Office of
Energy Projects

September 2017

Florida Gas Transmission Company, L.L.C. **Docket No. CP17-79-000**

Wekiva Parkway Relocation Project

Environmental Assessment

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 2
Florida Gas Transmission Company, L.L.C.
Wekiva Parkway Relocation Project
Docket No. CP17-79-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Wekiva Parkway Relocation Project, proposed by Florida Gas Transmission Company, L.L.C. (Florida Gas) in the above-referenced docket. Florida Gas requests authorization to abandon in place and relocate portions of their existing 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop pipeline in Lake and Seminole Counties, Florida, that conflict with construction of the Florida Department of Transportation (FDOT) Wekiva Parkway. The affected pipelines would be relocated to new adjacent right-of-way abutting the north side of FDOT's Wekiva right-of-way.

The EA assesses the potential environmental effects of the construction and operation of the Wekiva Parkway Relocation Project in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed project, with appropriate mitigating measures, would not constitute a major federal action significantly affecting the quality of the human environment.

The FERC staff mailed copies of the EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the project area. In addition, the EA is available for public viewing on the FERC's website (www.ferc.gov) using the eLibrary link. A limited number of copies of the EA are available for distribution and public inspection at:

Federal Energy Regulatory Commission
Public Reference Room
888 First Street NE, Room 2A
Washington, DC 20426
(202) 502-8371

Any person wishing to comment on the EA may do so. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this project, it is important that we receive your comments in Washington, DC on or before **October 14, 2017.**

For your convenience, there are three methods you can use to file your comments with the Commission. In all instances please reference the project docket number (CP17-79-000) with your submission. The Commission encourages electronic filing of comments and has expert staff available to assist you at 202-502-8258 or FercOnlineSupport@ferc.gov.

(1) You can file your comments electronically using the eComment feature located on the Commission's website (www.ferc.gov) under the link to Documents and Filings. This is an easy method for submitting brief, text-only comments on a project;

(2) You can also file your comments electronically using the eFiling feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing"; or

(3) You can file a paper copy of your comments by mailing them to the following address:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR 385.214).[1] Only intervenors have the right to seek rehearing of the Commission's decision. The Commission grants affected landowners and others with environmental

[1] See the previous discussion on the methods for filing comments.

concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. **Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.**

Additional information about the project is available from the Commission's Office of External Affairs, at **(866) 208-FERC,** or on the FERC website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on "General Search," and enter the docket number excluding the last three digits in the Docket Number field (i.e., CP17-79). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

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TECHNICAL ACRONYMS AND ABBREVIATIONS

APE	area of potential effects
Certificate	Certificate of Public Convenience and Necessity
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
Commission	Federal Energy Regulatory Commission
dB	decibel
dBA	A-weighted decibel
DOT	U.S. Department of Transportation
EA	environmental assessment
EI	environmental inspector
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FERC	Federal Energy Regulatory Commission
Florida Gas	Florida Gas Transmission Company, L.L.C
FWS	U.S. Fish and Wildlife Service
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutants
HDD	horizontal directional drilling
L_{eq}	equivalent sound level
L_{dn}	day-night sound level
LLV	lateral line valve
MBTA	Migratory Bird Treaty Act
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
N_2O	nitrous oxide
NOI	Notice of Intent to Prepare an Environmental Assessment for the Proposed Wekiva Parkway Relocation Project and Request for Comments on Environmental Issues
OEP	Office of Energy Projects
Pipeline	natural gas pipeline
Plan	Upland Erosion Control, Revegetation, and Maintenance Plan
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns

PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
Procedures	Wetland and Waterbody Construction and Mitigation Procedures
Secretary	Secretary of the Commission
SHPO	State Historic Preservation Office
SPAR Plan	Spill Prevention and Response Plan
SO_2	sulfur dioxide
USGS	United States Geological Survey
USDA	United States Department of Agriculture
VOC	volatile organic compound

A. PROPOSED ACTION

1.0 INTRODUCTION

The staff of the Federal Energy Regulatory Commission (Commission or FERC) has prepared this environmental assessment (EA) to assess the environmental effects of the natural gas pipeline facilities proposed by Florida Gas Transmission Company, L.L.C. (Florida Gas). We[1] prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality's regulations for implementing NEPA (Title 40 of the Code of Federal Regulations, Parts 1500-1508 [40 CFR 1500-1508]), and the Commission's regulations implementing NEPA under 18 CFR 380.

On March 16, 2017, Florida Gas filed an application with the Commission in Docket No. CP17-79-000 for the Wekiva Parkway Relocation Project (Project) under sections 7(b) and 7(c) of the Natural Gas Act and part 157 of the Commission's regulations. Florida Gas seeks to construct, operate, and abandon certain natural gas facilities in Florida.

The EA is an important and integral part of the Commission's decision on whether to issue Florida Gas a Certificate of Public Convenience and Necessity (Certificate) to construct and operate the proposed facilities, and an authorization to abandon natural gas facilities. Our principal purposes in preparing this EA are to:

- identify and assess potential impacts on the natural and human environment that could result from implementation of the proposed action;
- identify and recommend reasonable alternatives and specific mitigation measures, as necessary, to avoid or minimize project-related environmental impact; and
- facilitate public involvement in the environmental review process.

2.0 PURPOSE AND NEED

Florida Gas's purpose is to resolve conflicts with the Florida Department of Transportation (FDOT) construction of the Wekiva Parkway toll road. Portions of the planned roadway would be constructed over existing Florida Gas pipelines, requiring relocation of the affected sections of Florida Gas's 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop. Affected pipeline segments would be capped and abandoned in place and the proposed pipeline segments would be constructed in a new permanent right-of-way, adjacent to new FDOT right-of-way, on the north side of Wekiva Parkway. Florida Gas anticipates that construction of the Wekiva Parkway Relocation Project would begin in March 2018, pending receipt of all necessary permits and authorizations, with an in-service date of October 13, 2018.

Under Section 7(c) of the Natural Gas Act, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical

[1] "We," "us," and "our" refers to environmental staff of the Office of Energy Projects.

competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project. Section 7(b) of the Natural Gas Act specifies that no natural gas company shall abandon any portion of its facilities subject to the Commission's jurisdiction without the Commission first finding that the abandonment will not negatively affect the present or future public convenience and necessity.

3.0 PROPOSED FACILITIES

Florida Gas proposes to abandon, construct, install, own, operate, and maintain natural gas facilities in Lake and Seminole Counties, Florida. Florida Gas proposes to abandon two segments of its existing 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop facilities that conflict with construction of the new Wekiva Parkway and associated FDOT facilities. Florida Gas would relocate-by-replacement 4.6 miles of its existing 12-inch-diameter Sanford Lateral facilities with 4.6 miles of pipeline, and 3.2 miles of its existing 26-inch-diameter Sanford Lateral Loop facilities with 3.1 miles of pipeline. The proposed pipeline segments would be constructed in a new permanent right-of-way, adjacent to new FDOT right-of-way, on the north side of Wekiva Parkway. Florida Gas also proposes to install one new 12-inch-diameter lateral line valve (LLV) on the 12-inch-diameter Sanford Lateral in Seminole County.

The proposed 12-inch-diameeter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop replacement facilities would be constructed in the same permanent right-of-way, adjacent to each other, and approximately 15 feet apart except where otherwise noted. Florida Gas would construct and relocate the Wekiva Parkway Relocation Project facilities prior to FDOT's planned expansion.

General location maps for the Project, are shown in figure 1 below.

3.1 NON-JURISDICTIONAL FACILITIES

There are no non-jurisdictional facilities associated with the Project.

4.0 PUBLIC REVIEW AND COMMENT

On April 18, 2017, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Wekiva Parkway Relocation Project and Request for Comments on Environmental Issues* (NOI). The NOI was mailed to landowners, federal, state, and local government representatives and agencies; elected officials; Native American tribes; environmental and public interest groups; and newspapers and libraries in the Project area. In response to the NOI, we received six comments which are further described below.

- One landowner comment questioned the location of workspaces within their property, and expressed concern about their ability to perform future expansions on the property. These concerns are addressed in section 5.1 of this EA.

- The U.S. National Park Service (NPS) expressed concern about the Wekiva Wild and Scenic River crossing, which is addressed in section 2.1 of this EA.

Florida Gas Transmission Company, LLC

Wekiva Parkway Relocation Project

General Location Map

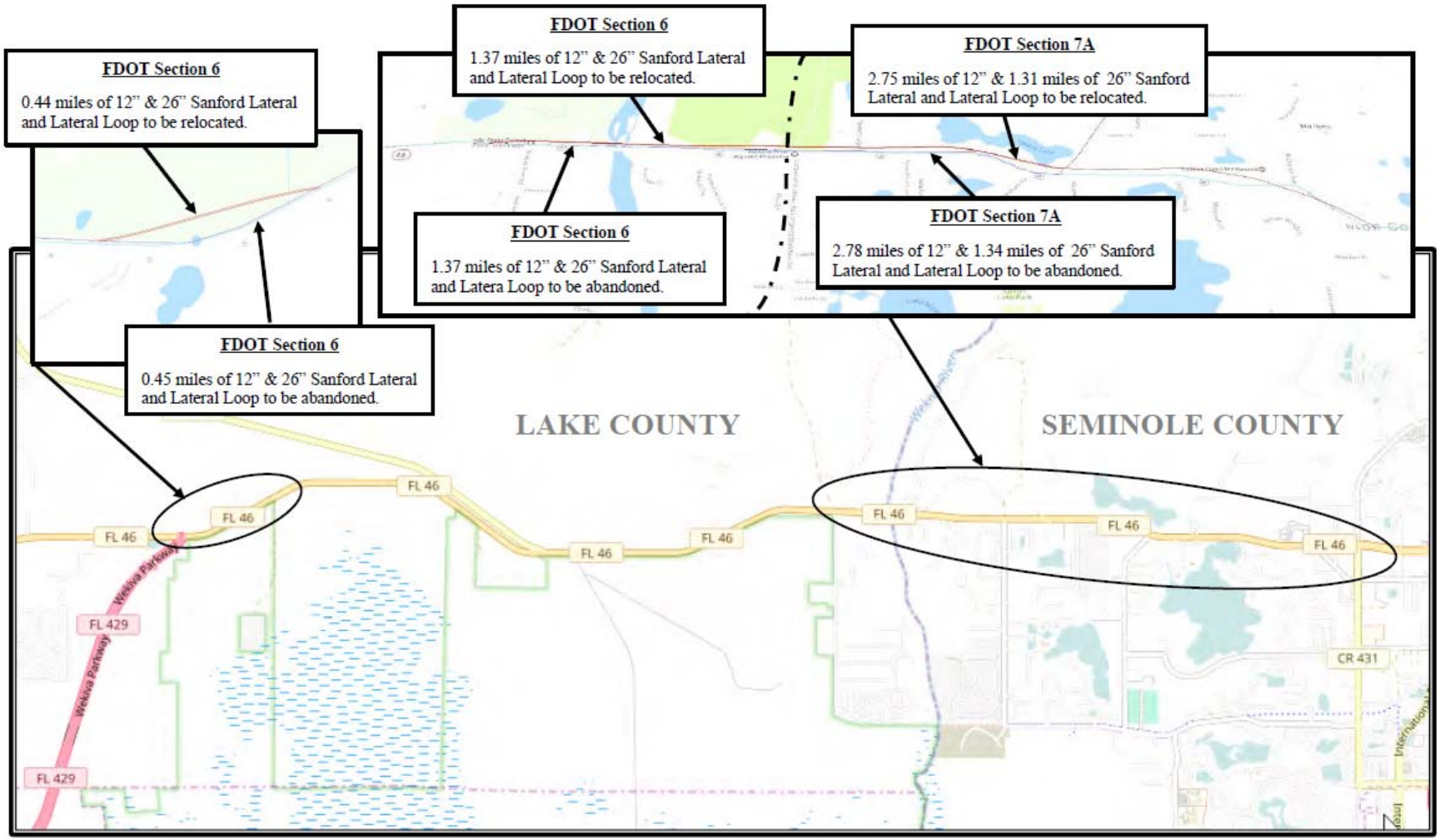

Figure 1: General Location Map

- The National Marine and Fisheries Service (NMFS) provided a statement of no comment for the proposed Project.

- The Florida Fish and Wildlife Service commented on state-listed species impacts, which is further discussed in section 3.3 of this EA.

- The Seminole Tribe of Florida and the Seminole Nation of Oklahoma requested that a phase 1 survey be conducted. The resolution is discussed in section 4.0 of this EA.

5.0 PERMITS, APPROVALS, AND REGULATORY CONSULTATIONS

Florida Gas would obtain all necessary permits, licenses, clearances, and approvals related to construction and operation of the Project. Florida Gas would provide all relevant permits and approvals to the contractor, who would be required to adhere to applicable requirements. Table 1 displays the major anticipated federal and state permits for the Project.

Table 1
Permits, Approvals, and Consultations Applicable to the Project

Permitting/ Approval Agency	Permit, Approval, or Consultation	Filing Date	Actual/*Anticipated* Receipt Date
Federal			
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity	March 16, 2017	TBD
U.S. Army Corps of Engineers	Section 404 Clean Water Act, Joint Application for Environmental Resource Permit/ Authorization to use Sovereign Submerged Lands/ Federal Dredge and Fill Permit	June 1 2017	*September 2017*
U.S. Fish and Wildlife Service	Consultation under Section 7 of Endangered Species Act, Migratory Bird Treaty Act and Fish and Wildlife Coordination Act	March 3, 2017	March 13, 2017
National Marine Fisheries Service	Consultation under the Magnuson-Stevens Act, Endangered Species Act and Marine Mammal Protection Act	March 3, 2017	March 6, 2017
U.S. National Park Service	Section 7 Consultation, Wild and Scenic Rivers Act for Rivers in the National Inventory	March 3, 2017	June 15, 2017

Table 1 Permits, Approvals, and Consultations Applicable to the Project			
Permitting/ Approval Agency	**Permit, Approval, or Consultation**	**Filing Date**	**Actual/*Anticipated* Receipt Date**
USDA Natural Resources Conservation Service	Natural Resources Conservation Service Consultation	June 21, 2017	*July 31, 2017*
Federal Delegated State Authority			
Florida Dept. of Environmental Protection, State Clearing House	Section 403.061(42) of Florida Administrative Code and Coastal Zone Consistency Determination	June 1, 2017	*September 1, 2017*
Florida Division of Historical Resources	Consultation for cultural resources under section 106 of National Historic Preservation Act	March 2, 2017	June 21, 2017
Florida Dept. of Environmental Protection	Section 401 Clean Water Act Joint Application	April 2017	*September 2017*
Florida Department of Environmental Protection, Wastewater Program	Hydrostatic Test Discharge Permit- NPDES- Verification of Exemption	January 2018	*February 2018*
State- Florida			
Florida Fish and Wildlife Conservation Commission	Consultation under Chapter 379.2291 of Florida Statutes: Endangered and Threatened Species Act	March 3, 2017	April 19, 2017
Florida Fish and Wildlife Conservation Commission	Temporary Exclusion or Conservation Permit for Relocation of Gopher Tortoises	January 2018	*February 2018*
Florida Division of Historical Resources	Section 106 Consultation	March 2, 2017	April 6, 2017 June 21, 2017
Florida Dept of Environmental Protection, Wastewater Program	Hydrostatic Test Discharge Permit	*January 2018*	*February 2018*
Florida Dept of Environmental Protection	Application for Environmental Resource Permit/ Authorization to use Sovereign Submerged Lands/ Federal Dredge and Fill Permit	June 1, 2017	*September 1, 2017*

Table 1 Permits, Approvals, and Consultations Applicable to the Project			
Permitting/ Approval Agency	**Permit, Approval, or Consultation**	**Filing Date**	**Actual/*Anticipated* Receipt Date**
County Authority			
Seminole County- FL Planning and Development Division	Seminole County Arbor Permit	December 7, 2016	December 16, 2016

6.0 CONSTRUCTION, OPERATION, AND MAINTENANCE

Florida Gas would construct, operate, and maintain the proposed Project in compliance with all applicable federal and state permit requirements, regulations, and environmental guidelines, including the U.S. Department of Transportation (DOT) under 49 CFR 192 - *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*. These regulations ensure adequate protection for the public and prevent natural gas facility accidents and failures.

Florida Gas adopted FERC staff's *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan), and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) with minor modifications and best management practices. Florida Gas would also utilize a Spill Prevention and Response (SPAR) Plan to ensure proper handling of lubricants, fuel, or other potentially toxic materials and prevent spills, prior to construction.

Florida Gas would clear brush and trees within the Project right-of-way, not previously cleared by FDOT. Timber and other vegetative debris may be chipped for use as erosion-control mulch in areas where permitted, or otherwise disposed of in accordance with applicable regulations. Temporary fencing, safety fencing and gates would be erected as required in accordance with permits and landowner agreements. The right-of-way would be graded to create a level working surface allowing safe passage and operation of equipment. Temporary erosion and sediment controls would be installed in accordance with the Plan and Procedures, permits and other environmental authorizations.

Following clearing and grading, a trench would be excavated for installation of the pipe. Trench dewatering would be conducted, as needed, along the Project. All dewatering activities would be in accordance with the Plan and Procedures and applicable permits. Best management practices such as use of filter bags or silt fence/hay bale structures would be used to control erosion and sedimentation at discharge points for dewatering effluent.

After the pipe is lowered into the trench, the trench would be backfilled. Previously excavated materials would be placed back into the trench using bladed equipment or backhoes. Where the previously excavated material contains large rocks or other materials that could damage the pipe or coating, clean fill or a protective coating would be placed around the pipe prior to backfilling. Once complete, the pipeline would be hydrostatically tested to demonstrate

it is capable of operating at the design pressure and all disturbed areas would be restored to pre-construction contours.

In addition to trenching activities, two waterbodies (the Wekiva River and an ephemeral ditch), State Road 46, and two FDOT drainage structures would be crossed using the Horizontal Directional Drilling (HDD) method for this project. The HDD crossing technique is a trenchless installation process by which pipeline is installed beneath obstacles and/or sensitive areas by utilizing remote guidance drilling technology. An HDD involves a multi-stage process that consists of establishing a small diameter pilot hole, followed by enlargement of the pilot hole (reaming) to accommodate pull back of the proposed pipeline. Upon successful completion of the reaming operation, the pre-assembled, hydrostatically tested section of pipeline is then pulled through the completed hole. Drilling fluid, mostly bentonite and water, is used to lubricate the drill bit, help stabilize the drill hole, and remove cutting spoil as the drilling fluid is returned to the entry point.

The Project would be collocated with much of FDOT's Wekiva Parkway project area. Generally, Florida Gas would construct its relocated pipeline first, abandon its existing pipeline in place, followed by FDOT's expansion activities. The abandoned lateral piping would be cut into segments, capped and filled with grout at existing road crossings, with remaining lateral piping being capped and filled with nitrogen. All areas disturbed during construction would be restored and revegetated according to FERC's Plan and Procedures or left in suitable condition for FDOT to complete its construction activities.

Florida Gas would conduct environmental training for all construction personnel prior to and during construction of the Project. Training would focus on the requirements of the Plan and Procedures, and other Project-specific permit conditions and mitigation measures, as applicable.

Florida Gas would assign an Environmental Inspector (EI) to the Project. The EI's duties include, but are not limited to, ensuring compliance with all environmental conditions. The EI would have peer status with any/all other inspectors, would be present throughout construction and restoration, and would have the authority to enforce permit conditions, to issue stop-activity orders, and require corrective actions to maintain environmental compliance. FERC staff would also conduct periodic inspections to verify compliance with the Commission's order, throughout construction and until restoration is deemed fully successful.

7.0 LAND REQUIREMENTS

Construction of the Project would temporarily impact 94.9 acres of land during construction, and of this, 29.7 acres would be permanently affected by operation of the Project. Land use affected by construction and operation of the Project is displayed in table 2. Florida Gas proposes an 85 foot wide construction right-of-way, of which 50 feet would be retained as permanent right-of-way. Florida gas also proposes 35 feet of temporary workspace for activities including, but not limited to, truck turnarounds, offloading areas, staging and fabrication of pipe sections, and access to the existing pipeline.

Although Florida Gas has identified areas where extra workspace would be required, additional or alternative areas could be identified in the future due to changes in site-specific

construction requirements. Florida Gas would be required to file information on each of those areas for review and approval prior to use.

Table 2
Acreage Affected by Construction and Operation of the Proposed Facilities

Facility	County, State	Land Affected by Construction (acres)	Land Affected by Operation (acres)
Pipeline Right-of-Way	Lake/Seminole, FL	40.8	29.4
Lateral Line Valve[a]	Lake/Seminole, FL	0.03	0.03
Additional Temporary Work Spaces	Lake/Seminole, FL	16.6	0.0
Temporary Access Road	Lake/Seminole, FL	1.9	0.0
Permanent Access Road	Lake/Seminole, FL	0.3	0.3
Contractor Yards	Lake/Seminole, FL	35.4	0.0
TOTAL		**94.9**	**29.7**

[a] – Lateral Line Valve would installed and operated within the proposed 50-foot-wide permanent right of way.

Existing Right-of-Way

The relocated pipelines would be collocated with FDOT Wekiva Parkway right-of-way the entire length of the Project, with a majority of the temporary workspaces and temporary right-of-way overlapping with existing FDOT right-of-way.

Access Roads

Florida Gas would use 15 existing private roads and driveways for temporary access to the Project and would acquire permanent access rights for use of existing roads designated as permanent access. No new access roads would be constructed for Project activities. Table 3 below shows a list of proposed access roads.

Table 3
Proposed Access Roads

Facility	Location (MP)	Temporary/ Permanent	Dimensions (feet)
AR-1	2.53	Temp	100 X 25
AR-2	2.69	Perm	35 X 25
AR-3	3.41	Temp	214 X 25
AR-4	3.46	Temp	158 X 25
AR-5	7.41	Perm	29 X 25
AR-6	7.74	Perm	157 X 25
AR-7	8.84	Temp	120 X 25
AR-8	8.98	Temp	210 X 25
AR-9	9.97	Temp	230 X 25

Table 3
Proposed Access Roads

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AR-1	2.53	Temp	100 X 25
AR-2	2.69	Perm	35 X 25
AR-3	3.41	Temp	214 X 25
AR-4	3.46	Temp	158 X 25
AR-5	7.41	Perm	29 X 25
AR-10	10.17	Temp	Irregular
AR-11	10.28	Temp	110 X 25
AR-12	10.41	Temp	Irregular
AR-13	10.55	Temp	310 X 25
AR-14	11.08	Perm	110 X 25
AR-15	11.13	Temp	35 X 25
AR-16	11.25	Temp	40 X 25
AR-17	11.67	Perm	40 X 25

Pipe and Contractor Yards

Florida Gas would use one pipe and contractor yard and has proposed three alternative sites for locations to be determined by FDOT activities and yard availability at time of Florida Gas construction activities. The proposed sites are below:

- PCY-1: 12.66 acres located at milepost (MP) 10.28 in Seminole County. Current land use for the yard is a combination of open land, forest residential/commercial lands;
- PCY-2: 8.55 acres located at MP 8.74 on open land, in Seminole County; and
- PCY-3: 14.14 acres located on Country Road 46A on open and residential/commercial lands in Lake County.

Aboveground Facilities

Florida Gas would install one lateral line valve at either MP 8.76 or MP 7.76 on 0.03 acres, on upland forest.

B. ENVIRONMENTAL ANALYSIS

Construction and operation of the Project would have temporary, short-term, long-term, and permanent impacts. As discussed throughout this EA, temporary impacts are defined as occurring only during the construction phase. Short-term impacts are defined as lasting from two to five years. Long-term impacts would eventually recover, but require more than five years. Permanent impacts are defined as lasting throughout the life of the Project.

1.0 GEOLOGY AND SOILS

1.1 Geology

Geologic Setting

The proposed Project is located within the Atlantic Coastal Plain physiographic province of the United States. This is the flattest of the provinces and stretches over 2,200 miles in length from Cape Cod to the Mexican border and southward another 1,000 miles to the Yucatan Peninsula. The Atlantic Plain slopes seaward from the Inland Highlands in a series of terraces, continuing far into the Atlantic and Gulf of Mexico. The province forms the continental shelf and the relief is so low at the land-sea interface that the boundary between them is often blurry and indistinct. The Project is located within the Osceola Plain of the Marion Upland which is underlain by a thick sequence of limestone and dolostones upon which a relatively thin section of clastics (sand, silt, shell material and clay) was deposited (United States Geological Survey [USGS], 2004).

Mineral Resources

Mining occurs throughout Florida. Florida's mineral commodities include limestone, sand, gravel, clay, heavy minerals, phosphate and peat. The Florida Department of Environmental Protection (FDEP) maintains three datasets on mining activities in Florida (FDEP, 2006) including active mine, mandatory non-phosphate mines, and mandatory phosphate mines. Mandatory refers to the regulatory status of the land. There are no active mines, mandatory non-phosphate mines, or mandatory phosphate mines within 0.25 mile of the Project. Additionally, FDEP maintains a dataset of permitted oil and gas wells within the state of Florida (FDEP, November 2014). The nearest oil and gas well is approximately 12 miles southwest of the pipeline.

Geologic Hazards

Geologic hazards are physical conditions that are capable of producing property damage and loss of life. Typically, these potential hazards could include seismic related issues such as ground rupture due to faulting, strong ground shaking, liquefaction, subsidence, slope stability and landslides, flash floods, and karst terrain. These conditions are discussed below.

Seismicity

The 2008 U.S. Geological Survey National Seismic Hazard Maps (DOI 2008) display earthquake ground motions for various probability levels across the United States. Values on

these seismic hazard maps are called peak acceleration values and are expressed as a percentage of gravitational acceleration (g), where the higher the value, the greater the potential hazard. Review of the USGS map, which identifies the levels of horizontal shaking that have a 2-in-100 chance of being exceeded in a 50-year period, shows that the peak acceleration values for the Project area range from zero to four percent of g, which is the lowest hazard level identified on the map. As a result, earthquakes and related seismic hazards are not anticipated to have an impact on the Project.

Landslides and Slope Stability

Landslides are very rare in Florida, a state generally known to be fairly flat. Gravity is the force that is responsible for landslides. In areas where there are steep slopes, unconsolidated soils and sediments may move downward. This movement may be too slow to notice, in which case it is called soil creep. If the movement is sudden and catastrophic, it is referred to as a landslide or slump. Landslides may be associated with excessive amounts of rain that lead to saturation of earth materials by water. The steepening of slopes by erosion or construction may also be a factor in the development of landslides. Due to low incidence of landslides, the flat topography, and minimal threat of seismic activity, the likelihood of a landslide to occur in the proposed Project area is low.

Flooding

The greatest potential for flooding to impact buried pipe is at a waterbody crossing during or after a large storm event with significant precipitation in a short period of time. Flooding with heavy rainfall is not uncommon in the southeast U.S. Segments of the proposed 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop would be located within the 100-year floodplain as defined by publicly available Federal Emergency Management Agency floodplain data. The pipelines are proposed for relocation to accommodate expansion of the Wekiva Parkway. As such, land use and disturbance impacts would be minimized by collocating the pipeline with the parkway. FDOT's construction of stormwater management systems for the Wekiva Parkway would alter current drainage patterns and surface water flow in the Project area.

Temporary workspace within floodplain areas would be restored to preconstruction contours or incorporated into FDOT's construction of the Wekiva Parkway after the conclusion of Florida Gas's construction activities. Because the proposed facilities within the Federal Emergency Management Agency-designated 100-year floodplain are existing pipelines that are being relocated short distances, there would not be any new impacts on flood storage capacity.

Karst Terrain

Karst terrain and the potential for karst features such as sinkholes, and/or surface collapse can occur within areas underlain by soluble carbonate bedrock and can be problematic during construction. Karst topography is a landscape that develops in regions underlain by limestone, dolomite, gypsum, or rarely, bedded salt. Karst is characterized by closed depressions termed sinkholes, and by caves, cave systems and underground drainage. The agent of erosion that

creates these cavernous features is a solution of soluble minerals from one or all of the rock types mentioned above, in combination with slightly acidic groundwater.

Florida is underlain by carbonate rocks, such as limestone and dolomite, which are susceptible to dissolution, and as a result sinkholes and other karst features are found over much of Florida. The Project is located in an area where the cover overlying the carbonate rock is 20 to 130 feet thick and consists mainly of sandy, clay, and loose limestone gravel. The Florida Geological Survey (FGS) maintains and provides a downloadable database of reported subsidence incidents statewide (FDEP, 2016). There have been no reported subsidence incidents within 0.25 mile of the proposed Project. The hazards from surface subsidence due to karst is low due to thickness of unconsolidated mater overlying the carbonate rock, but to ensure impacts due to karst features are avoided, **we recommend that:**

- **<u>Prior to construction</u>, Florida Gas should file with the Secretary of the Commission (Secretary) a Karst Mitigation Plan, for review and written approval by the Director of the Office of Energy Projects (OEP), that includes:**

  a. **construction techniques that Florida Gas will utilize to control drainage within the construction work areas;**

  b. **monitoring and mitigation of any springs and wells in areas with karst features within 500 feet from the Project for water quality and yield; and**

  c. **mitigation of karst features if encountered during trenching activities, including contacting a designated project geotechnical engineer to develop site specific design and mitigation measures for construction trench dewatering, final grading of contours, and any necessary permanent erosion and sediment controls, based on the site conditions and nature of any karst feature that is encountered.**

Blasting

No blasting is anticipated for this Project.

Paleontological Resources

The geologic units underlying the Project area are described as either unfossiliferous or do not contain original fossil material. As a result, the potential for encountering significant paleontological resources within the Project area is low. In the event that paleontological resources are encountered, Florida Gas would follow the procedure outlined in its Unanticipated Discoveries Plan.

Based on the analysis above and implementation of our recommendation regarding karst mitigation, we do not anticipate any geologic hazard impacts on the Project facilities. Furthermore, we conclude that impacts on geological resources would be adequately minimized and would not be significant.

1.2 Soils

A description of the soil series crossed by the Project was compiled from information presented in the United States Department of Agriculture (USDA) Soil Resource. Based on information from the Natural Resources Conservation Service Web Soil Survey, there are multiple soil series within the Project area. Appendix A lists the acreage of each soil mapping unit at each of the work spaces associated with the Project, as well as each mapping unit's limiting factors for construction and restoration activities.

Prime Farmland

The USDA defines prime farmland as land that is best suited to food, feed, fiber, and oilseed crops. This designation includes cultivated land, pasture, woodland, or other lands that are either used for food or fiber crops or are available for these uses. Urbanized land and open water are excluded from prime farmland. Prime farmland typically contains few to no rocks, is permeable to water and air, is not excessively erodible or saturated with water for long periods, and is not subject to frequent, prolonged flooding during the growing season. Soils that do not meet the above criteria may be considered prime farmland if the limiting factor is mitigated.

No prime farmland is mapped and there are no agricultural activities occurring within the Project limits. Therefore, no adverse impacts on the availability of prime farmland are anticipated to occur as a result of the Project.

Soil Rutting and Compaction

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Soils that are artificially drained or protected from flooding are still considered hydric if the soil in its undisturbed state would meet the definition of a hydric soil. Generally, hydric soils are those that are poorly or very poorly drained. Due to extended periods of saturation, hydric soils can be prone to compaction and rutting. Some soils within the Project area are characterized as hydric.

If construction activities, particularly the operation of heavy equipment, occur when soils are saturated, soil compaction and rutting could occur. In general, rutting and compaction of soils would be avoided or minimized through the use of timber mats, as deemed necessary during construction. Also, compaction would be minimized through the implementation of the construction and restoration measures outlined in the FERC's Plan and Procedures. These include the segregation of topsoil/subsoil/hydric soil, the use of timber mats in wetlands, preparation of a proper seed bed prior to seeding, revegetating the right-of-way with seed mixes suitable for the area, and conducting follow-up inspections to evaluate the success of revegetation efforts. As such, any adverse impacts due to rutting and compaction would be adequately mitigated.

Soil Erosion

Erosion is a continuing process that can be accelerated by human disturbances. Factors that can influence the degree of erosion include soil texture, structure, length and percent of

slope, vegetative cover, as well as rainfall or wind intensity. Soils most susceptible to erosion by water are typified by bare or sparse vegetative cover, non-cohesive soil particles with low infiltration rates, and moderate to steep slopes. Wind erosion processes are less affected by slope angles. Characterization of erosion potential includes both water and wind as agents of erosion. Clearing, grading, and equipment movement can accelerate the erosion process and, without adequate protection, result in discharge of sediment to waterbodies and wetlands. Soil loss due to erosion could also reduce soil fertility and impair revegetation.

Erosion factor (K Factor) indicates the susceptibility of a soil to sheet and rill erosion by water. K Factor is based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity. The K Factors are provided in appendix A. None of the soils affected by the Project have a high erosion potential from water. Lack of erosion potential from water can largely be attributed to the very gently sloping terrain encountered within the Project area.

Wind erodibility groups (WEGs) are a set of classes given to soils based on compositional properties of the surface horizon such as texture, organic matter, content, and aggregate stability that are considered particularly susceptible to wind erosion. WEGs group 1 or 2, out of 8 total groups denote the most severe erosion potential from wind. The values for the Project area were obtained from the Natural Resources Conservation Service Web Soil Survey. The majority of the Project area has soils with a WEG of 1, or 3 as described in appendix A. Florida Gas would utilize dust-control measures, including routine wetting of the construction workspace as necessary where soils are exposed. Florida Gas would minimize construction impacts by adherence to the measures contained in the FERC Plan, which specifies the use of mulch (e.g., hay and straw) or mats in areas where a high erosion potential exists.

Temporary erosion control devices would be maintained until the Project area is successfully revegetated. Following successful revegetation of construction areas, temporary erosion control devices would be removed. Impacts due to would be adequately mitigated.

Low Revegetation Potential

Construction would temporarily and permanently remove existing vegetation, and revegetation in soils that have a low revegetation potential may be difficult. Soil properties that affect the growth of grasses, sedges and other non-woody vegetation include the topsoil thickness for the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flood hazard, soil temperature, and slope. Appendix A lists areas where revegetation potential may be low or moderate in the Project area.

Upon completing construction, Florida Gas would prepare the seedbed and utilize seed mix and fertilizer/lime application rates as specified by the FERC Plan, agency recommendations or landowner request. Monitoring and necessary maintenance activities would be conducted per the measures outlined in the FERC Plan and impacts on soils would be adequately mitigated. Impacts on soils from low revegetation are not expected.

Inadvertent Spills or Discovery of Contaminants

During construction, contamination from accidental spills or leaks of fuels, lubricants, and coolant from construction equipment could adversely impact soils. The effects of contamination are typically minor because of the low frequency and volumes of spills and leaks. Florida Gas would implement its SPAR Plan that specifies cleanup procedures in the event of soil contamination from spills or leaks of fuel, lubricants, coolants, or solvents. Florida Gas and its contractors would implement the SPAR Plan to prevent and contain accidental spills of any material that may contaminate soils, and to ensure that inadvertent spills of fuels, lubricants, or coolants are contained, cleaned up, and disposed of in an appropriate manner. Therefore, impacts on resources from spills or leaks would be adequately mitigated.

It is also possible that localized pre-existing evidence of contamination may be encountered during construction of the Project. No hazardous waste sites or facilities were identified within 0.25 mile of the Project facilities. In the event that hazardous wastes or substances are encountered, Florida Gas follow the procedure outlined in its Unanticipated Discoveries Plan.

Based on Florida Gas's proposed construction and mitigation procedures, including its implementation of the FERC Plan, FERC Procedures, and SPAR Plan, we conclude that no significant impacts on soil resources would occur as a result of the Project.

2.0 WATER RESOURCES

2.1 Surface Water and Wetlands

Two waterbodies would be crossed by the Project, the Wekiva River and an unnamed ephemeral ditch. Both waterbodies would be crossed using the HDD method, and no in-water work is proposed. Table 4 identifies these waterbodies, classifications, and crossing location.

Table 4
Waterbodies Crossed by the Project

Location (MP) [a]	Feature ID [b]	Waterbody Name	Flow Regime [c]	FERC Classification[d]	State Water Quality	County	Fishery Type	Crossing Method
7.97	LA-OSW-001[e]	Unnamed	E	Minor	N/A	Lake	N/A	HDD
8.13	N/A	Wekiva River	P	Major	Class III	Lake/ Seminole	Rec	HDD

Table 4
Waterbodies Crossed by the Project

[a] Milepost numbers are slightly different between the 12-inch-diameter Sanford Lateral and the 26-inch-diameter Sanford Lateral Loop. For ease of presentation, milepost numbers shown in this table reference the 12-inch-diameter Sanford Lateral.
[b] Feature ID is a unique Project designation assigned to wetlands and waterbodies during field surveys.
[c] Flow regime based on USGS topographic mapping: I = Intermittent; P = Perennial; E = Ephemeral
[d] FERC classifies waterbodies based on width of the water's edge at the time of crossing: minor is less than or equal to 10 feet; intermediate is greater than 10 feet, but less than or equal to 100 feet; major is greater than 100 feet (Procedures section I.B.1).

Sensitive Waterbody Crossings

The Wekiva River is a federal Wild and Scenic River, Outstanding Florida Water, and Special Water. The Wekiva River and its tributaries have also been designated a Florida Scenic and Wild River, a State Canoe Trail, and Regionally Significant (FDEP, 2016). The Wekiva River is a spring-fed system that derives most its base flow from springs of the Floridian Aquifer. Florida Gas would install the 12-inch-diameter and 26-inch-diameter pipeline crossings of the Wekiva River via HDD adjacent to FDOT's new bridges for its Wekiva Parkway. The HDDs for each pipeline segment would be about 3,100 feet long and would be installed about 15 feet apart and 40 feet below the bottom of the river. HDD entry and exit locations would be set back approximately 1,500 feet from the river in upland areas. Florida Gas does not propose any construction within the Wekiva River.

Florida Gas states that the proposed HDDs would be at their deepest where they cross the Wekiva River and the depths of these HDDs would reduce the potential for an inadvertent release of drilling mud to the Wekiva River. However, if an inadvertent release of HDD drilling fluid occurs within a waterbody, the resulting turbidity could temporarily affect water quality. Florida Gas would implement the measures in its HDD Contingency Plan, which addresses measures for prevention, detection, notifications, and mitigation for inadvertent releases. We reviewed this plan and found it acceptable. In the event an inadvertent release enters a flowing waterbody, Florida Gas would work to stop the flow and isolate the release, and would develop a clean-up plan based on site-specific conditions, in consultation with appropriate agencies. Florida Gas's 1,500-foot setback from the Wekiva River for HDD entrance and exit pits, and the application of measures in its SPAR Plan, including locating hazardous material storage and equipment refueling activities at least 100 feet from waterbodies, would minimize the potential for hazardous materials to enter waterbodies.

The Project would require permits from the U.S. Army Corps of Engineers (USACE) (Section 404, Section 10) and the Florida Department of Environmental Protection (Section 401) for the proposed crossings of jurisdictional wetlands and the Wekiva River. Additionally, a Sovereign Submerged Lands Easement from the FDEP would be requested for the proposed crossings of the Wekiva River. The NPS indicated in an email to Florida Gas, dated June 15, 2017, that Section 7 consultation to determine consistency with the Wild and Scenic Rivers Act for Rivers in the National Inventory is not necessary given the proposed crossing method of

HDD across the Wekiva River; however, if the crossing method were to change to an alternate method such as open cut, then consultation per the Act would be necessary.

Florida Gas is performing geotechnical investigations to ensure feasibility of using HDD method. Because they are not yet complete, in order to ensure that the HDD method is feasible for the Wekiva River crossing, with favorable drilling conditions, **we recommend that:**

- **Prior to construction, Florida Gas should file with the Secretary the results of its geotechnical investigations for its HDD crossings of the Wekiva River. In the event that the geotechnical investigations indicate that an HDD is infeasible, or should a feasible HDD prove unsuccessful during construction, Florida Gas should file with the Secretary a plan for crossing the waterbody using an alternate method. This should include a site-specific plan with scaled drawings identifying all areas that will be disturbed by construction. Florida Gas should file this plan concurrent with the submission of any applicable applications to the USACE and NPS for a permit to construct using this plan. The Director of OEP must review and approve this plan in writing before construction of the crossing.**

Given Florida Gas' proposed crossing methods and adherence to measures in the FERC Plan and Procedures, HDD Contingency Plan, SPAR Plan, adherence to its permit conditions, as well as our recommendation above, we conclude that the Project would not significantly impact surface waters.

Floodplains

Segments of the proposed 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop would cross the Federal Emergency Management Act 100-year floodplain. Avoidance of floodplain areas would not be feasible due to collocation with FDOT's Wekiva Parkway.

Per the requirements of Executive Order 11988 on Floodplain Management, we analyzed the total permanent (operational) footprint of the Project relative to the total acres of the impacted floodplains and conclude that there would be an insignificant permanent loss of floodplain storage due to operation of the Project facilities. Construction workspaces within floodplain areas would be restored to preconstruction contours and revegetated or incorporated into FDOT's construction of the Wekiva Parkway after the conclusion of Florida Gas' construction activities. Based on Florida Gas' proposed construction techniques and adherence to mitigation measures described in the Plan and Procedures, we conclude that construction of Project facilities would not significantly impact flood storage capacity within the 100-year floodplain.

Hydrostatic Testing

Florida Gas would hydrostatically test new pipelines and aboveground facility piping in accordance with DOT pipeline safety regulations. A hydrostatic test involves filling the pipeline facilities with water and pressurizing it above its maximum allowable operating pressure. After each test, the hydrostatic test water would be discharged through an energy dissipating device

into a well vegetated upland area to reduce impacts on soil erosion in accordance with the Procedures.

Prior to discharge, Florida Gas would be responsible for obtaining all applicable state permits required for withdrawal and discharge of hydrostatic test water. Florida Gas proposes to obtain hydrostatic test water from municipal/commercial sources. Given that hydrostatic test water would be discharged into well vegetated upland areas, we conclude that impacts related to hydrostatic test water withdrawal and discharge would be temporary and minor in nature.

Wetlands

Wetlands were identified along the Project by reviewing National Wetland Inventory maps, Florida Land Use, Cover, and Forms Classification System maps, USGS topographic maps, and current aerial photography. In accordance with the USACE Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain, wetlands were delineated along the proposed route during field surveys conducted in November 2015 and July 2016. Designations for wetland types follow the classifications developed by the U.S. Fish and Wildlife Service (USFWS) (Cowardin et al., 1979). Jurisdictional wetland boundaries were also assessed using the methods described in Chapter 62-340, Florida Administrative Code. Three palustrine emergent (PEM) wetlands, one palustrine scrub shrub (PSS) wetland, and nine palustrine forested (PFO) wetlands, would be crossed by the Project and are presented in table 5. The proposed 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop would cross each wetland at the same location in the same construction right-of-way, and would be operated within the same permanent right-of-way.

Five wetlands crossed by the centerline of the pipeline would be installed via HDD; minimal disturbance would occur between HDD entry and exit pits consisting of selective hand-clearing of vegetation of a narrow path for guide wires, if necessary. Two PEM wetlands cross a pipeline segment to be abandoned in-place, and no disturbance is proposed in these wetlands. One PFO wetland is within the proposed contractor yard. Florida Gas would exclude this wetland and no disturbance is proposed in this wetland. The remaining five wetlands (three PFO, one PSS and one PEM would be impacted by temporary workspaces (0.473) acres). Of these, three wetlands (0.470 acres) have been permitted to be filled by the USACE and FDEP for FDOT's construction of the Wekiva Parkway. About 0.013 acre of PFO wetland would be within the permanent right-of-way, of which 0.01 acre is within the footprint of FDOT's Wekiva Parkway that is permitted to be filled.

Impacts on wetlands, including clearing and routine maintenance activities, range from short-term to permanent. Wetlands within the temporary construction right-of-way would be restored to preconstruction conditions or left in a suitable condition for FDOT's subsequent construction of the Wekiva Parkway. PEM and PSS wetlands are expected to revegetate relatively quickly and continue to perform their functions and values. PFO wetlands would be altered to scrub shrub or herbaceous types and impacts are considered long-term, as it could take more than 30 years to return to preconstruction conditions. Florida Gas's proposed HDD and collocating the proposed pipeline with FDOT's Wekiva Parkway would minimize clearing of PFO wetlands. Further, the proposed 12-inch-diameter Sanford Lateral and 26-inch-diameter

Sanford Lateral Loop would cross each wetland at the same location in the same construction right-of-way, and would be operated within the same permanent right-of-way. Permanent impacts would result in the permanent vegetation conversion of approximately 0.003 acre of PFO wetland to PEM wetland within Florida Gas's permanent right-of-way and outside of FDOT's Wekiva Parkway project footprint. There would be no net loss of wetlands, as these wetlands would still continue to perform their function.

Table 5
Wetlands Crossed by the Pipeline Route

Facility/ Wetland ID	Approx. Milepost [a]	NWI Classification [b]	Source [c]	Approx. Crossing Length (feet)	Acreage Affected During Construction [d]	Acreage Affected During Operation	Crossing Method [e]
12-inch Sanford Lateral and 26-inch Sanford Lateral Loop [f]							
LA-WL-001	2.61	PEM	FD	N/A	0	0	Off Line
LA-WL-002	2.90	PEM	FD	N/A	0	0	Off Line
LA-WL-003	3.11	PFO	FD	0	0.02	0	WS
LA-WL-004	7.99	PFO	FD	736	0	0	HDD
SE-WL-001	8.14	PFO	FD	471	0	0	HDD
SE-WL-002	8.29	PFO	FD	73	0	0	HDD
SE-WL-003	8.45	PFO	FD	0	0.15 [h]	0.01 [g]	Open Cut
SE-WL-004	8.45	PEM	FD	0	0.17 [h]	0	Open Cut
SE-WL-005	8.45	PSS	FD	0	0.13 [h]	0	Open Cut
SE-WL-006	9.92	PFO	FD	0	0.003	0.003	Open Cut
SE-WL-007	10.01	PFO	FD	147	0	0	HDD
SE-WL-008A	10.04	PFO	FD	652	0	0	HDD
Contractor Yard PCY-1 [h]							
SE-WL-008B	10.26	PFO	FD	0	0	0	Off Line
		TOTAL		**2,079**	**0.473**	**0.013**	

[a] Milepost numbers are slightly different between the 12-inch Sanford Lateral and the 26-inch Sanford Lateral Loop. For ease of presentation, milepost numbers shown in this table reference the 12-inch Sanford Lateral.
[b] PFO = Palustrine Forested, PSS = Palustrine Scrub/Shrub, PEM = Palustrine Emergent
[c] FD = Field delineated.
[d] Based on a 75-foot-wide construction corridor, acreage determined by geographic information system polygon measurements.
[e] LA-WL-001 is off line within Florida Gas's existing right-of-way. Florida Gas would temporarily install mats for access to the proposed construction right-of-way. LA-WL-002 is off line. Florida Gas would not impact LA-WL-002; WS = impacted by temporary workspace only.
[f] The proposed 12-inch Sanford Lateral and 26-inch Sanford Lateral Loop would cross each wetland at the same location in the same construction right-of-way, and would be operated within the same permanent right-of-way.
[g] These wetlands are permitted and mitigated for permanent fill by FDOT as part of its construction of the Wekiva Parkway.
[h] Florida Gas does not propose any impacts on SE-WL-008B. It would be excluded from the workspace for the proposed yard.

Florida Gas would apply for permits from the USACE and the FDEP for constructing proposed crossings of jurisdictional wetlands. As part of this permitting process, the USACE and FDEP would impose appropriate mitigation for the Project's impacts on wetlands, and consider the permanent vegetation conversion of forested wetlands. Florida Gas would obtain these permits prior to construction. Lastly, if an inadvertent return of drilling mud were to occur within wetlands during construction, increased turbidity or sedimentation could occur. Florida Gas would implement measures in its HDD Contingency Plan, which contains measures for avoidance and response, to minimize impacts on wetlands from inadvertent returns of drilling mud during construction. For these reasons, we conclude that the Project would not significantly impact wetlands.

Modifications to the FERC Procedures

Florida Gas would set back ATWS at least 50 feet from wetland boundaries except as noted in table 6. Florida Gas requests modifications to section VI.B.1.a. of the Procedures for three ATWS that would be within 50 feet of a wetland. Wetlands SE-WL-003, SE-WL-004, and SE-WL-005 are permitted to be filled during construction of FDOT's Wekiva Parkway. Impacts on wetlands LA-WL-003 and SE-WL-008 would be temporary and restored to pre-construction conditions. We find the siting and justification of these ATWS to be acceptable.

Table 6
Additional Temporary Workspaces Within 50 Feet of a Wetland

Milepost[a]	Wetland(s)	Purpose of ATWS
3.12 (12-inch)/3.16 (26-inch)	LA-WL-003	ATWS partially within a wetland is required for the tie-in of the proposed Sanford Lateral and the Sanford Lateral Loop relocations to existing lines. It is also required for access to existing pipelines for abandonment activities (cutting, capping, and filling with grout).
8.25 (12-inch)	SE-WL-003, SE-WL-004, SE-WL-005	ATWS within wetlands are needed for abandonment of existing pipelines and construction of relocations. These wetlands will be permanently filled by FDOT during construction of its Wekiva Parkway.
10.17 (12-inch) 10.21 (26-inch)	SE-WL-008	ATWS within 50 feet of a wetland is necessary for HDD rig placement for HDDs 2 and 2A. Moving the workspace to the east to avoid wetland SE-WL-008 would place the ATWS closer to an existing house (Structure ID D-8).

a Milepost numbers are slightly different between the 12-inch-diameter Sanford Lateral and the 26-inch-diameter Sanford Lateral Loop.

2.2 Groundwater

The Project area is located in Lake and Seminole Counties, Florida and is underlain by the Floridan aquifer. The Floridan aquifer system underlies an area of about 100,000 square miles in southern Alabama, southeastern Georgia, southern South Carolina, and all of Florida. The Floridan aquifer system provides water for Jacksonville, Tallahassee, Orlando, and St. Petersburg in Florida as well as smaller communities and rural areas. The aquifer is comprised of thick sequences of carbonate rocks (limestone and dolomite) of Tertiary age. The Project area is also underlain by a surficial aquifer. The surficial aquifer system in Florida includes any otherwise undefined aquifers that are present at land surface. The surficial aquifer is mainly used for domestic, commercial, or small municipal supplies. The surficial aquifer system is generally under unconfined, or water-table, conditions and is made up of mostly unconsolidated sand, shelly sand, and shell. Groundwater resources may be affected during various stages of construction, including clearing and grading, excavation and dewatering, and hydrostatic testing. Shallow aquifers could sustain negligible effects from temporary changes in overland water flow and recharge caused by clearing and grading of the temporary workspaces. In forested areas, water infiltration, which is normally enhanced by vegetation, could be reduced until vegetation is reestablished. To minimize impacts on groundwater and the aquifer during construction activities, Florida Gas would use best-management practices and measures in the Plan and Procedures, including use of sediment control measures such as filter bags, silt fences, and

dewatering structures, for dewatering and hydrostatic test water discharge activities. Most construction activities would be temporary and short-term. Therefore, we find that impacts on groundwater from construction activities would be adequately minimized through use of the measures described in the Plan and Procedures.

3.0 VEGETATION, WILDLIFE, AND SPECIAL STATUS SPECIES

3.1 Vegetation

The Project area consists primarily of upland forest (38.1 acres), residential/commercial land (28.7 acres), open land (24.3 acres), and wetland (3.8 acres). Forested upland in the Project area consists of mixed hardwood forest, xeric and mesic hammocks, and flatwoods. Residential/Commercial land type within the Project area includes existing roadways, residential areas and existing businesses. These areas are covered by concrete, gravel, and hard packed bare soil but also include some landscaping vegetation. Open land is characterized by low-growing herbaceous cover which has been previously disturbed within the existing Florida Gas 50-foot-wide permanent right-of-way, existing utility rights-of-way, and along State Road 46. This vegetative cover type also includes the Contractor Yard located on County Road 46A. PFO wetlands are dominated by woody vegetation 20 feet or taller, PSS wetlands are dominated by woody vegetation less than 20 feet tall, and PEM wetlands are characterized by rooted herbaceous and grass-like plants which stand erect above the water or ground surface (excluding mosses or lichen) (Cowardin, et al., 1979). Table 7 provides vegetation observed in the Project area for each cover type. No vegetation types of special concern would be impacted by the Project. Table 8 summarizes the Project's impacts on vegetation for construction and operation.

Table 7
Vegetation in the Project Area

Upland Forest	long leaf pine, slash pine, sweetgum, sand live oak, laurel oak, live oak, turkey oak, water oak, hackberry, black cherry, and red cedar
Residential/commercial	long leaf pine, slash pine, water oak, live oak, Bermuda grass, bahiagrass, dog fennel, longleaf pine, frog fruit, and ragweed
Open land	bahiagrass, dog fennel, bluestem, frog fruit
PFO Wetland	red maple, black gum, sweetgum, American hornbeam, American elm, slash pine, and bald cypress
PSS Wetland	Carolina willow, American elm, common rush
PEM Wetland	bluestem, common rush, viviparous spikerush, and maidencane

Table 8
Vegetative Communities Affected by Construction and Operation of the Project (in acres) [a, b]

Facility / County, State	Upland Forest		Open Land		Wetlands		Residential / Commercial		Total	
	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
12-inch Sanford Lateral and 26-inch Sanford Lateral Loo p										
Pipeline Right-of-Way	25.48	17.55	2.67	1.76	3.34 [c]	3.34 [c]	9.30	6.78	40.79	29.43
ATWS	4.06	0	5.83	0	0.47	0	6.22	0	16.58	0
Temp Access Roads	0.25	0	1.28	0	0	0	0.38	0	1.91	0
Perm Access Roads	0.02	0.02	0.16	0.16	0	0	0.10	0.10	0.28	0.28
Contractor Yards	8.32	0	14.37	0	0.01 [c]	0	12.65	0	35.35	0
Aboveground Facilities					0	0	0	0	0	0
12-inch LLV-17-22B	0.03	0.03	0	0						
Project Total	**38.13**	**17.57**	**24.31**	**1.92**	**3.82**	**3.34**	**28.65**	**6.88**	**94.91**	**29.71**

a The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the addends in all cases.
b Construction and operational impacts are calculated by geographic information systems (GIS).
c Land use calculations for wetlands include all areas within the Project boundaries. These acreages are different from actual proposed wetland impacts which are presented in table 2.3-1.
d LLV 12-22B would be constructed within proposed 85-foot-wide construction right-of-way and operated within the proposed 50-foot-wide permanent right-of-way for the 12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop.

Primary impact of construction of the Project facilities on vegetation would be the cutting, clearing, and/or removal of existing vegetation within the construction right-of-way. Some areas of forested wetland (0.013 acre, including wetlands permitted to be subsequently filled by FDOT) and upland forest (17.57 acres) would be within the permanent right-of way and undergo routine maintenance. After construction is complete, temporary workspaces within FDOT's right-of-way for the Wekiva Parkway would be left in a suitable condition until construction of the Wekiva Parkway commences. All other temporary workspaces would be revegetated in accordance with the Plan and Procedures. Given that the Project is collocated with much of FDOT's project area for the Wekiva Parkway and that all areas disturbed during construction would be restored and revegetated according to the Plan and Procedures or left in suitable condition until FDOT's construction activities commence, we conclude that the impacts on vegetation as a result of the Project would be minor.

Noxious Weeds and Invasive Species

Invasive or exotic plant species may alter natural systems by out-competing native plants for resources and replacing native plants in the composition of native communities. Both invasive species and noxious weeds are regulated by the Florida Department of Agriculture and Consumer Services, Division of Plant Industry within the state of Florida to prevent their introduction or further spread, and facilitate control or eradication if already present. The Florida

Department of Agriculture has currently identified about 75 noxious weeds that may occur in the state of Florida (Florida Department of Agriculture, 2016). General data was collected for invasive and noxious weeds for the Project. Cogongrass, air potato, and Chinese tallow tree and were identified during these surveys.

Ground disturbance from construction activities provide ideal conditions for the establishment of invasive plant species. Florida Gas would implement measures to minimize the potential to introduce or spread noxious and invasive vegetation species including:

- cleaning all equipment prior to bringing it to the Project site;
- limiting the amount of equipment operating in areas with known invasive species; and
- timely reseeding of desirable species to avoid establishment of undesirable species.

Florida Gas's restoration monitoring procedures stipulate that nuisance and exotic species within the areas disturbed by construction not exceed percent cover and composition of the adjacent undisturbed areas. Given Florida Gas's proposed measures for minimizing the spread and introduction of invasive species and restoration monitoring, we conclude that the Project would not have a significant impact due to the spread of invasive species.

3.2 Fisheries

The Project would two cross waterbodies: an ephemeral ditch and the Wekiva River. Ephemeral streams flow only in response to precipitation and are unlikely to contain sufficient water to support fisheries. The Wekiva River supports significant recreational fisheries and important breeding and spawning grounds for bass, sunfish, catfish, and tilapia. It also supports protected species such as the state-protected bluenose shiner. The Wekiva River would be crossed by HDD and no in-water work is proposed during construction or operation of the Project.

As discussed above, potential impacts from the inadvertent release of drilling fluids within the Wekiva River could result in temporary increases in turbidity and deposition of drilling mud along the bottom of the river. Florida Gas's drilling fluid would be a mixture of bentonite clay and water with no additives. Bentonite is non-toxic to aquatic life and is inert. Temporary turbidity and deposition of drilling mud on the bottom of the river would be limited to the area of release and areas immediately downstream and may temporarily displace fish species to adjacent undisturbed areas but would not likely result in mortality or long term impacts. Any temporary impacts to water quality and/or habitat would be remediated through flushing and natural flow of the river. These impacts would be of short duration, would be limited to the area of the release and would not result in permanent impacts. Florida Gas would monitor the drill trajectory during HDD operations to quickly identify and contain any inadvertent releases of drilling fluid. In the event of an inadvertent release of drilling fluid during HDD operations for installation of the proposed pipeline crossings, Florida Gas would adhere to the response measures in its HDD Contingency Plan. Given that all waterbodies would be crossed by HDD, along with measures in Florida Gas's HDD Contingency Plan, we conclude that fisheries would not be significantly impacted by the Project.

The NMFS Habitat Conservation Division commented on May 10, 2017 stating that it has no comments at this time, as the Project would not affect NMFS Trust Resources and an essential fish habitat assessment would not be required. We agree.

3.3 Wildlife

The Project would cross a variety of terrestrial and wetland habitats that support wildlife species. The vegetation cover types previously discussed describe the various habitat types available for wildlife species in the Project area: upland forests, residential/commercial, open land, and wetlands. Table 9 provides wildlife commonly found for each habitat type crossed by the Project.

Table 9
Wildlife Commonly Observed in the Project Area

Upland Forest	white-tailed deer, eastern cottontail rabbit, gray squirrel, cotton mouse, gray fox, American crow, bluejay, wild turkey, pileated woodpecker, eastern spadefoot, barking treefrog, eastern newt, timber rattlesnake, black rat snake
Residential/commercial	white-tailed deer opossum, raccoon, northern mockingbird, blue jay, Carolina wren, tufted titmouse, eastern and box turtle
Open land	cottontail rabbit, white-tailed deer, coyote, mice, eastern mole, mourning dove, common grackle, red-winged blackbird, eastern bluebird, red-tailed hawk, garter snake, southern black racer, gopher tortoise, green anole
Wetlands	muskrat, beaver, egrets, great blue heron, Canada goose, mallard duck, common snapping turtle, cottonmouth, banded watersnake

Significant and Sensitive Habitat

The Project would cross the Seminole State Forest and the Lower Wekiva River State Preserve. FDOT is acquiring temporary and permanent right-of-way agreements for Florida Gas's pipeline facilities from Seminole State Forest and the Lower Wekiva River State Preserve.

The Seminole State Forest is comprised of 27,082 acres consisting of two separate tracts in Lake County. The Seminole Tract is located within the Wekiva River Basin in eastern Lake County. The Seminole State Forest management responsibilities are shared among four separate agencies: Florida Forest Service, the Florida Fish and Wildlife Commission (FWC), St. Johns River Water Management District, and Division of Historical Resources (FDACS, 2013). Florida Gas's proposed Project enters the Seminole Tract at the far western end of the construction footprint and parallels its southern boundary up to the eastern bank of the Wekiva River. Seminole State Forest contains nearly all of the naturally occurring vegetation communities found in central Florida and provides a vital wildlife corridor for many protected species (FDACS, 2013).

Lower Wekiva River State Preserve is comprised of almost 18,000 acres in Lake and Seminole Counties of environmentally significant land, bordering six miles of the St. Johns River and the lower four miles of the Wekiva River and Black Water Creek. The system of blackwater streams and wetlands provides habitat for black bears, river otters, alligators, wood storks, and sandhill cranes (DRP, 2008). The Lower Wekiva River State Preserve is located in Seminole County to the east of the Wekiva River and is managed by the FDEP, Division of Recreation and Parks. Florida Gas's Project construction footprint enters the Lower Wekiva River State Preserve on its southern boundary that parallels State Road 46. Table 10 provides locations by milepost of the Project facilities location by milepost and length of crossing of the above significant wildlife habitat types.

Table 10
Significant Wildlife Habitat Types Affected by Construction and Operation of the Project

Wildlife Habitats	Enter (MP)[a]	Exit (MP)[a]	Crossing Length (feet)	Land Affected During Construction (acres)	Land Affected During Operation (acres)
12-inch-diameter Sanford Lateral and 26-inch-diameter Sanford Lateral Loop					
Seminole State Forest	2.65	3.17	2,327	5.18	2.43
	7.52	7.92	2,005	5.95	2.54
	8.00	8.13	716	1.14	1.14
		Total	**5,048**	**12.27**	**6.11**
Lower Wekiva River State Preserve	8.53	8.76	1,104	2.35	1.08
	8.88	9.04	1,038	2.30	1.21
		Total	**2,142**	**4.65**	**2.29**

a Milepost numbers (MP) are slightly different between the 12-inch-diameter Sanford Lateral and the 26-inch-diameter Sanford Lateral Loop. For ease of presentation, milepost numbers shown in this table reference the 12-inch-diameter Sanford Lateral.

Potential impacts on wildlife include habitat removal and construction-related ground disturbance and noise. Some individuals could be inadvertently injured or killed by construction equipment. However, more mobile species such as birds and mammals would likely relocate to other nearby suitable habitat and avoid the Project area once construction activities commence. Impacts on non-forested upland habitat would be temporary, and these areas are expected to recover quickly. Similarly, Project-related impacts on PEM wetland habitats would be short-term. Forested communities, both upland and wetland, would be affected to a greater extent, because of the long-term conversion of these wooded habitats to earlier successional stages in the temporary right-of-way and the permanent conversion to PEM wetland and/or non-woody herbaceous species in the permanent, maintained right-of-way. The majority of proposed temporary workspace is within FDOT's right-of-way and would be incorporated into construction of the new Wekiva Parkway. These areas would be under the control of the FDOT and not be permanently revegetated by Florida Gas, but would be left in a suitable condition after construction of the Project. Temporary disturbance of local habitat is not expected to have population-level effects on wildlife because the amount of habitat impacted represents only a small portion of the habitat available to wildlife throughout the general area.

Long-term impacts from habitat alteration would be further minimized by the implementation of the measures contained in the Plan, which would ensure revegetation of areas disturbed by construction outside of FDOT's right-of-way for the Wekiva Parkway. Further, FDOT, on behalf of Florida Gas, is consulting with the agencies responsible for the management of Seminole State Forest and Lower Wekiva River State Preserve to obtain agreements regarding construction and operation on these lands. Therefore, we conclude that the Project would not have a significant impact on wildlife or their habitat in the Project area.

Migratory Birds

Migratory birds are species that nest in the United States and Canada during the summer and then migrate to and from the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and bald and golden eagles are additionally protected under the Bald and Golden Eagle Protection Act. The MBTA, as amended, prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Further, Executive Order 13186 was enacted in 2001 to, among other things, ensure that environmental analyses of federal actions evaluate the impacts of actions on migratory birds. This Order directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the USFWS, and emphasizes species of concern, priority habitats, and key risk factors.

A variety of migratory birds may occur seasonally along the proposed Project route. The Project crosses the Peninsular Florida Bird Conservation Region, referred to as BCR31. Birds of Conservation Concern potentially occurring within the Project area include: Roseate spoonbill, swallow-tailed kite, bald eagle, American kestrel, Limpkin, Bachman's sparrow, common ground dove, brown-headed nuthatch, prairie warbler (USFWS, 2008).

Potential impacts on migratory birds include habitat loss, disruption of foraging adults, and abandonment or destruction of active nests. Increased human activity and noise from pipeline construction could result in short-term disturbance of migratory bird habitat, causing birds in the Project area to avoid the area and/or relocate during periods of active construction. The proposed Project has the potential to alter migratory bird foraging and nesting habitat; however, such impacts would be minimal given the amount of similar undisturbed habitats available. Florida Gas would install the pipelines via HDD for a significant portion of the Project, minimizing clearing and potential impacts on migratory bird habitat. In addition, Florida Gas would limit clearing and ground disturbance to approved work areas and would utilize workspace that overlaps the FDOT's workspace, further minimizing the amount of clearing required solely for pipeline construction. Florida Gas would provide environmental training for construction personnel including specific instructions that no wildlife, including migratory birds, is to be harmed during construction activities. Florida Gas's EI would monitor construction activities and work areas in an effort to ensure that regulations and protective measures are implemented as required by all environmental permits and authorizations.

The bald eagle is present within the state of Florida. While it has been removed from the USFWS Endangered Species List (ESA) list in August 2007 and the FWC state list of threatened

species in 2008, it is still protected under the MBTA and Bald and Golden Eagle Protection Act. Eagles typically use mixed conifer and hardwood forests with large, accessible trees for roosting and nesting. While there is potential habitat for bald eagles, no bald eagles nests were observed during field surveys. Potential impacts on bald eagle nesting and foraging habitat would be minimal due to abundant undisturbed habitat adjacent to the Project area. If nesting bald eagles are observed in the Project area during construction, Florida Gas would adhere to measures in the Florida State Bald Eagle Management Plan of 2008, which is based on USFWS' National Bald Eagle Management Guidelines (2007), which stipulates a 660-foot buffer between active nests and activities that may disturb nesting eagles. Because no nests were observed in the Project area and Florida Gas's commitment to adhere to measures in the Florida State Bald Eagle Management Plan of 2008, we conclude that the Project would not impact bald eagles.

We did not identify any bird species of special concern, priority habitats, key risk factors, or any population-level impacts. For the reasons listed above, we find that the Project would not significantly affect migratory bird species within the Project area.

Florida Gas submitted a letter dated March 3, 2017 to the USFWS North Florida Ecological Services Office and requested comments on its Biological Assessment, which included mitigation measures for migratory birds. On March 13, 2017, the USFWS concurred with determinations in the Biological Assessment. No further comments have been received to date.

3.4 Special Status Species

Special status species are those species for which state or federal agencies provide an additional level of protection by law, regulation, or policy. Included in this category for the purposes of this EA are federally listed species that are protected under Section 7 of the Endangered Species Act (ESA), species that are state-listed as threatened or endangered, and state species of special concern.

Section 7(a)(2) of the ESA requires the Commission to ensure that any action it authorizes, funds, or carries out would not jeopardize the continued existence of federally listed or proposed listed species, or result in the adverse modification or destruction of critical habitat for federally listed and proposed species. As the lead federal agency for the Wekiva Parkway Relocation Project, FERC is responsible for the ESA consultation with the USFWS. Species classified as candidates for listing under the ESA do not currently carry regulatory protection but, if applicable, are typically considered during our assessment as they may be listed in the future. Similarly, species protected under state statutes do not carry regulatory protection under the ESA but impacts are reviewed if the applicable agency indicates its potential presence in the Project area during consultation. Table 11 lists the special status species with potential to occur in the Project area.

As our non-federal representative, Florida Gas consulted with the USFWS – North Florida Ecological Services Office to determine whether any federally listed threatened or endangered species, federal species of concern, or designated critical habitats occur in the Project area Florida Gas consulted with FWC regarding state listed species and habitats.

Based on database research for the Project area, field surveys and determinations by USFWS and FWC for FDOT's Wekiva Parkway, the wood stork, eastern indigo snake, gopher tortoise, Sherman's fox squirrel, and burrowing owl may be affected by the Project. Florida Gas also conducted field surveys in November 2015 and July 2016 in the Project area. Gopher tortoise burrows were identified within the survey area. No other federally- or state-listed species were observed.

Wood Stork

Wood storks are federally- and state-listed as threatened. Florida Gas would avoid impacts on wood stork foraging habitat (e.g., wetlands, waterbodies) within the Project area by installing the proposed pipelines via HDD. Potential impacts on wood storks would be of short duration limited to temporary disturbance in localized areas during active construction. Based on this information, we conclude that the Project *may affect, but is not likely to adversely affect* the wood stork.

Eastern Indigo Snake

Eastern indigo snakes (federally listed as threatened wherever found) were not observed during surveys. However, they have been known to occupy dens of gopher tortoises as a commensal species. In the rare event that the Eastern Indigo Snake is located during construction activities, Florida Gas would adhere to USFWS Standard Protections Measures for the snake during construction. Therefore, we conclude that the Project *may affect, but is not likely to adversely affect* the eastern indigo snake.

Gopher Tortoise

Gopher tortoises are federally designated as "candidate species for possible listing later under the ESA" and are state-listed as threatened. If dens or tortoises are observed on the right-of-way during construction, generally, Gopher tortoises would be relocated in Florida under authorization from the FWC. Florida Gas would relocate gopher tortoises out of the proposed workspace under permit from the FWC. Authorized biologists would scope affected burrows prior to excavation to determine if burrows are occupied by tortoises or contain protected commensal species, particularly the eastern indigo snake. For these reasons, we conclude that the Project *may affect, but is not likely to adversely affect* the gopher tortoise.

Conclusion regarding Federally Listed Species

In a letter dated March 3, 2017, Florida Gas submitted a Biological Assessment to the USFWS and requested concurrence with its findings and determinations of effect. The USFWS concurred with determinations for all federally listed species on March 13, 2017. We also reviewed this information and agree, and therefore, consultation pursuant to Section 7 of the ESA is complete for this Project.

Sherman's Fox Squirrel

Sherman's fox squirrel is state-listed as a species of special concern and has no federal designation. While there is potential habitat in the Project area, there is also abundant undisturbed habitat adjacent to the Project area for individuals that may be displaced during construction activities. As recommended by FWC, Florida Gas would conduct preconstruction surveys for the Sherman's fox squirrel. Surveys would include all proposed workspace and areas within 125 feet of proposed construction activities. In the event the Sherman's fox squirrel is found within areas affected by the Project, Florida Gas would avoid known locations and adhere to protection measures as required by FWC and/or obtain necessary permits for specific locations where avoidance is not feasible. Therefore, we conclude that the Sherman's fox squirrel would not be adversely affected by the Project.

Florida Burrowing Owl

In a letter dated April 19, 2017 in response to Florida Gas's Biological Assessment, the FWC identified the Florida burrowing owl within the Project footprint based upon current site conditions and nearby observations. Burrowing owls are found in open areas with low vegetation, such as prairies, agricultural fields, golf courses, airports, and vacant lots in residential and commercial areas. The FWC specifically pointed out the pasture areas on the south side of County Road 46A, just west of the intersection with SR 46 to potentially contain suitable habitat. FWC recommended surveying for Florida burrowing owls in areas of suitable habitat prior to the commencement of construction to ensure that no active burrowing owl burrows exist onsite. Florida Gas has committed to the recommendations of the FWC and would conduct preconstruction surveys for the Florida burrowing owl. Surveys would include all proposed workspace and areas within 150 feet of proposed construction activities. In the event the Florida burrowing owl is found within areas affected by the Project, Florida Gas would avoid known locations and adhere to protection measures as required by FWC and/or obtain necessary permits for specific locations where avoidance is not feasible. Therefore, we conclude that the Project would not adversely affect the Florida burrowing owl.

The Florida Fish and Wildlife Conservation Commission stated that the Wekiva Parkway Project would likely have impacts on several listed species, but with careful planning and certain considerations, those impacts can be minimized and not adversely affect listed species populations. We concur.

Table 11

Federally and State-listed Endangered & Threatened Species with Potential to Occur in the Project Area [a]

Common Name ***Scientific Name***	**Federal [b] Status**	**State [c] Status**	**Habitat Assessment/ Project Impact Determination**
Birds			
Florida Scrub-jay (*Aphelocoma coerulescens)*	T	FT	No true scrub habitat present. ***No effect.***
Red Knot (*Calidris canutus rufa*)	T	-	No coastal habitat present. ***No effect.***
Red-cockaded Woodpecker (*Picoides borealis*)	E	FE	No mature 80-120-year-old longleaf or loblolly pine forest present. ***No effect.***

Table 11

Federally and State-listed Endangered & Threatened Species with Potential to Occur in the Project Area [a]

Common Name ***Scientific Name***	**Federal [b] Status**	**State [c] Status**	**Habitat Assessment/ Project Impact Determination**
Wood Stork (*Mycteria americana*)	T	FT	Habitat present. USFWS and FWC issued finding of "May affect, not likely to adversely affect" for FDOT's Wekiva Parkway Project. ***May affect, not likely to adversely affect.***
Southeastern American Kestrel (*Falco sparverius paulus*)	-	ST	Some foraging and nesting habitat available. FWC issued finding of "No effect" for FDOT's Wekiva Parkway Project ***No effect.***
Florida Sandhill Crane (*Grus canadensis pratensis*)	-	ST	Habitat present. ***No effect***
Least Tern (*Sternula antillarum*)	-	ST	No coastal habitat present. ***No effect.***
Florida Burrowing Owl *(Athene cunicularia floridana)*	-	ST	FWC identified potential for suitable habitat and nearby observations. ***Not likely to adversely effect.***
Reptiles/Amphibians			
Eastern Indigo Snake (*Drymarchon corais couperi*)	T	FT	Habitat present. USFWS and FWC issued finding of "May affect, not likely to adversely affect" for FDOT's Wekiva Parkway Project. Commensal species with Gopher Tortoise. Florida Gas would adhere to USFWS Standard Protection Measures for the Eastern Indigo Snake. ***May affect but not likely to adversely affect.***
Sand Skink (*Neosep reynoldsi*)	T	FT	Elevation in Project area not suitable for habitat. Project outside of USFWS consultation area. ***No effect.***
Gopher tortoise (Gopherus polyphemus)	C	ST	Habitat present within footprint. FWC issued finding of "May affect, not likely to adversely affect" for FDOT's Wekiva Parkway Project. Species observed during field surveys. Florida Gas would relocate tortoises within 25 feet of construction activities under permit from FWC. ***May affect, not likely to adversely affect***
Short-tailed Snake (Lampropeltis extenuata)	-	ST	Potential habitat present. FWC issued finding of "No Effect" for FDOT's Wekiva Parkway Project. ***No effect.***
Mammals			
West Indian Manatee (*Trichechus manatus*)	E	FE	No canals or marine areas within project footprint. ***No effect.***

Table 11

Federally and State-listed Endangered & Threatened Species with Potential to Occur in the Project Area [a]

Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment/ Project Impact Determination
Sherman's Fox Squirrel *(Sciurus niger shermani*)	-	SSC	Habitat present. FWC issued finding of "May affect, but not likely to adversely affect" for FDOT's Wekiva Parkway Project. ***Not likely to adversely effect.***
Plants			
Britton's Beargrass (*Nolina brittoniana*)	E	E	Habitat marginal, some scrub, pine, and hammock habitat available but not ideal. Recorded in other parts of Lake County west of Lake Apopka but not known to occur in the Project area. ***No effect***
Florida Bonamia (*Bonamia grandiflora*)	T	E	Habitat marginal, sparse true scrub areas. Known mostly to occur in Ocala National Forest. Not known to occur in immediate Project area. ***No effect.***
Lewton's Polygala (*Polygala lewtonii*)	E	E	Some transitional pine and turkey oak habitat but not ideal. Fire-dependent for habitat. Project area fire-excluded. ***No effect.***
Okeechobee Gourd (*Cucurbita okeechobeensis ssp. okeechobeenis*)	E	E	No pond apple swamps within the Project footprint. ***No effect.***
Papery Whitlow-wort (*Paronychia chartacea*)	T	E	Elevation in Project area not high enough for proper growth. ***No effect.***
Pigeon Wings (*Clitoria fragrans*)	T	E	Sparse true scrub habitat located along the Project footprint. Fire-dependent species. Project area fire-excluded. Species has not been recorded in Lake County in decades. ***No effect.***
Pygmy Fringe-tree (*Chionanthus pygmaeus*)	E	E	Habitat marginal, some xeric hammock present. No ridges along Project footprint. Fire- dependent species. Project area fire-excluded. ***No effect.***
Scrub Buckwheat (*Eriogonum longifolium car. gnaphalifolium*)	T	E	Little to no turkey oak barrens present. ***No effect.***

[a] Source - FNAI, 2016; FWS, 2017

[b] E – Endangered; T – Threatened; C – Candidate species for listing

[c] FE – Florida listed Federally Endangered; FT – Florida listed Federally Threatened; ST – Florida State Threatened; E – Endangered; T – Threatened; SSC – Special Species of Concern

4.0 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act, as amended, requires the FERC to take into account the effects of its undertakings on properties listed, or eligible for listing, on the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation an opportunity to comment. Florida Gas, as a non-federal party, is assisting the FERC in meeting our obligations under Section 106 and its implementing regulations at 36 CFR Part 800.

Florida Gas completed a cultural resources survey for the Project and provided a Phase I survey report (Arbuthnot, June 2017) to the FERC and the Florida State Historic Preservation Office (SHPO). The survey included a 9- to 28-meter-wide corridor for the pipeline replacement areas, temporary workspaces, and contractor yards. Approximately 92 acres were visually inspected and further examined with 143 shovel test units. The survey also included an assessment of architectural resources within 100 meters of the construction work areas.

As a result of the survey, three newly recorded archaeological sites (8LA04509, 8LA04510, and 8LA04520, all small prehistoric artifact scatters), two isolated finds, and five historic dwellings (8SE02902 [ca. 1953], 8SE02903 [ca. 1957], 8SE02904 [ca. 1925], 8SE02905 [ca. 1963], and 8SE02909 [ca. 1964]) were identified. In addition, two previously recorded linear resources, the Seaboard Coast Line Railroad Grade (8LA02957), and State Route 46 (8LA03584/8SE01953), and two previously recorded historic dwellings (8SE01955 [ca. 1925] and 8SE02192 [ca. 1920]) were revisited. All but one of the resources were recommended, or previously determined, as not eligible for the NRHP. The Seaboard Coast Line Railroad Grade had previously been determined eligible for the NRHP. Florida Gas recommended that the surveyed portion of the grade be considered non-contributing to NRHP eligibility due to lack of integrity. In addition, the grade is located south of the project area, outside the project footprint.

In a letter dated June 21, 2017, the SHPO concurred with the recommendations in the report, with the clarification that Seaboard Coast Line Railroad Grade remained NRHP-eligible despite the portion of the resource with deteriorated integrity in the Project area, and that the proposed Project would have no adverse effect on the grade or any other historic properties. We agree, and have determined that the Project would have no adverse effect on historic properties.

Florida Gas contacted the following Native American tribes, providing a Project description and mapping, and also sent project update follow-up letters: Eastern Shawnee Tribe of Oklahoma; Miccosukee Tribe of Indians of Florida; Muscogee (Creek) Nation; Seminole Nation of Oklahoma; and Seminole Tribe of Florida. On September 9, 2016, the Miccosukee Tribe of Indians of Florida provided updated contact information, and indicated no objection to the Project proceeding, though its only concern was regarding any known burials in the project area. On January 24, 2017, the Seminole Nation of Oklahoma indicated interest in the project, and requested information on the flora in the area, which Florida Gas provided. In a letter dated March 27, 2017, the Seminole Tribe of Florida requested the survey report and consultation with the FERC. Florida Gas provided all the tribes with the survey report. No other responses have been received.

We sent our NOI to the same five tribes. On June 1, 2017, the Seminole Tribe of Florida requested a copy of the survey report. As noted above, Florida Gas provided the tribe with the report. On June 6, 2017, the Seminole Nation of Oklahoma requested the survey report, a listing of flora in the area, and to be notified of inadvertent discoveries. Florida Gas provided the tribe with the requested information. The Project unanticipated discovery plan provides for notification of tribes in the event of a discovery during construction. No other responses to our NOI have been received.

Florida Gas provided a plan to address the unanticipated discovery of historic properties and human remains during construction. We requested minor revisions to the plan. Florida Gas provided a revised plan which we find acceptable.

5.0 LAND USE, RECREATION, AND VISUAL RESOURCES

5.1 Land Use

Construction of the Project would disturb about 94.91 acres of land during construction and permanently affect 29.71 acres for operation. The Project would affect residential/commercial, open land, forested upland and wetland land use types. Table 8, above, shows the amount of acreage affected by construction and operation of the Project for each land use type.

Elaine Smialek expressed concern about the location of pipeline placement on her property, including access, HDD drilling activities, equipment storage, tree clearing, and use of mud pits. Florida Gas responded to these concerns, stating that any HDD drilling activities and material storage would not occur on her private property, but on State-owned property. Also, no tree clearing is anticipated on the landowner's property, and from our review, it appears that access to the HDD drilling site would be directly from State Road 46. Ms. Smialek also has concerns about future personal development of her property. Any future development activity, across or along, Florida Gas' easement, would be addressed through acquisition of additional easement agreement with Florida Gas. Landowners may be prohibited or be restricted from building future structures that may conflict with the pipeline within the permanent easement. These matters would be addressed during negotiations between the landowner and the pipeline company in the easement process.

There are several residences listed within 50 feet of Florida Gas's proposed right-of-way. Many are to be removed by FDOT through its land acquisition process according to Florida state practice. This would be done prior to Florida Gas's construction activities. For residences within 50 feet of the proposed construction right-of-way that are not being removed, Florida Gas would adhere to the following Plan requirements:

- avoid removal of mature trees and landscaping within the construction workspace unless necessary for safe operation of construction equipment;

- fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and

- restore all lawn areas and landscaping immediately following cleanup operations.

Site-specific plans for residences within 25 feet of the Project can be found in appendix C. We have reviewed these plans and find them acceptable.

5.2 Recreation

Portions of the Project would be within the Seminole State Forest in Lake County and the Lower Wekiva River State Preserve in Seminole County. The Seminole State Forest is primarily used for recreation such as camping, hiking, biking, fishing and hunting. Primary uses of the Lower Wekiva River State Preserve are recreational, including camping, hiking, canoeing and wildlife viewing. The final right-of-way agreement would contain specific requirements regarding proposed construction and any mitigation measures that may be required to minimize interruption of recreational activities. Table 12 shows all recreational and special use areas affected by construction of the Project. Because of the location and limited scope of the construction and operation of facilities at the Project site, minimal impacts are expected on recreational activities in the Project area.

Table 12
Public, Recreation and Special Use Areas Affected by Construction and Operation of the Project

Facility /Significant Habitat	Enter (MP) [a]	Exit (MP) [a]	Crossing Length (feet)	Land Affected During Construction (acres)	Land Affected During Operation (acres)
12-inch Sanford Lateral and 26-inch Sanford Lateral Loop					
Seminole State Forest	2.65	3.17	2,327	5.18	2.43
	7.52	7.92	2,005	5.95	2.54
	8.00	8.13	716	1.14	1.14
Total			**5,048**	**12.27**	**6.11**
Lower Wekiva River State Preserve	8.53	8.76	1,104	2.35	1.08
	8.88	9.04	1,038	2.30	1.21
Total			**2,142**	**4.65**	**2.29**

[a] Milepost numbers are slightly different between the 12-inch-diameter Sanford Lateral and the 26-inch-diameter Sanford Lateral Loop. For ease of presentation, milepost numbers shown in this table reference the 12-inch-diameter Sanford Lateral.

FDOT, through the state of Florida's land acquisition process, would acquire the right-of-way agreement with Seminole State Forest and Lower Wekiva River State Refuge. FDOT, on behalf of Florida Gas, is consulting with the agencies responsible for the management of Seminole State Forest and Lower Wekiva River State Preserve to obtain agreements regarding construction and operation on these lands.

5.3 Visual Resources

FDOT would remove all existing structures within its right-of-way and the proposed Florida Gas construction right-of-way as part of its construction of the Wekiva Parkway. All

structures would be removed prior to Florida Gas's proposed Project activities begin. A complete list of structures within 50 feet of the Project can be found in table 8.2-1 located in appendix B.

The Wekiva River would be the only visually sensitive area potentially affected by the Project. The Project would cross the Wekiva River by HDD with entry and exit points approximately 1,500 feet from the river. Therefore, the Project would not result in visual impacts to the Wekiva River

5.4 Coastal Zone Management Areas

The Project would be within the geographical boundaries of the Florida Coastal Zones and subject to coastal zone consistency in Florida. Florida Gas submitted an application to FDEP in April 2017 for a coastal zone consistency determination included with a Joint Application for Environmental Resource Permit. Florida Gas would be required to receive the consistency determination prior to construction. Therefore **we recommend that**:

- **Florida Gas <u>should not begin construction</u> of the Project until it files with the Secretary a copy of the determination of consistency with the Coastal Zone Management Plan issued by the FDEP.**

6.0 AIR QUALITY AND NOISE

6.1 Air Quality

Air quality would be affected by construction of the Project. During construction, short-term emissions would be generated by operation of equipment, land disturbance, and increased traffic from worker and delivery vehicles. Florida Gas does not propose any new, or changes to existing, compressor stations or operating emission sources as part of the Project; and therefore, no air permitting actions are required.

Ambient air quality is protected by federal and state regulations. Under the Clean Air Act (CAA) and its amendments, the EPA has established National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), lead, nitrogen dioxide, ozone, particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and sulfur dioxide (SO_2). These standards incorporate short-term (hourly or daily) levels and long-term (annual) levels to address acute and chronic exposures to the pollutants, as appropriate. The NAAQS include primary standards, which are designed to protect human health, including the health of sensitive subpopulations such as children and those with chronic respiratory problems. The NAAQS also include secondary standards designed to protect public welfare, including economic interests, visibility, vegetation, animal species, and other concerns not related to human health. Florida has adopted all of the NAAQS.

Areas of the country in violation of the NAAQS are designated by EPA as nonattainment areas. Areas formerly designated as nonattainment that have subsequently reached attainment are designated maintenance areas for that pollutant. New sources to be located in or near nonattainment or maintenance areas may be subject to more stringent air permitting requirements. The EPA and state and local agencies have established a network of ambient air

quality monitoring stations to measure and track the background concentrations of criteria pollutants across the United States. The Project is located in the Central Florida Interstate Air Quality Control Region, which is designated as Attainment/Unclassifiable for all criteria pollutants.

The EPA now defines air pollution to include greenhouse gases (GHG). The most common GHGs emitted during fossil fuel combustion and natural gas transportation are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Emissions of GHGs are typically expressed in terms of CO_2 equivalents (CO_{2e}), where the potential of each gas to increase heating in the atmosphere is expressed as a ratio relative to carbon dioxide over a specific timeframe, or its global warming potential (GWP). Thus the GWP of CO_2 is 1, CH_4 is 25 and N_20 is 298.[3] During construction of the Project, these GHGs would be emitted from non-electrical construction equipment. Because the Project involves the relocation of existing pipelines, there would be no net increase of fugitive methane leaks from the pipeline, and no change in downstream GHG emissions from natural gas combustion. In compliance with EPA's definition of air pollution to include GHGs, emission estimates of GHGs[4] for construction, are presented below.

Construction of the Project would result in short-term increases in emissions of some pollutants from the use of fossil fuel-fired equipment and the generation of fugitive dust due to earthmoving activities. Some temporary indirect emissions, attributable to construction workers commuting to and from work sites during construction and from on-road and off-road construction vehicle traffic, could also occur. Large earth-moving equipment and other mobile equipment are sources of combustion-related emissions, including criteria pollutants (i.e., NO_x, CO, VOC, SO_2, and PM_{10}). Construction emissions are presented in table 13 for the Project. These emissions present the emissions of construction equipment combustion, on-road vehicle travel, off-road vehicle travel, and earthmoving fugitives. Detailed emissions for each activity are provided in Florida Gas's Resource Report 9 to its application and supplemental filings.

3 These GWPs are based on a 100-year time period. We have selected their use over other published GWPs for other timeframes because these are the GWPs EPA has established for reporting of GHG emissions and air permitting requirements. This allows for a consistent comparison with these regulatory requirements.

4 Detailed emission calculations were provided in Florida Gas's application filed on March 16, 2017. Detailed emissions calculations can be found on the FERC eLibrary website using Accession Number 20170329-3037

Table 13 Estimated Construction Emissions (tons)							
Source	**CO**	**NO_x**	**SO_2**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Construction Equipment	63.85	27.26	0.04	3.78	1.49	1.48	5,253
Deliveries/Commutes	1.30	0.35	3.07E-03	0.06	0.01	0.01	237
Fugitive Dust	0	0	0	0	32.26	3.61	0
Total	**65.15**	**27.61**	**0.04**	**3.84**	**33.76**	**5.10**	**5,490**

Construction related emission estimates were based on a typical construction equipment list, hours of operation, and vehicle miles traveled by the construction equipment and supporting vehicles for the Project area. Florida Gas conservatively utilized emission factors from the Western Regional Air Partnership Fugitive Dust Handbook (2006), along with EPA's NONROAD2008a, MOVES 2010b and MOVES2014 emission modeling softwares to estimate construction emissions.

Construction of the Project would occur between March 2018 and October 2018 with activities lasting a few weeks at any given location. The air quality impacts of project construction are considered short-term and would be further minimized by Florida Gas's implementation of fugitive dust control measures such as watering exposed soil surfaces, applying temporary mulch and expediting restoration and revegetation activities. Following construction, air quality would revert back to previous conditions. Given the relatively small amount of pipeline to be replaced, the temporary nature of construction, and the intermittent nature of construction emissions, we find that emissions from construction-related activities for the Project are not expected to cause or significantly contribute to a violation of any applicable ambient air quality standard, or significantly affect local or regional air quality.

6.2 Noise

Construction of the Project would temporarily affect the local noise environment in the Project area. The Project does not involve the construction or use of any new permanent noise sources. Therefore, there would be no impact on noise levels during operation of the Project.

The ambient sound level of a region, which is defined by the total noise generated within the specific environment, is usually comprised of sounds emanating from both natural and artificial sources. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of the day and throughout the week, in part due to changing weather conditions and the impacts of seasonal vegetative cover.

In 1974, the EPA published its Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Noise levels are expressed as decibels on the A-weighted scale (dBA) to put more emphasis on frequencies in the range that humans hear best. Because noise levels are perceived differently, depending on length of exposure and time of day, the day-night sound level (L_{dn}) takes into account the duration and time the noise is encountered. Specifically, the L_{dn} adds 10 dBA to nighttime sound levels between the hours of 10 p.m. and 7 a.m. to account for a people's greater sensitivity to sound during the night. The EPA has indicated that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. We have adopted this criterion and use it to evaluate the

potential noise impacts from the proposed Project at noise sensitive areas (NSAs), such as residences, schools, or hospitals. Also, in general, a person's threshold of perception for a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 5 dBA change is clearly noticeable, and a 10 dBA change is perceived as either twice or half the loud.

The State of Florida has not adopted any noise regulations applicable to construction and operation of the Project.

Seminole County has noise ordinances that outline limits on allowable sound levels at residential property lines, with exemptions for construction activities proceeding under a valid governmental permit. Lake County has a noise control ordinance with an exemption for construction activities of commercial or industrial structures permitted by the property's jurisdictional agency. The Project is exempt from the provisions of the Seminole County noise ordinance and Lake County noise control ordinance.

Noise would be generated during the installation of the Project components. Construction activities would be intermittent and temporary, involving operation of general construction equipment. Measures to mitigate construction noise would include compliance with federal regulations limiting noise from trucks, proper maintenance of equipment, and ensuring that sound muffling devices provided by the manufacturer are kept in good working condition.

Florida Gas proposes to utilize the HDD method for five crossing locations. An HDD noise study was performed for the five HDD crossing locations proposed for the Project. Each HDD crossing is estimated to take about 14 days to complete. Sound sources from HDD entry and exit sites would include the drilling rig, mud pumps and generators, drilling mid mixers, shale shakers, light plants, front-end loaders, forklifts, backhoe, bulldozer and trucks. Predicted noise contribution from HDD equipment was calculated for each NSA and are shown in table 14 below.

Table 14
Calculated HDD Sound Level Contribution

HDD Entry/Exit	MP	Distance to Closest NSA (feet)	Measured Ambient Ldn (dBA)	Daytime Drilling Ldn (dBA)	Combined Ldn (dBA)	Increase at Nearest NSA (dBA)
Entry 1	7.87	700 SE	59.1	53.6	60.2	1.1
Exit 1	8.45	500 SW	57.5	45.4	57.8	0.3
Entry 2	9.97	130 NE	56.3	74.8	74.9	18.6
Exit 2	10.17	640 SW	54.8	57.3	59.2	4.4
Entry 3	10.20	150 NE	56.3	74.6	74.7	18.4
Exit 3	10.43	260 NW	54.4	59.7	60.8	6.4
Entry 4	10.71	120 NE	55.0	76.7	76.7	21.7
Exit 4	11.00	630 NNE	54.8	56.2	58.6	3.8
Entry 5	11.13	100 N	56.4	79.3	79.3	22.9
Exit 5	11.30	520 E	54.4	57.8	59.4	5.0

Predicted HDD sound levels would be similar in nature to sound levels from construction equipment along the pipeline. Florida Gas proposes to mitigate sound levels from HDD activities by committing to drilling during daytime hours only. Florida Gas would also respond to specific concerns by landowners during HDD activities for mitigation measures specific to each site that could include higher performance exhaust mufflers, noise barriers, or partial enclosures. If such measures are not practical for the given work area, Florida Gas would pursue temporary relocation or compensation for any residents that express concern. Considering the proposed two week daytime-only drilling timeline given by Florida Gas, noise impacts on NSAs from HDD activities would not be significant.

Construction noise would be highly variable because the types of equipment in use at a construction site changes with the types of construction activities. Noise from construction activities may be noticeable at nearby NSAs; however, construction equipment would be operated on an as-needed basis during the short-term construction period. Further, Florida Gas would limit construction activities to occur during daytime hours.

Based on the construction noise analyses conducted and the scope of the Project, we conclude that the Project would not result in significant noise impacts on residents and the surrounding communities.

7.0 RELIABILITY AND SAFETY

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

The pipeline and aboveground facilities associated with the project must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures.

The DOT pipeline standards are published in Parts 190-199 of Title 49 of the CFR. For example, Part 192 of 49 CFR specifically addresses natural gas pipeline safety issues, prescribes the minimum standards for operating and maintaining pipeline facilities, and incorporates compressor station design, including emergency shutdowns and safety equipment. Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency.

The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials.

Facilities associated with Florida Gas's Wekiva Parkway Relocation Project must be designed, constructed, operated, and maintained in accordance with DOT standards, including the provisions for written emergency plans and emergency shutdowns. Florida Gas would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

The DOT requires all operators of natural gas transmission pipelines to notify the DOT of any significant incident and to submit a report within 30 days. The available data through DOT shows that natural gas transmission pipelines continue to be a safe, reliable means of energy transportation. Because the Project is a replacement of pipeline, the overall risk for an incident to occur at any given location distributed over the operating transmission pipeline would remain the same (i.e. very low).

8.0 CUMULATIVE IMPACTS

Cumulative impacts would be the result of multiple projects' impacts on the resources located near the Project areas. Although the individual impact of the separate projects might be minor, the additive or synergistic effects from multiple projects could be significant. Cumulative impact is the incremental impact on the environment of multiple projects occurring within the same timeframe and vicinity as the proposed action. When evaluating cumulative impacts, we consider past, present, and reasonably-foreseeable future projects within the area affected by the proposed Project. Table 15 presents the resources which may be affected by the Project and have the potential for cumulative impacts. Table 15 also identifies the assessment area, or geographic scope, for each resource in which impacts have the potential to be cumulative.

Table 15 Geographic Scope for Cumulative Impact Analysis	
Environmental Resource	**Area of Impact**
Soils and Geology	Construction Workspaces.
Groundwater, Wetlands and Vegetation	Hydrologic Unit Code (HUC) 12 Watershed.
Wildlife/Migratory birds/Sensitive and Protected Species	Hydrologic Unit Code (HUC) 12 Watershed.
Surface Water Resources	Hydrologic Unit Code (HUC) 12 Watershed.
Land Use	1 mile radius.
Visual	0.25 mile radius

Cumulative impacts are not assessed for cultural resources,as the Project would have negligible impacts on these resources. In addition, air quality and noise impacts would be limited to duration of construction activities only, considered to be temporary and short-term. Cumulatively, these impacts are also minor.

Present and reasonably foreseeable projects and other human related activities that have been identified that may result in cumulative impacts when combined with the effects of the Project are presented in table 16 below. This area has several existing residential developments including Grass Lake Estates, Wekiva Park Subdivision, and Wekiva Falls that were completed in recent years. Identified projects that could contribute to cumulative impacts include construction of FDOT's Wekiva Parkway, Seminole County Lake Sylvan Outfall Improvements, Deer Lakes residential development, Reformation Bible College Student Learning Center and Pearl Lake Estates residential development. The projects listed in table 16 will be constructed either about the same time, or soon after Florida Gas' project, with the latest being constructed in 2022.

Table 16 Projects Considered in the Cumulative Impact Analysis		
Development	**Distance from Project (feet)**	**Status**
Lake Sylvan Outfall Improvements	590ft south	Completion estimated 2018
Deer Lakes	400ft north	Completion estimated 2020
Reformation Bible College Student Learning Center	1,630ft southeast	Completion estimated 2022
Pearl Lake Estates	3,930ft south	Completion estimated 2018

The general geographic scope for geological resources is considered the project footprint during the period of construction for the Project. Construction of FDOT's Wekiva Parkway would occur in the same geographic region as the Project, as the footprints overlap by 47.23 acres, so geographic features may be affected by both projects. Minor impacts on surface features would occur during construction of the Project facilities. Because there is a very low probability that an earthquake of sufficient magnitude would occur within the proposed Project area, neither the Project nor Wekiva Parkway would be affected by seismically related geologic hazards, including liquefaction. In addition, the proposed Project area has a very low potential for landslide incidence, and instances of land subsidence in the Project area have not been identified. Given the proximity of other identified projects, relative distance to active mining or mineral resource exploration, and low probability of geologic hazards, no anticipated cumulative impacts on geologic resources are expected as a result of the Project.

Potential cumulative impacts associated with soil resources may include loss of agricultural land use at a regional level or diminished fertility of soils directly affected by projects. Depending on soil conditions, localized soil impacts from construction and post-construction monitoring activities may potentially include loss of excavated soil from water and wind erosion, soil compaction from construction equipment and mixing of topsoil and subsoil horizons. The geographic scope utilized for potential cumulative impacts on soil resources is the construction workspace; only the FDOT Wekiva Parkway Project would contribute to cumulative impacts on soils for the Project, since they share construction workspace components. The roadway and relocated portions of the pipelines would be collocated with FDOT's Wekiva Parkway right-of-way for the entire length of the Project. The collocation planning minimizes impacts of the two projects together. Florida Gas would utilize sediment and erosion controls that would be implemented in accordance with FERC's Plan and Procedures. Temporary erosion controls, including interceptor diversions and sediment filter devices, such as silt fences, would be installed immediately following land disturbing activities, as required and as needed. FDOT's Wekiva Parkway would impact soils where roadway construction is proposed, with permanent impacts as the roadway is a permanent structure. The proposed Project itself would only result in temporary impacts on soils, and we conclude that the Project would not result in significant cumulative impacts on soils.

Groundwater resources may be affected during various stages of construction, including clearing and grading, excavation and dewatering, and hydrostatic testing. Shallow aquifers could sustain negligible effects from temporary changes in overland water flow and recharge caused by clearing and grading of the temporary workspaces. In forested areas, water infiltration, which is normally enhanced by vegetation, could be reduced until vegetation is reestablished. Based on these factors, potential cumulative impacts were evaluated for projects within the HUC 12 watershed. The Wekiva Parkway, Seminole County Lake Sylvan Outfall Improvements and Deer Lakes residential development were identified as additional projects that could result in cumulative impacts on groundwater. To minimize potential impacts associated with construction, Florida Gas and other project proponents would implement mitigation measures during construction and within state guidelines. Florida Gas would use sediment control measures such as filter bags, silt fences, dewatering structures during dewatering and hydrostatic test water discharge activities, as described in the Plan and Procedures. The proposed relocated portions of Florida Gas pipeline would be collocated with FDOT's Wekiva Parkway right-of-way for the entire length of the Project. The collocation planning minimizes impacts of the two

projects together. The parkway would be subject to state and local permitting requirements to mitigate impacts on groundwater from the roadway construction and permanent infrastructure. FDOT would also implement comprehensive best-management practices to ensure its Project-related effects on groundwater are adequately minimized and within the construction workspace limits. In conclusion, no cumulative impacts on groundwater are expected, when considered with the other identified projects.

Surface water resources potentially affected by the Project would be limited to the Wekiva River and nearby drainage features. Surface water for the Project would not be impacted as all water features would be crossed by HDD. In the event of an inadvertent release of drilling fluids reaching the river, temporary and short-term impacts from increased turbidity may result. The geographic scope includes construction of the Wekiva Parkway, as well as the Seminole County Lake Sylvan Outfall Improvements and Deer Lakes residential developments. Construction of the associated stormwater management system would alter current drainage patterns and surface water flow in the Project area. Other project sponsors would comply with local and state best-management practices. Based on the location and nature of impacts, we conclude that, by utilizing the proposed construction techniques (i.e. HDD), the Project would not contribute to cumulative impacts on surface water.

Cumulative impacts on wetlands would include clearing and routine maintenance activities, ranging from short-term to permanent. Based on the geographic scope, the FDOT Wekiva Parkway was identified as a possible contributor to cumulative impacts on wetlands as well as the Seminole County Lake Sylvan Outfall Improvements and Deer Lakes residential development. The Project's primary contribution to cumulative impacts on wetlands in the geographic scope would include vegetation conversion of approximately 0.003 acre of PFO wetland to PEM wetland within Florida Gas' permanent right-of-way and outside of FDOT's Wekiva Parkway project footprint. There would be no net loss of wetlands, as these wetlands would still continue to perform their function. The Wekiva Parkway is a permanent structure and wetlands cleared in its construction footprint could be permanently impacted, with quantity depending on design specifications for the roadway. Wetlands within the temporary construction right-of-way for the Project would be restored to preconstruction conditions or left in a suitable condition for FDOT's subsequent construction of the Wekiva Parkway. Most wetland areas to be used for construction of the Project are within wetlands that have been permitted to be filled by the USACE and FDEP for FDOT's construction of the Wekiva Parkway. The proposed HDD crossings would limit clearing in the affected wetlands to minimal disturbance at entry and exit pits.

Florida Gas and FDOT would be required to obtain authorizations under Sections 404 and 401 of the Clean Water Act from the USACE and the FDEP, respectively, for crossings of jurisdictional wetlands. As part of this permitting process, the USACE and FDEP would require appropriate mitigation for both Florida Gas' and FDOT's project impacts on wetlands, including the permanent vegetation conversion of forested wetlands. The incremental impacts on wetlands from the Project would be minor. The Seminole County Lake Sylvan Outfall Improvements and Deer Lakes development could also impact wetlands, but based on proximity to the Project area, any cumulative impacts from these projects would be minor considering further minimization of wetland impacts with the Project's collocation with FDOT's Wekiva Parkway. For these reasons, we conclude that cumulative impacts on wetlands would not be significant.

Potential impacts on vegetation, wildlife and migratory bird habitat include habitat removal and construction-related ground disturbance and noise. Cumulative impacts, such as those on vegetative cover types and wildlife habitat, are additive, and based on geographic scope, the FDOT Wekiva Parkway, the Seminole County Lake Sylvan Outfall Improvements and the Deer Lakes residential development were identified as additional projects that could result in cumulative impacts on vegetation, wildlife and migratory bird habitat. Long-term impacts from the Project on habitat alteration would be minimized by the implementation of the measures contained in the Plan which would ensure revegetation of areas disturbed by construction. The other projects identified potentially have permanent impacts on land use by conversion to new use, either of utility/road infrastructures or residential/commercial areas. Cumulative impacts from the Project would be further minimized by the proposed workspaces and the overlapping nature of the projects design with the Wekiva Parkway. The USFWS concurred with Florida Gas's Biological Assessment's determination of may affect, but not likely to adversely affect federally listed species. In conclusion, given the minimal nature of potential impacts from the proposed Project and the implementation of applicable avoidance and minimization measures, and given that the Project and FDOT's Wekiva Parkway would use similar workspace requirements, the projects considered would not result in significant cumulative impacts on vegetation, wildlife habitat, or nesting/migratory birds.

Cumulative land use impacts within the geographic scope include the Project, FDOT's Wekiva Parkway, Seminole County Lake Sylvan Outfall Improvements, Deer Lakes residential development, Reformation Bible College Student Learning Center and Pearl Lake Estates. Each of the projects identified would need to go through the state and local permitting process to get approval and may have site-specific conditions to minimize permanent impacts. In conjunction with the Project, through state processes of property acquisition and eminent domain, the FDOT would acquire and remove eight residential facilities and 59 other structures, including sheds and swimming pools, to facilitate Florida Gas's relocation and their own Wekiva Parkway construction activities. However, impacts are minimized by utilizing the collocation layout design proposed for FDOT's roadway and Florida Gas's pipeline relocation, minimizing impacts on land use to the maximum extent practicable. These areas are identified in the site specific plans included in appendix C, which we reviewed and find acceptable. In addition, landowners whose properties are acquired would be compensated based on fair market value for their properties. In conclusion, given impacts have been minimized to the extent practical by collocation of the Project and Wekiva Parkway, and landowners will be compensated for the use of their properties, construction of the above identified projects and the proposed Project would not result in significant adverse cumulative impacts on land use,.

Visual impacts generally occur from removal of forested vegetation along the proposed right-of-way and construction of permanent facilities. Projects identified in the vicinity of the Project that have the potential to contribute to cumulative visual impacts include FDOT's Wekiva Parkway, Seminole County Lake Sylvan Outfall Improvements, and Deer Lakes residential development. Residential structures would have the greatest impact on visual resources in the Project area, and project developers could configure the projects such that existing natural buffers (trees or hills) are maintained. FDOT would acquire several structures and remove them prior to Florida Gas beginning construction to facilitate the subsequent construction of the Wekiva Parkway. As the Project would be buried within FDOT right-of-way for the length of the Project, considering the pipeline relocation would not be adding any new

visual features and construction of the pipeline is considered temporary and short-term, we conclude that cumulative visual impacts would be adequately minimized to the extent practical.

We identified planned activities in the Project area that met the criteria for inclusion in the cumulative impact analysis. Implementation of best-management practices and proposed mitigation plans would minimize environmental impacts and when the impacts of the Project are added to the impacts from FDOT's Wekiva Parkway and other identified projects, the cumulative impacts would be minimal.

C. ALTERNATIVES

1.0 INTRODUCTION

In accordance with NEPA and Commission policy, we identified and evaluated alternatives to the Project to determine whether they would be reasonable and environmentally preferable to the proposed action. These alternatives include the no action alternative, system alternatives, and route alternatives. The criteria used for selecting potentially environmentally preferable alternatives are: the ability to meet the Project objectives; technical and economic feasibility and practicality; and significant environmental advantage over the proposed Project.

2.0 NO ACTION ALTERNATIVE

The no-action alternative would consist of not constructing the Project and continuing with the facilities as-is. If the proposed facilities are not constructed, the impacts identified would be avoided. The no action alternative does not meet the purpose and need of the Project, as portions of the existing pipelines are currently under the proposed Wekiva Parkway pavement, making operation and maintenance of the pipeline facilities infeasible if the FDOT goes forward with its expansion without Florida Gas's proposal to relocate its pipeline. If the purpose and need of the Project is not met under the no-action alternative, Florida Gas would be unable to provide reliable gas service to its customers as its system would be compromised by FDOT road construction. Therefore, the no-action alternative is not practical and provides no advantage over the proposed Project.

3.0 ALTERNATIVES

Florida Gas and FDOT evaluated relocating the existing pipeline facilities to the south side of the new Wekiva Parkway as an alternative to the proposed route. We reviewed this alternative and found it would yield additional impacts on several subdivisions and require FDOT to access their work areas by crossing the relocated Florida Gas pipelines. The relocation of the Florida Gas pipeline segments would be most advantageous on the north side of Wekiva Parkway for constructability and access, and we do not find the alternative to be preferable to the proposed route.

In summary, we conclude that the Florida Gas's proposed Project, as modified by our recommended mitigation measures, is the preferred alternative that can meet the Project objectives.

D. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this EA, we have determined that if Florida Gas constructs and operates the proposed facilities in accordance with its application and supplements and the staff's recommended mitigation measures, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment. We recommend that the Commission's Order contain a finding of no significant impact and include the mitigation measures listed below as conditions to any Certificate the Commission may issue.

1. Florida Gas shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Florida Gas must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;

    b. justify each modification relative to site-specific conditions;

    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

    d. receive approval in writing from the Director of OEP **before using that modification.**

2. The Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the Project, which shall include:

    a. the authority to modify conditions of the Order;

    b. stop-work authority; and

    c. the imposition of any additional measures deemed necessary to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from Project construction and operation.

3. **Prior to any construction**, Florida Gas shall each file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel would be informed of the EI's authority and have been or would be trained on the implementation of the environmental mitigation measures appropriate to their jobs before becoming involved with construction and restoration activities.

4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**,

Florida Gas shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Florida Gas's exercise of eminent domain authority granted under the Natural Gas Act section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Florida Gas's right of eminent domain granted under the Natural Gas Act section 7(h) does not authorize it to increase the size of its natural gas facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Florida Gas shall file with the Secretary detailed alignment maps and aerial photographs at a scale not smaller than 1: 6,000 identifying all facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

   This requirement does not apply to extra workspace allowed by FERC's Plan and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

   Examples of alterations requiring approval include all facility location changes resulting from:

   a. implementation of cultural resources mitigation measures;

   b. implementation of endangered, threatened, or special concern species mitigation measures;

   c. recommendations by state regulatory authorities; and

   d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of acceptance of the authorization and before construction begins**, Florida Gas shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Florida Gas must file revisions to the plan as schedules change. The plan shall identify:

a. how Florida Gas will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;

b. how Florida Gas will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;

c. the number of EIs assigned, and how Florida Gas will ensure that sufficient personnel are available to implement the environmental mitigation;

d. Florida Gas personnel, including EIs and contractors, who will receive copies of the appropriate material;

e. the location and dates of the environmental compliance training and instructions Florida Gas will give to all personnel involved with construction and restoration (initial and refresher training as the Project progresses and personnel change);

f. the company personnel (if known) and specific portion of Florida Gas's organization having responsibility for compliance;

g. the procedures (including use of contract penalties) Florida Gas will follow if noncompliance occurs; and

h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

i. the completion of all required surveys and reports;

ii. the environmental compliance training of onsite personnel;

iii. the start of construction; and

iv. the start and completion of restoration.

7. Florida Gas shall employ at least one EI for the Project. The EI shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;

c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;

d. a full-time position, separate from all other activity inspectors;

e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and

f. responsible for maintaining status reports.

8. Beginning with the filing of its Implementation Plan, Florida Gas shall file updated status reports with the Secretary on a **biweekly** basis until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on efforts to obtain the necessary federal authorizations;

b. the construction status of the Project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;

c. a listing of all problems encountered and each instance of noncompliance observed by the EI during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);

d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;

e. the effectiveness of all corrective actions implemented;

f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

g. copies of any correspondence received by Florida Gas from other federal, state, or local permitting agencies concerning instances of noncompliance, and Florida Gas's response.

9. **Prior to receiving written authorization from the Director of OEP to commence construction of any Project facilities**, Florida Gas shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

10. Florida Gas must receive written authorization from the Director of OEP **before placing the Project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the areas affected by the Project are proceeding satisfactorily.

11. **Within 30 days of placing the authorized facilities in service**, Florida Gas shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed and abandoned in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

    b. identifying which of the conditions in the Order Florida Gas has complied with or will comply with. This statement shall also identify any areas affected by the Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

12. **Prior to construction**, Florida Gas shall file with the Secretary a Karst Mitigation Plan, for review and written approval by the Director of OEP, that includes:

    a. construction techniques that Florida Gas will utilize to control drainage within the construction work areas;

    b. monitoring and mitigation of any springs and wells in areas with karst features within 500 feet from the Project for water quality and yield; and

    c. mitigation of karst features if encountered during trenching activities, including contacting a designated project geotechnical engineer to develop site specific design and mitigation measures for construction trench dewatering, final grading of contours, and any necessary permanent erosion and sediment controls, based on the site conditions and nature of any karst feature that is encountered.

13. **Prior to construction**, Florida Gas shall file with the Secretary the results of its geotechnical investigations for its HDD crossings of the Wekiva River. In the event that the geotechnical investigations indicate that an HDD is infeasible, or should a feasible HDD prove unsuccessful during construction, Florida Gas shall file with the Secretary a plan for crossing the waterbody using an alternate method. This should include a site-specific plan with scaled drawings identifying all areas that will be disturbed by construction. Florida Gas should file this plan concurrent with the submission of any applicable applications to the USACE and NPS for a permit to construct using this plan. The Director of OEP must review and approve this plan in writing **before construction of the crossings.**

14. Florida Gas **shall not begin construction** of the Project until it files with the Secretary a copy of the determination of consistency with the Coastal Zone Management Plan issued by the FDEP.

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Appendix A: Soils Table

Appendix A
Soil Characteristics by Milepost Segment for Each Soil Map Unit Along the Proposed Pipeline Route

Lake County

Milepost		Map Unit Symbol	Component Percent	Crossing Length (miles)	Prime Farmland* (Y/N)	Hydric Soils [a] (Y/N)	Highly Erodible Compaction Prone [b] (Y/N)	Highly Erodible Water Y/N (K Factor)	Highly Erodible Wind Y/N (WEG)	Highly Erodible Revegetation Concerns (Y/N)	Highly Erodible Stony/ Rock (Y/N)	Highly Erodible Shallow Bedrock (Y/N)
Begin	End											
7.98	8.15	19	Bluff 35% Manatee 25%	0.24	N	Y	Moderate	N (0.15)	Y (1)	Y	N	N
7.41 7.52	7.41 7.65	12	Cassia 90%	0.13	N	N	Moderate	N (0.02)	Y (1)	N	N	N
7.90	7.98	20	Immokalee 90%	0.08	N	N	Moderate	N (0.02)	Y (1)	Moderate	N	N
7.65 7.75	7.72 7.81	28	Myakka 70% Myakka, wet 15%	0.38	N	Y	Moderate	N (0.05)	Y (1)	Y	N	N
3.12	3.16	29	Myakka 60% Placid 30%	0.08	N	Y	Moderate	N (0.02)	Y (1)	Y	N	N
7.52 7.80	7.52 7.90	41	Pomello 85%	0.26	N	N	Moderate	N (0.02)	Y (1)	Moderate	N	N
2.88 3.41 3.47 7.72	3.12 3.41 3.47 7.75	42	Pompano 80%	0.49	N	Y	Moderate	N (0.02)	Y (1)	Y	N	N
2.53 2.65	2.53 2.88	45	Tavares 85%	0.38	N	N	Moderate	N (0.10)	Y (1)	Moderate	N	Y

Seminole County												
Milepost		Map Unit Symbol	Component Percent	Crossing Length (miles)	Prime Farmland* (Y/N)	Hydric Soils [a] (Y/N)	Compaction Prone [b] (Y/N)	Highly Erodible		Revegetation Concerns (Y/N)	Stony/ Rock (Y/N)	Shallow Bedrock (Y/N)
Begin	End							Water Y/N (K Factor)	Wind Y/N (WEG)			
10.36	10.45	2	Adamsville 54% Sparr 36%	0.21	N	N	Moderate	N (0.02)	Y (1)	N	N	N
10.52	10.61											
8.56	9.08											
9.25	9.66		Astatula 65%									
10.21	10.36	6	Apopka 22%	2.27	N	N	Moderate	N (0.02)	Y (3)	Moderate	N	N
10.45	10.52											
10.76	10.95											
10.00	10.17	10	Basinger 58% Samsula 15% Hontoon 15%	0.33	N	Y	Moderate	N (0.02)	Y (1)	Y	N	N
8.29	8.30		EauGallie 56%									
		13	Immokalee 35%	0.21	N	N	Moderate	N (0.02)	Y (1)	Y	N	N
8.36	8.50											
10.17	10.21	20	Myakka 58%	0.06	N	Y	Moderate	N (0.02)	Y (1)	Y	N	N
8.50	8.53											
9.66	9.91	27	Pomello 91%	0.58	N	N	Moderate	N (0.02)	Y (1)	N	N	N
10.21	10.27											

8.15 9.05	8.29 9.25	28	Pompano 90%	0.18	N	Y	Moderate	N (0.02)	Y (1)	Y	N	N
8.30 8.53 10.61 10.95	8.36 8.56 10.75 11.70	31	Tavares 63% Millhopper 32%	1.55	N	N	Moderate	N (0.02)	Y (1)	N	N	N

Milepost								Highly Erodible				
Begin	End	Map Unit Symbol	Component Percent	Crossing Length (miles)	Prime Farmland* (Y/N)	Hydric Soils [a] (Y/N)	Compaction Prone [b] (Y/N)	Water Y/N (K Factor)	Wind Y/N (WEG)	Revegetation Concerns (Y/N)	Stony/Rock (Y/N)	Shallow to Bedrock (Y/N)
9.91	10.00	35	Wabasso 85%	0.23	N	N	Moderate	N (0.02)	Y (1)	Y	N	N

[a] The area affected includes the permanent pipeline ROW, temporary pipeline ROW, and additonal temporary workspace. The soils data in the table does not include areas of open water.

[b] The numbers in this table have been rounded for presentation purposes.

[c] The values in each row do not add up to the total acreage for each county because soils may occur in more than one characteristic class or may not occur in any class listed in the table.

[d] As designated by the Natural Resources Conservation Service. Prime farmland does not include those soils that are considered prime if articicial drainage is implemented due to the lack of drain tile us in the project area.

[e] Includes soils in somewhat poor to very poor drainage classes with surface textures of sandy clay loam and finer.

[f] Land in capability subclasses 4E through 8E and soils with an average slope greater than or equal to 9%

[g] Soils with a wind erodibility group (WEG) classification of 1 , 2 or 3. Only a single map unit with WEG 3 designation is crossed by the project.

[h] Soils with a surface texture of sandy loam or coarser and are moderately well to excessively drained and soils with an average slope greater than or equal to 9 percent.

[i] This group includes soils with a cobbley, stony, bouldery, shaly, very gravelly, or extremely gravelly modifier to the textural class of the surface layer, have a sufrace layer that contains greater than 5 percent by weight stones larger than 3 inches, and/or contains a layer in the subsoil meeting one of the preceding criteria

[j] Soils identified as containing bedrock at a depth of 5 feet or less from the surface, all of which is paralithic and rippable with standard construction equipment.

Appendix B: Non Residential Structures within 50 feet of Right of Way

TABLE 8.2-1
Non-Residential Structures Within 50 Feet of the Construction ROW

Structure ID [a]	Nearest Facility [b]	Location (MP) [c]	Distance from Proposed Pipeline (feet)	Direction from Proposed Pipeline	Distance from Structure to Construction ROW (feet)	Site Specific Drawing Number
*D-1.1 Shed	26	9.03	0	-	0	P11-1502
*D-2 Barn	26	10.03	0	-	0	P11-1503
*D-3 Shed	12	10.17	44	South	0	P11-1504
*D-4 Shed	12	10.17	54	South	0	P11-1504
*D-5 Shed	26	10.21	5	South	0	P11-1504
*D-6 Shed	12	10.18	14	South	0	P11-1504
*D-9 Shed	26	10.24	0	-	0	P11-1505
*D-10 Shed	12	10.21	49	-	32	P11-1505
*D-11 Shed	12	10.21	44	South	0	P11-1505
D-12 Shed	26	10.25	55	North	35	P11-1505
*D-13Shed	26	10.27	39	North	0	P11-1505
*D-14 Shed	26	10.27	34	North	0	P11-1505
D-15 Shed	26	10.27	55	North	7	P11-1505
*D-16 Shed	12	10.26	55	South	0	P11-1506
*D-17 Shed	12	10.27	51	South	0	P11-1506
*D-19 Shed	12	10.27	49	South	0	P11-1506
*D-20 Pool	12	10.34	314	North	0	P11-1507
*D-21 Shed	12	10.36	445	North	0	P11-1507
*D-22 Building	12	10.40	0	-	0	P11-1508
*D-23 Barn	12	10.41	390	North	0	P11-1509
*D-24 Shed	12	10.42	26	South	0	P11-1508
*D-25 Shed	12	10.42	19	South	0	P11-1508
*D-26 Shed	12	10.44	171	North	0	P11-1509
*D-27 Shed	12	10.44	174	North	0	P11-1509
D-28 Shed	12	10.41	75	North	39	P11-1510
*D-29 Shed	12	10.54	13	North	0	P11-1511
*D-30 Building	12	10.55	0	-	0	P11-1511
**D-31.1 Greenhouse	12	10.52	35	North	0	P11-1511
**D-31.2 Greenhouse	12	10.56	25	North	0	P11-1511
*D-32 Shed	12	10.62	0	-	0	P11-1512
*D-33 Shed	12	10.62	22	North	0	P11-1512

*D-34 Shed	12	10.63	4	South	0	P11-1512
*D-35 Shed	12	10.63	14	South	0	P11-1512
*D-36 Shed	12	10.64	0	-	0	P11-1512
**D-37.1 Greenhouse	12	10.63	6	North	0	P11-1512
**D-37.2 Greenhouse	12	10.66	0	-	0	P11-1512
*D-38 Building	12	10.66	26	South	0	P11-1512
*D-40 Shed	12	10.67	88	South	0	P11-1512
*D-41 Shed	12	10.68	47	South	0	P11-1512
D-43 Shed	12	11.01	109	North	22	P11-1513
D-44 Shed	12	11.01	98	North	13	P11-1513
*D-45 Concrete Pad	12	11.02	0	-	0	P11-1513
*D-50 RV Concrete	12	11.02	6	North	0	P11-1513
*D-52 RV Concrete	12	11.02	34	South		P11-1513
*D-53 RV Concrete	12	11.02	60	South	10	P11-1513
*D-54 RV Concrete	12	11.02	13	South	0	P11-1513
*D-55 RV Concrete	12	11.02	84	South	31	P11-1513
*D-56 Shed	12	11.04	34	South	0	P11-1514
*D-57 Shed	12	11.04	14	North	0	P11-1514
*D-58 Pool	12	11.05	0	-	0	P11-1514
*D-58.1 Office Building	12	11.06	0	-	0	P11-1514
*D-63 RV Concrete Pad	12	11.09	8	North	0	P11-1514
*D-64 RV Concrete Pad	12	11.08	123	South	34	P11-1514
*D-65 RV Concrete Pad	12	11.10	0	-	0	P11-1514
*D-66 RV Concrete Pad	12	11.10	3	South	0	P11-1514
*D-68 RV Concrete Pad	12	11.10	104	South	0	P11-1514
**D-70 RV Concrete Pad	12	11.11	15	North	0	P11-1515
*D-71 RV Concrete Pad	12	11.11	0	-	0	P11-1515
*D-72 RV Concrete Pad	12	11.11	80	South	0	P11-1514
*D-76 RV Concrete Pad	12	11.11	83	South	0	P11-1514
*D-78 RV Concrete Pad	12	11.12	55	South	0	P11-1515
**D-79 RV Concrete Pad	12	11.12	19	North	0	P11-1515
*D-84 RV Concrete Pad	12	11.13	0	-	0	P11-1515
*D-85 RV Concrete Pad	12	11.13	20	-	0	P11-1515
D-87 Shed	12	11.13	81	North	26	P11-1515
*D-92.1 Filled in Pool	12	11.16	65	North	0	P11-1516
*D-94 Building	12	11.16	0	-	0	P11-1516
*D-96 Building	12	11.16	73	North	10	P11-1516
**D-97 RV Concrete Pad	12	11.23	186	North	37	P11-1517
**D-99 RV-Concrete Pad	12	11.24	211	North	40	P11-1517
D-100 RV Concrete Pad	12	11.25	238	North	45	P11-1517

*D-105.1 Shed	12	11.63	21	North	0	P11-1520
**D-107 Office Building	12	11.64	20	North	0	P11-1520
D-108 Office Building	12	11.64	88	North	23	P11-1520
*D-109 Office Building	12	11.67	110	South	0	P11-1521
*D-110 Gazebo	12	11.67	65	South	0	P11-1521

[a] One asterisk denotes structures that will be acquired and removed by FDOT prior to commencement of Florida Gas construction. Two asterisks denote structures that are partially within the Florida Gas ROW. FDOT will remove the portion of the structure within the ROW and reface the remaining structure outside of the ROW and the landowner will continue to use the structure.

[b] 12 = 12-inch Sanford Lateral, 26 = 26-inch Sanford Lateral Loop.

[c] Milepost references correspond to the nearest pipeline.

Appendix C: Residential Site-Specific Plans

SITE-SPECIFIC RESIDENTIAL CONSTRUCTION DRAWINGS

RESIDENTIAL IMPLEMENTATION PLAN NOTES

1. FDOT WILL OBTAIN THE MAJORITY OF NEW ROW AND TWS AREAS NECESSARY FOR THE FGT PROJECT. FDOT WILL REMOVE ALL EXISTING STRUCTURES (E.G., BUILDINGS, RESIDENCES) WITHIN FGT'S PROPOSED ROW AND TWS, OBTAINED BY FDOT, PRIOR TO FGT INITIATING CONSTRUCTION.

2. CONTRACTOR SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS FOR RESIDENCES WITHIN 50 FEET OF THE CONSTRUCTION WORK AREA.

   A. SAFETY FENCE SHALL BE INSTALLED AT THE EDGE OF THE CONSTRUCTION WORK AREA ADJACENT TO THE RESIDENCE FOR A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE OF THE RESIDENCE.

   B. LEAVE AS MANY TREES AS POSSIBLE ON THE RESIDENCE PROPERTY. TREE BRANCHES MAY BE TRIMMED ON THE WORKING SIDE TO ALLOW FOR SAFE OPERATION AND PASSAGE OF CONSTRUCTION EQUIPMENT. VEGETATION REMOVED WILL BE DISPOSED OF AS NEGOTIATED BY LANDOWNER AND COMPANY.

   C. AS APPLICABLE, RESTORE OR REPLACE LAWNS AND LANDSCAPING TO PRECONSTRUCTION CONDITIONS AND REPAIR WALLS AND OTHER STRUCTURES WITHIN THE CONSTRUCTION WORK AREAS. THIS WORK IS TO BE COMPLETED IN A REASONABLE TIME AFTER THE TRENCH IS BACKFILLED AND CLEANUP IS COMPLETE.

   D. TOP SOIL IS TO BE SEGREGATED WHERE REQUIRED BY PERMIT CONDITIONS OR LANDOWNER AGREEMENT.

   E. UTILITIES ARE NOT TO BE INTERRUPTED DURING CONSTRUCTION ACTIVITIES.

   F. CONSTRUCTION ACTIVITIES ARE NOT TO TAKE PLACE DURING NIGHT TIME HOURS EXCEPT FOR AREA WHERE DIRECTIONAL DRILL ACTIVITIES AND/OR WELL POINT ACTIVITIES ARE TAKING PLACE.

   G. CLEANUP AND BACKFILL WILL TAKE PLACE IMMEDIATELY AFTER THE PIPELINE IS INSTALLED.

   H. REVEGETATION WILL TAKE PLACE AT THE FIRST SEASONAL OPPORTUNITY.

   I. ALL TRASH AND DEBRIS WILL BE CLEANED UP DAILY FROM THE CONSTRUCTION SITE.

   J. THE RIGHT OF WAY DEPARTMENT IS TO NOTIFY THE AFFECTED LANDOWNERS AND ADJACENT LANDOWNERS PRIOR TO THE START OF CONSTRUCTION.

   K. TRAFFIC FLOW AND EMERGENCY VEHICLE ACCESS WILL BE MAINTAINED ON RESIDENTIAL ROADWAYS. TRAFFIC DETAIL PERSONNEL AND/OR DETOUR SIGNS ARE TO BE USED WHEN APPROPRIATE.

   L. ANY EXCAVATIONS LEFT OPEN AT THE END OF THE WORKDAY ARE TO BE FENCED OFF OR COVERED WITH STEEL PLATE.

   M. INSPECT ROAD SURFACES ON A PERIODIC BASIS AND, IF NECESSARY, CLEAN THE STREET SURFACE AND WET EXPOSED SOIL.

3. CONTRACTOR SHALL COMPLY WITH THE ABOVE REQUIREMENTS AND THE FOLLOWING REQUIREMENTS FOR RESIDENCES WITHIN 25 FEET OF THE CONSTRUCTION WORK AREA.

   A. THE CONTRACTOR SHALL COMPLY WITH THE WORKSPACE LIMITATIONS AND THE CONSTRUCTION TECHNIQUES SHOWN ON THE RESIDENTIAL IMPLEMENTATION PLAN SITE-SPECIFIC DRAWINGS THAT ARE REFERENCED ON THE CONSTRUCTION DRAWINGS.

   B. THE CONTRACTOR SHALL NOT OPEN THE TRENCH UNTIL THE PIPE IS READY FOR INSTALLATION AND SHALL BACKFILL THE TRENCH IMMEDIATELY AFTER INSTALLATION IS COMPLETE.

   C. VEHICULAR ACCESS TO RESIDENCES SHALL BE MAINTAINED AT ALL TIMES.

   D. BEFORE CONSTRUCTION, THE CONTRACTOR AND THE COMPANY CHIEF INSPECTOR SHALL HAVE IN THEIR POSSESSION DOCUMENTATION FROM THE RIGHT OF WAY DEPARTMENT THAT THE LANDOWNER HAS AGREED FOR THE CONSTRUCTION WORK AREA AND FENCING TO BE LOCATED WITHIN 10 FEET OF THE RESIDENCE.

ISSUED FOR FERC FILING

REV. NO. – DESCRIPTION		BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

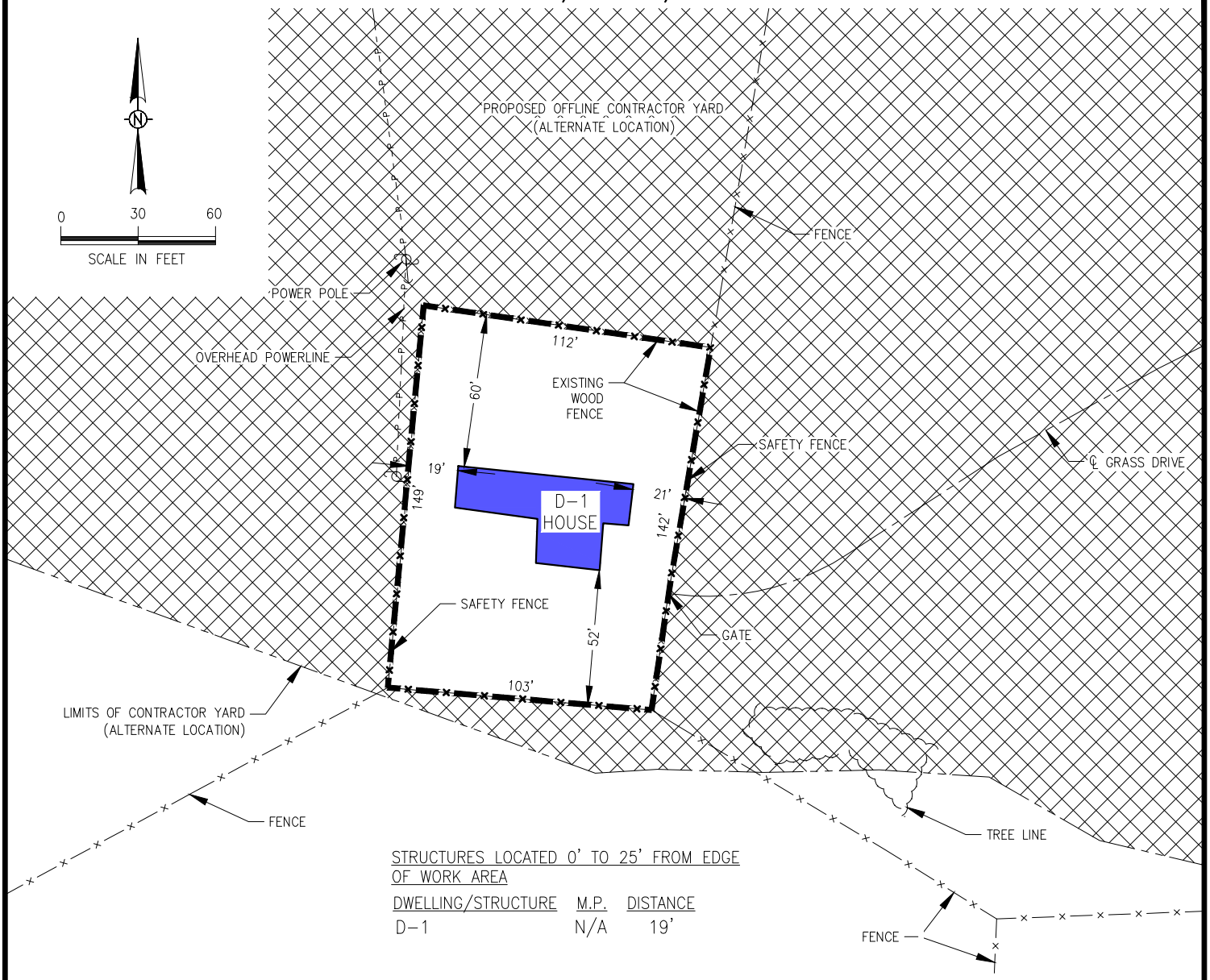
PIPELINE, STATION, OR ACCOUNT NUMBER: FLBOC/FLBOD
SCALE: AS NOTED (ANSI A)
CONST. YR.: 2018
FILENUMBER
CADD FILENAME: P11-1500.DWG/MODEL
DRAWN: RWM
DATE: 3/10/2017

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 25' EDGE OF WORK AREA
LAKE & SEMINOLE COUNTIES, FLORIDA
(FDOT SECTIONS 6 & 7A)

PROJECT NO.
537000920241
537000921785
PREVIOUS DWG. NO.
SHT. OF
DWG. NO.
P11-1500
SHT. 1 OF 22
E

UPI NO. 21493-505-SSW-13001

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-28-E, SEC. 23



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-1	N/A	19'

LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES ON THIS PROPERTY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE CONTRACTOR YARD ALTERNATE LOCATION 2 DRAWING PCY-3.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG THE PERIMETER OF THE EXISTING WOOD FENCE.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1501.DWG/MODEL	SDC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
C.R. 46A – ALT. CONTRACTOR YARD
0' TO 25' EDGE OF WORK AREA
LAKE COUNTY, FLORIDA
(FDOT SECTION 6)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

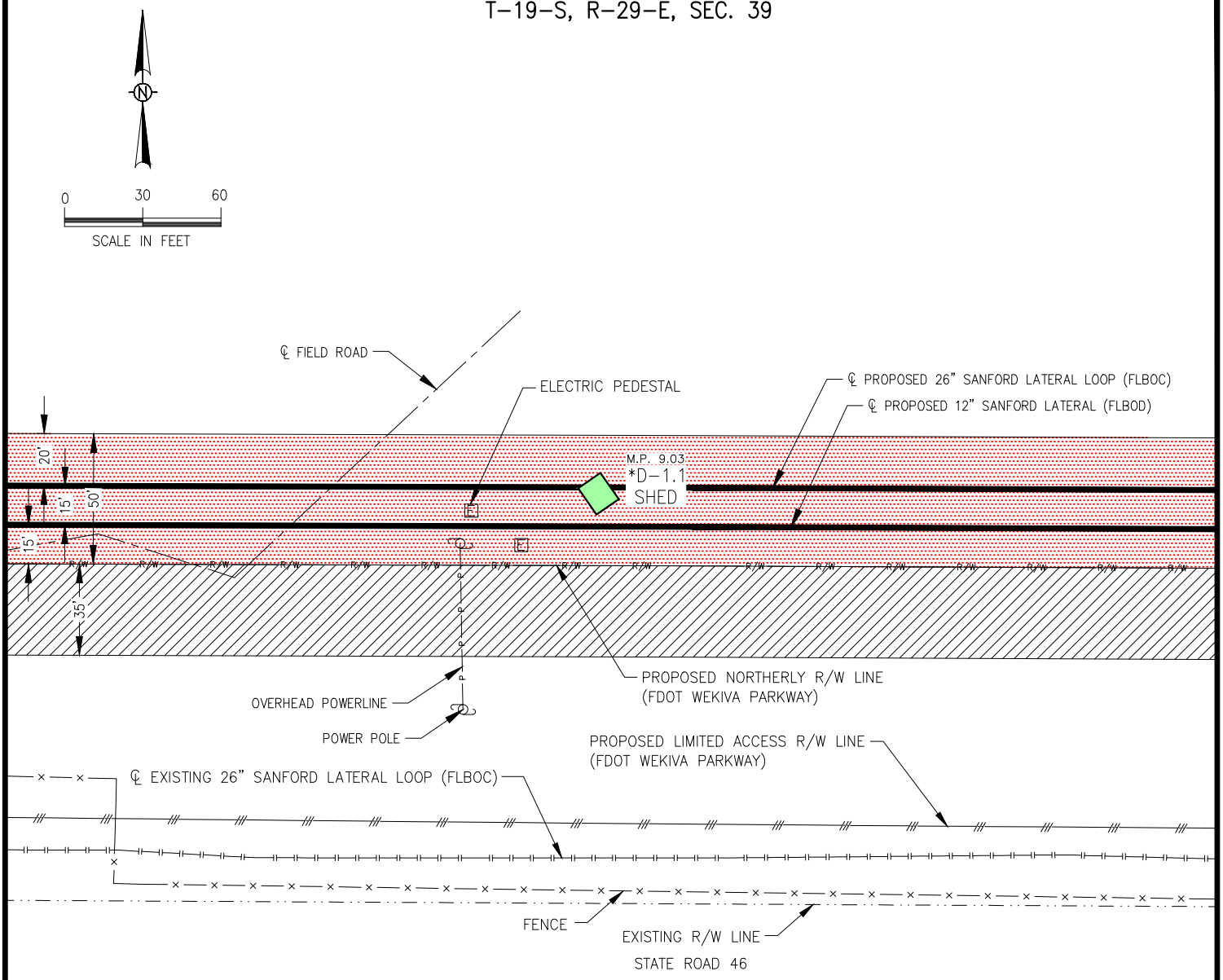
SHT. OF

DWG. NO.
P11-1501
SHT. 2 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12ln and 26ln Wekiva Relocation\ENGINEERING\12_26ln Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1501.dwg
Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:06 AM
Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:47 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 39



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWING P3-11.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1502.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 9.03
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

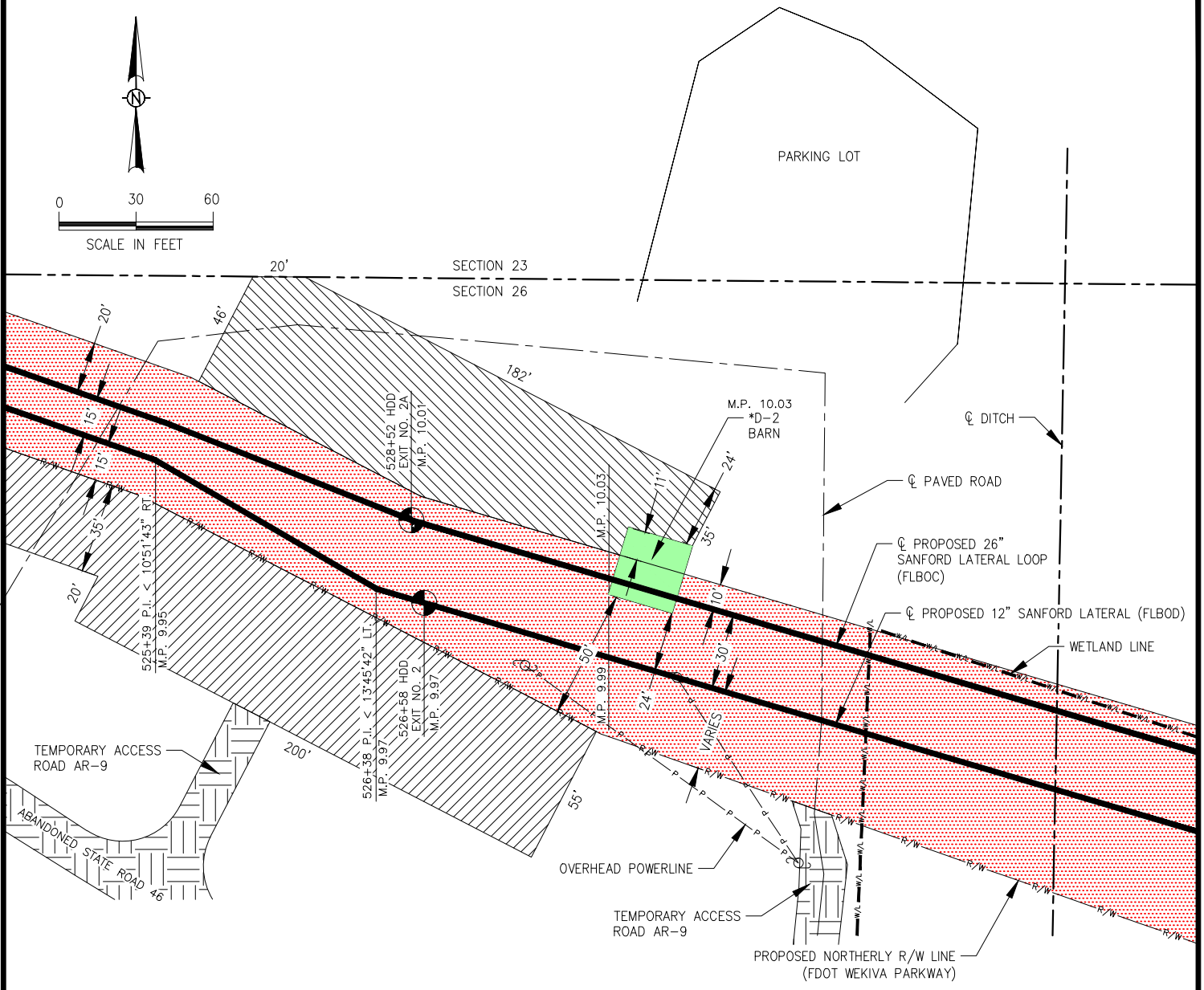
SHT. OF

DWG. NO.
P11-1502
SHT. 3 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12ln and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1502.dwg
Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:07 AM
Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:46 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWING P3-14.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1503.DWG/MODEL	BEC / 3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.03
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

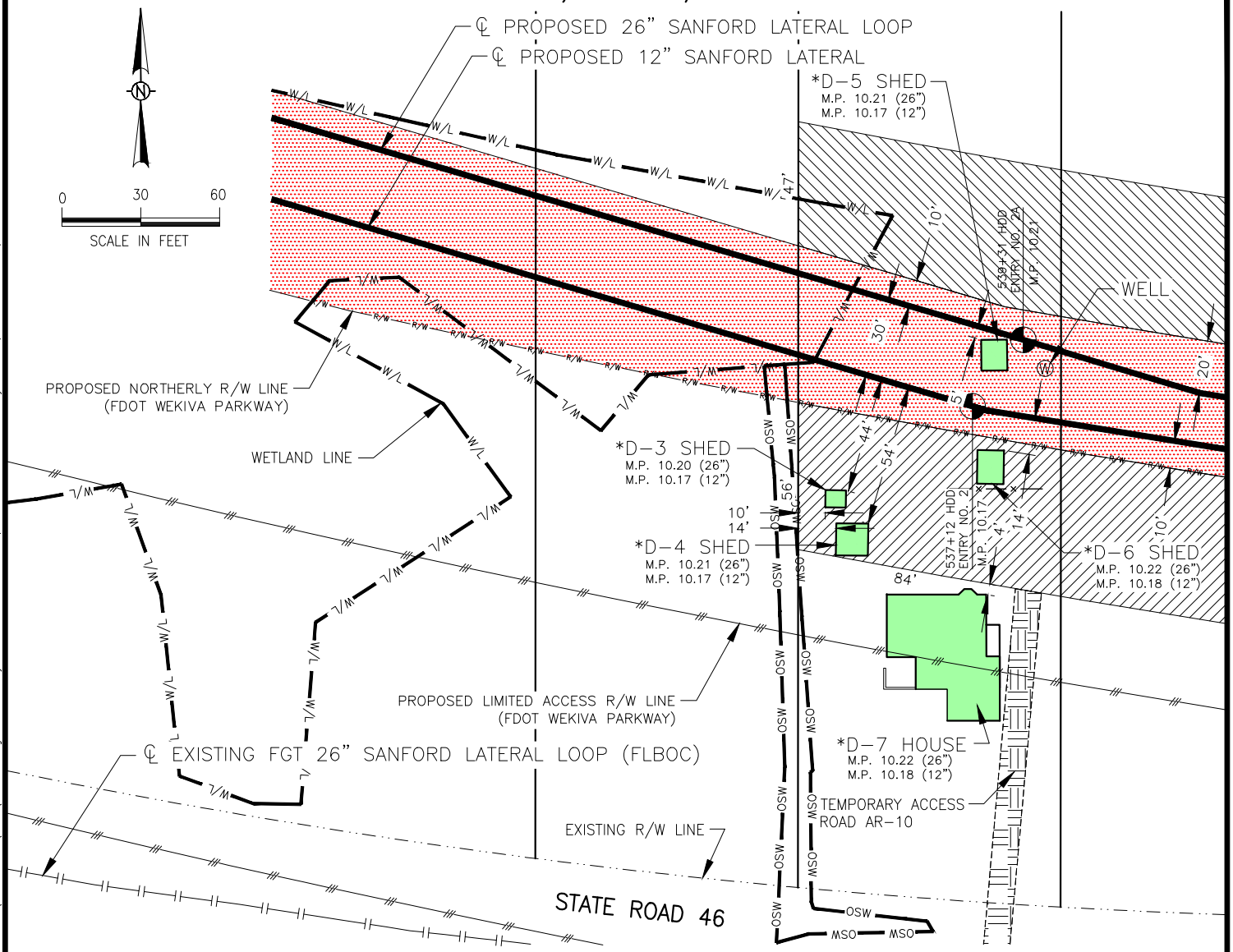
PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1503
SHT. 4 OF 22
E

UPI NO. 21493-505-SSW-13001

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

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= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

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3. REFERENCE ALIGNMENT DRAWING P3-15.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1504.DWG/MODEL	BEC	3/10/2017

PROJECT NO.
537000920241
537000921785

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.17
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PREVIOUS DWG. NO.

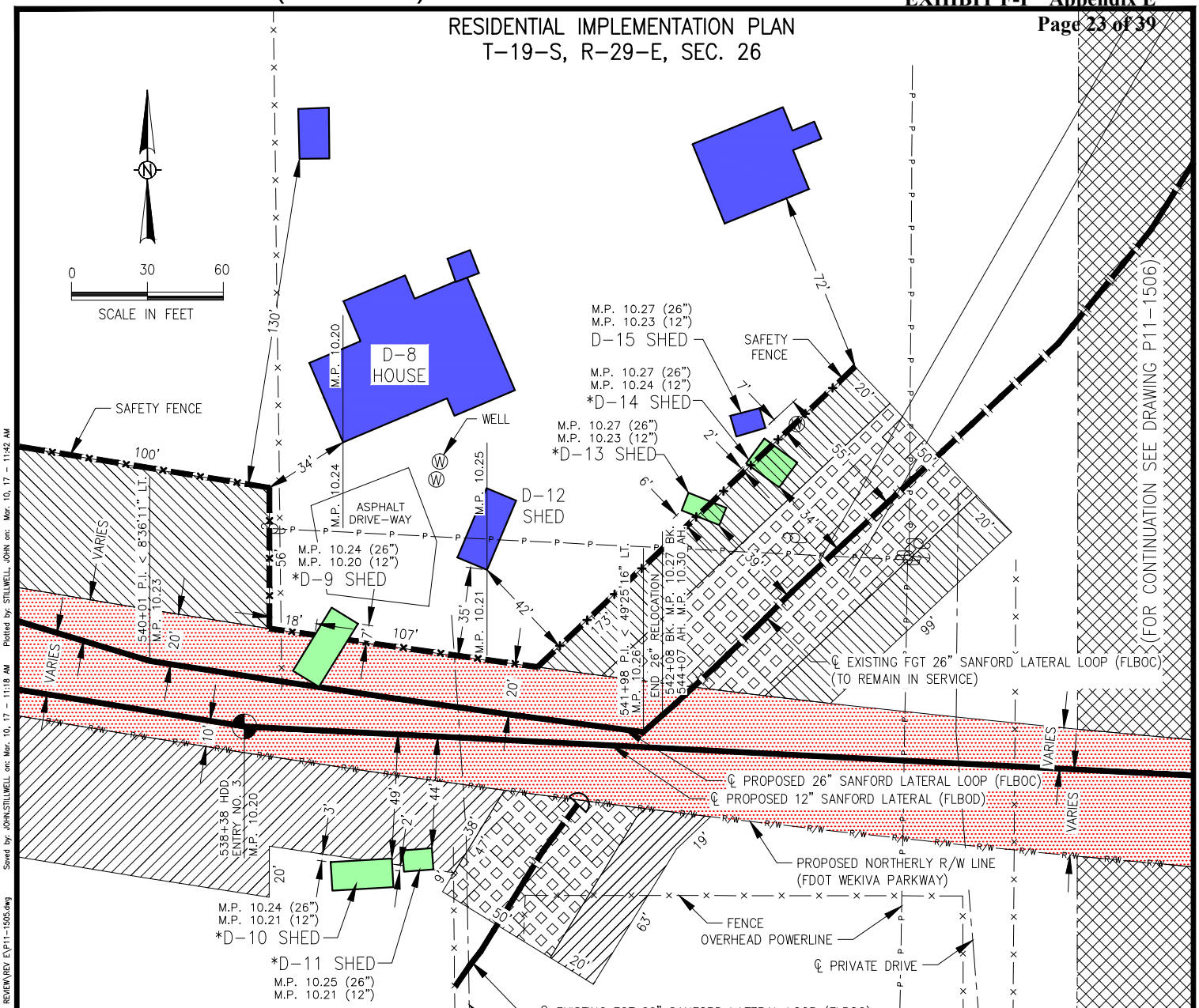
SHT. OF

DWG. NO.
P11-1504
SHT. 5 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-10in and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1504.dwg Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:13 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:43 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-15 SHED	10.27	7'

LEGEND

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= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

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= PROPOSED PERMANENT RIGHT OF WAY

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= STRUCTURES TO BE REMOVED BY FDOT

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3. REFERENCE ALIGNMENT DRAWING P3-15.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1505.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.25
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1505
SHT. 6 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12ln and 26ln Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1505.dwg
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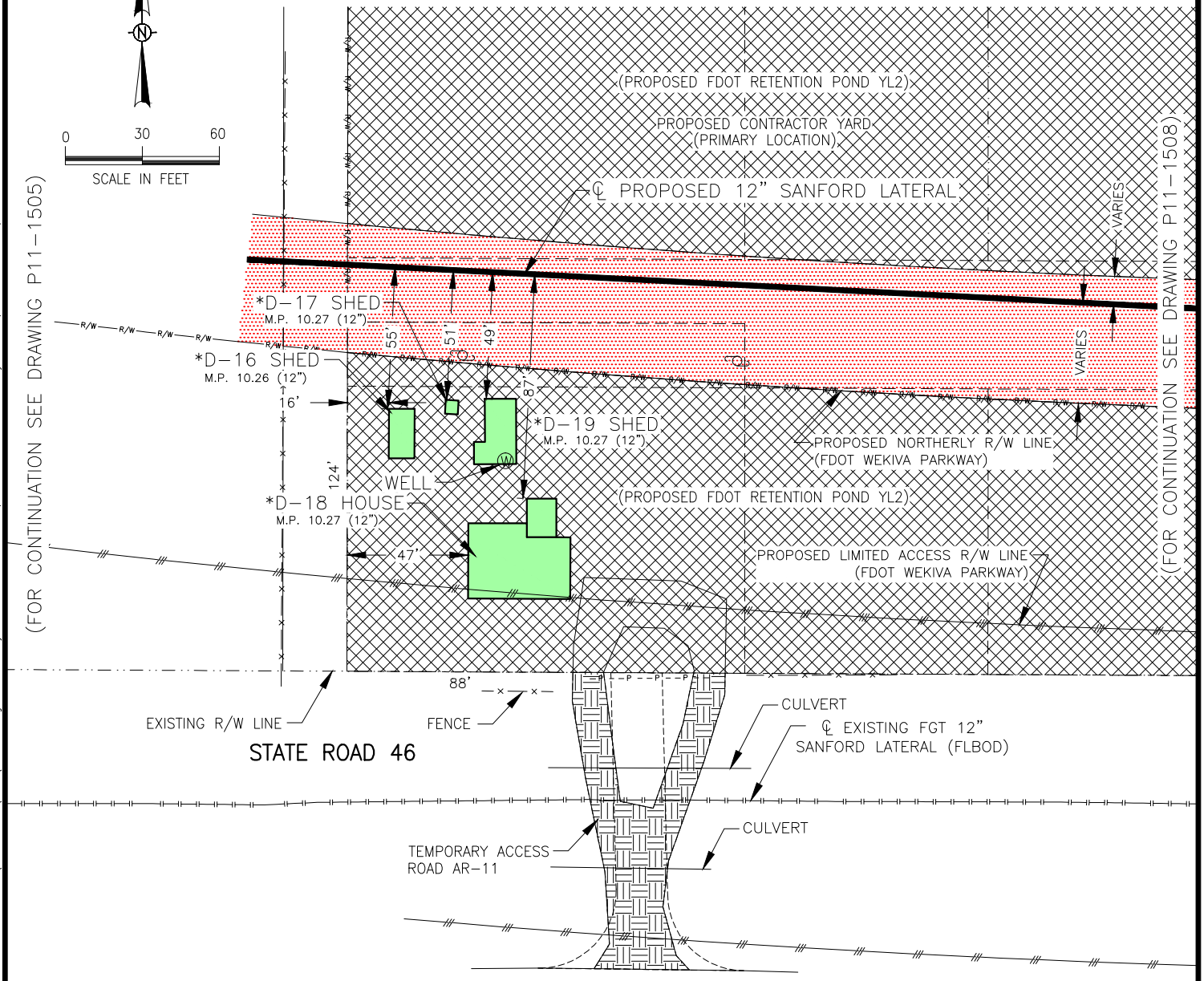
RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

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= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

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NOTES:
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3. REFERENCE ALIGNMENT DRAWINGS P3-16 AND PCY-1.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1506.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.27
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

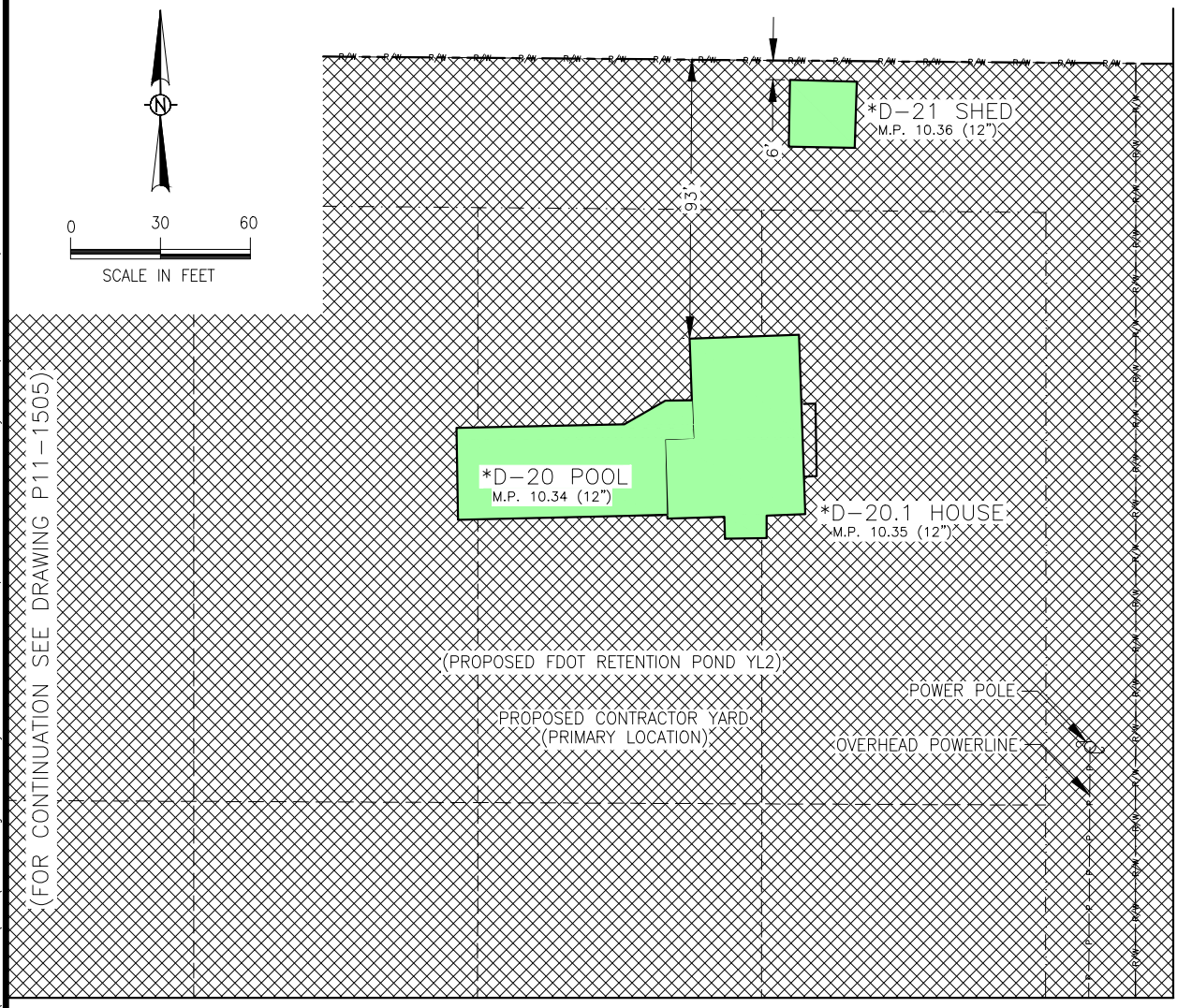
SHT. OF

DWG. NO.
P11-1506
SHT. 7 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-10in and 26in Wekiva Relocation\ENGINEERING\12-26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1506.dwg Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:20 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:41 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

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NOTES:
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3. REFERENCE ALIGNMENT DRAWINGS P3-16 AND PCY-1.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1507.DWG/MODEL	BEC	3/10/2017

PROJECT NO.
537000920241
537000921785

REV. NO. – DESCRIPTION		BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.35
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PREVIOUS DWG. NO.

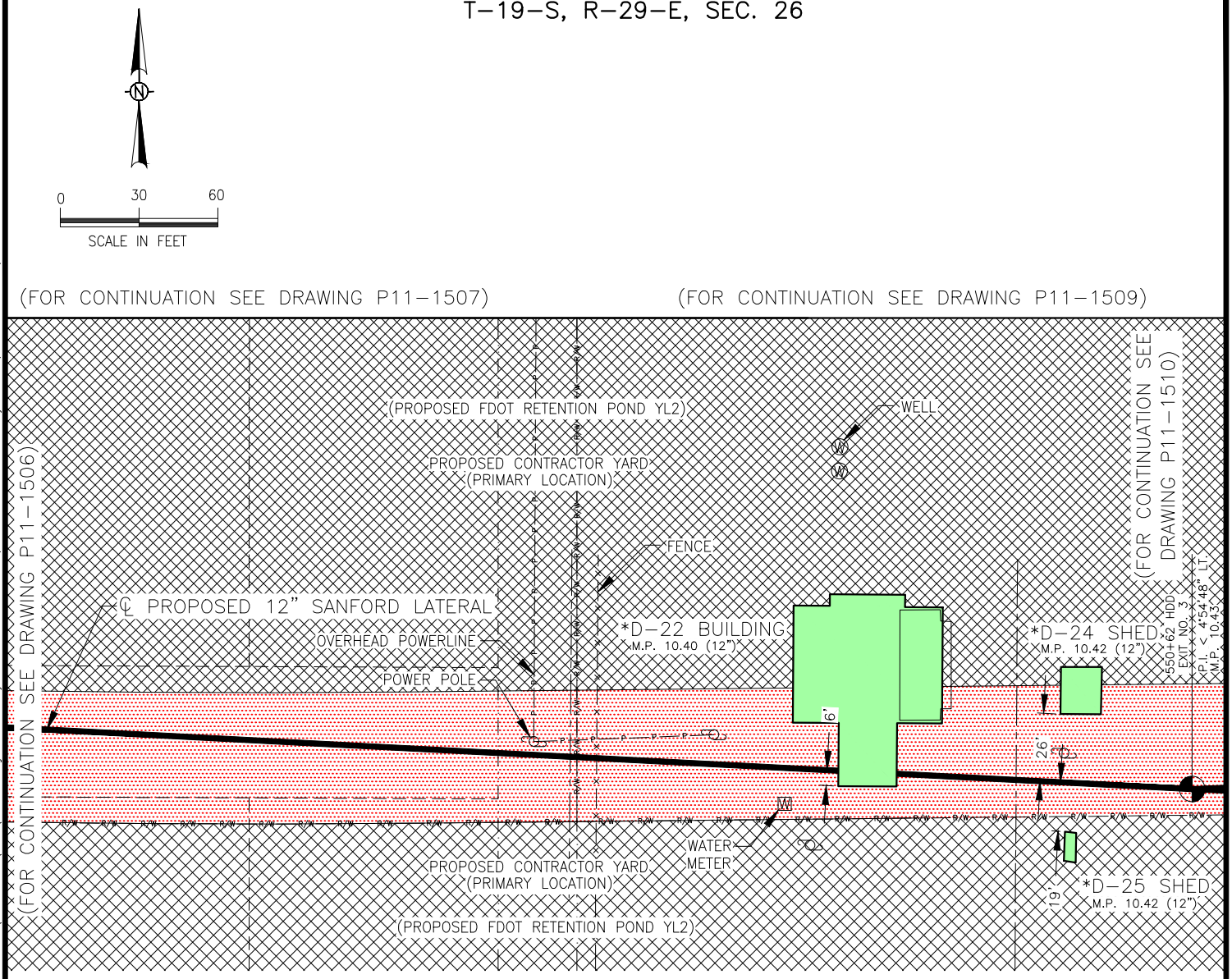
SHT. OF

DWG. NO.
P11-1507
SHT. 8 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-10in and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1507.dwg Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:21 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:39 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

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3. REFERENCE ALIGNMENT DRAWINGS P3-16 AND PCY-1.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1508.DWG/MODEL	BEC	3/10/2017

PROJECT NO.
537000920241
537000921785

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.40
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PREVIOUS DWG. NO.

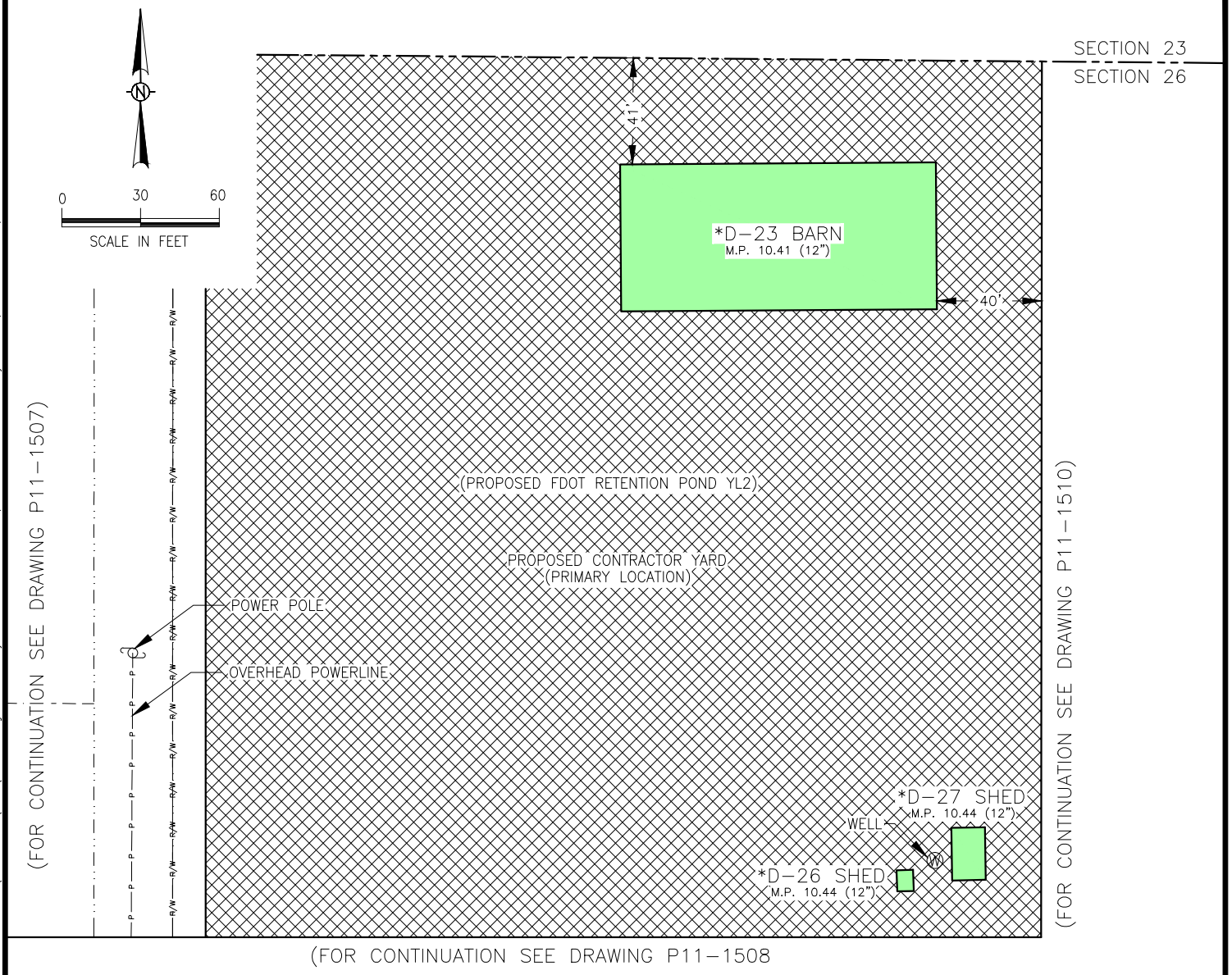
SHT. OF

DWG. NO.
P11-1508
SHT. 9 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12in and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1508.dwg Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:22 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:38 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



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ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1509.DWG/MODEL	BEC / 3/10/2017

PROJECT NO.
537000920241
537000921785

REV. NO. – DESCRIPTION		BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
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C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
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Florida Gas Transmission Company
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FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.41
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PREVIOUS DWG. NO.

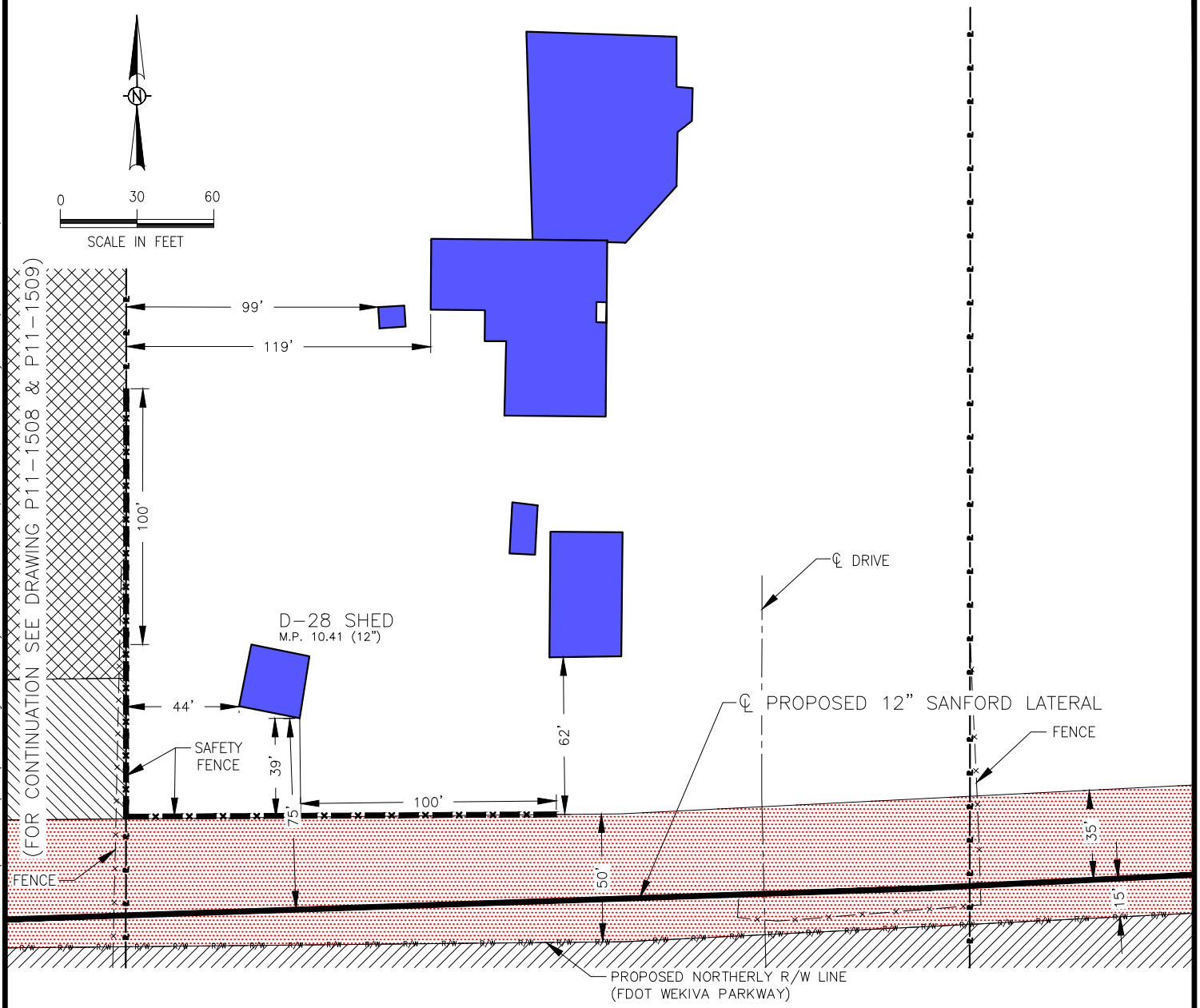
SHT. OF

DWG. NO.
P11-1509
SHT. 10 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12in and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1509.dwg Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:24 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:37 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWINGS P3-16.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1510.DWG/MODEL	BEC	3/10/2017

PROJECT NO.
537000920241
537000921785

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.41
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PREVIOUS DWG. NO.

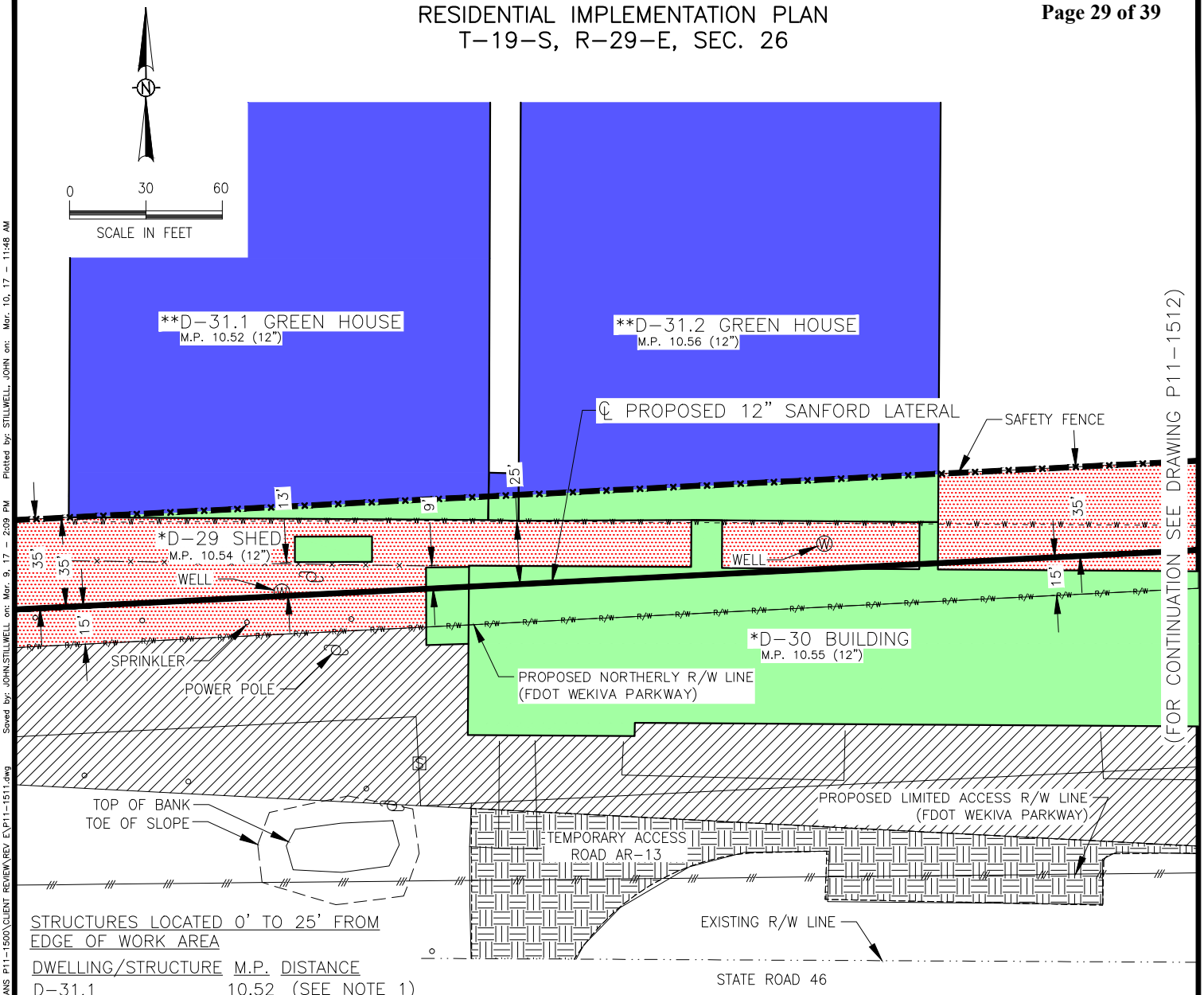
SHT. OF

DWG. NO.
P11-1510
SHT. 11 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-10in and 26in Wekiva Relocation\ENGINEERING\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1510.dwg Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:25 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:35 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-31.1	10.52	(SEE NOTE 1)
D-31.2	10.56	(SEE NOTE 1)

LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

** = INDICATES STRUCTURE TO BE MODIFIED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. FDOT WILL REMOVE THE PORTION OF GREENHOUSE STRUCTURES D-31.1 AND D-31.2 WITHIN THE PROPOSED FGT PERMANENT RIGHT OF WAY. FDOT WILL REFACE THE GREENHOUSE STRUCTURES AT THE NEAREST STRUCTURAL SUPPORT NORTH OF THE PROPOSED FGT PERMANENT RIGHT OF WAY AND THE LANDOWNER WILL CONTINUE TO USE THE STRUCTURE.
2. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
4. REFERENCE ALIGNMENT DRAWINGS P3-17.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY OPEN CUT INSTALLATION.

ISSUED FOR FERC FILING

REV. NO. – DESCRIPTION	BY	DATE	APP.
A ISSUED FOR REVIEW	UPI	08/10/16	AMT
B REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
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Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1511.DWG/MODEL	BEC / 3/10/2017

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.55
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

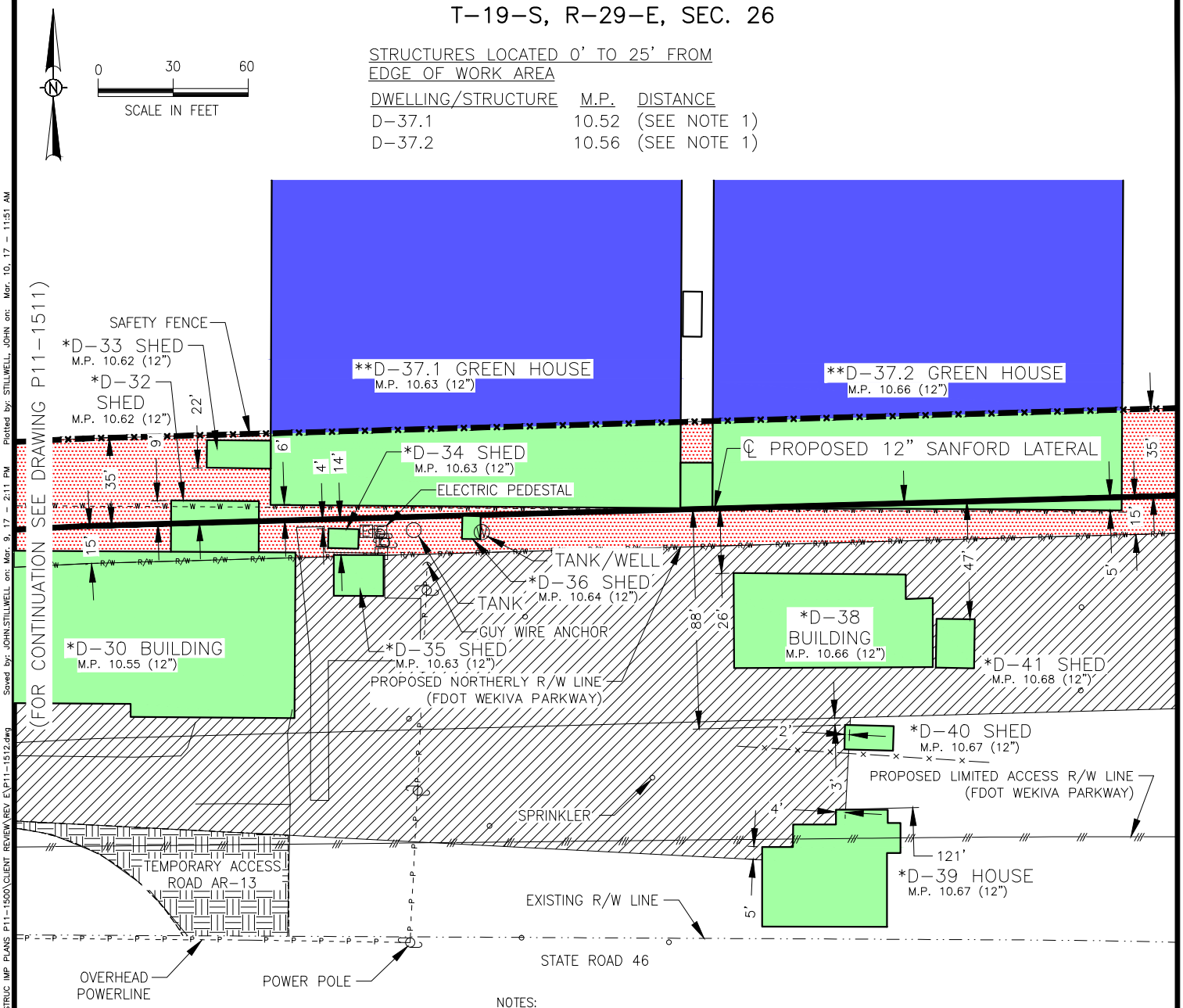
SHT. OF

DWG. NO.
P11-1511
SHT. 12 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-10in and 26in Wekiva Relocation\ENGINEERING\12-26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1511.dwg Saved by: JOHN.STILLWELL on: Mar. 9, 17 - 2:09 PM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:48 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 26



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

** = INDICATES STRUCTURE TO BE MODIFIED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. FDOT WILL REMOVE THE PORTION OF GREENHOUSE STRUCTURES D-37.1 AND D-37.2 WITHIN THE PROPOSED FGT PERMANENT RIGHT OF WAY. FDOT WILL REFACE THE GREENHOUSE STRUCTURES AT THE NEAREST STRUCTURAL SUPPORT NORTH OF THE PROPOSED FGT PERMANENT RIGHT OF WAY AND THE LANDOWNER WILL CONTINUE TO USE THE STRUCTURE.
2. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
4. REFERENCE ALIGNMENT DRAWINGS P3-17.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY OPEN CUT INSTALLATION.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1512.DWG/MODEL	BEC / 3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 10.61
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

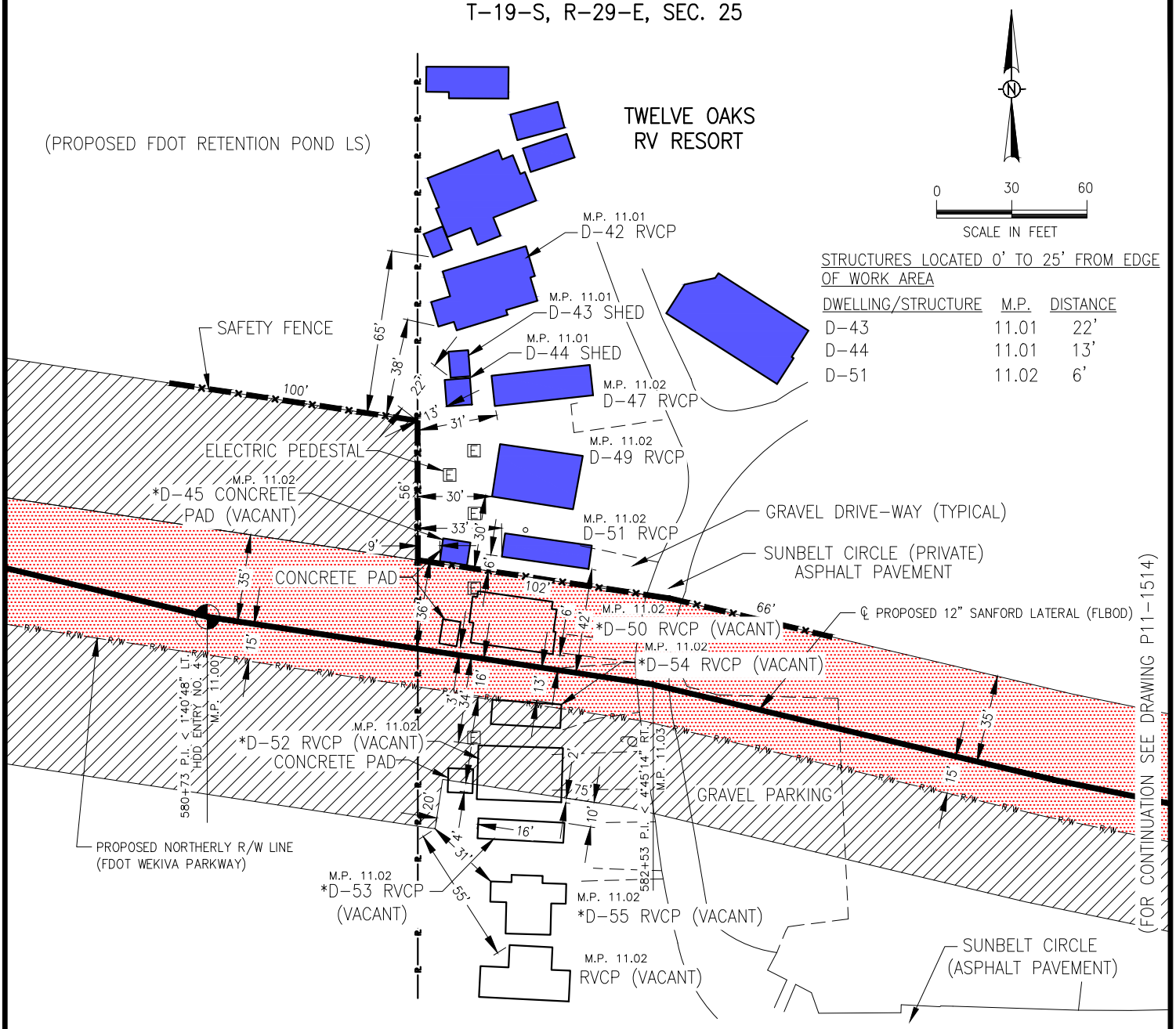
SHT. OF

DWG. NO.
P11-1512
SHT. 13 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12in and 26in Wekiva Relocation\ENGINEERING\12-26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1512.dwg Saved by: JOHN.STILLWELL on: Mar. 9, 17 - 2:11 PM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:51 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-43	11.01	22'
D-44	11.01	13'
D-51	11.02	6'

LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION
= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT
= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY
= TEMPORARY WORKSPACE (PRIVATE)
= CONTRACTOR YARD
= TEMPORARY ACCESS ROAD
= PROPOSED PERMANENT RIGHT OF WAY
= STRUCTURES TO REMAIN IN PLACE
= CONCRETE PADS TO BE REMOVED BY FDOT
RVCP = RECREATIONAL VEHICLE CONCRETE PAD

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWING P3-18.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY THE STOVE PIPE CONSTRUCTION METHOD IF RV PAD D-51 IS OCCUPIED AT THE TIME OF FGT CONSTRUCTION.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1513.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.02
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

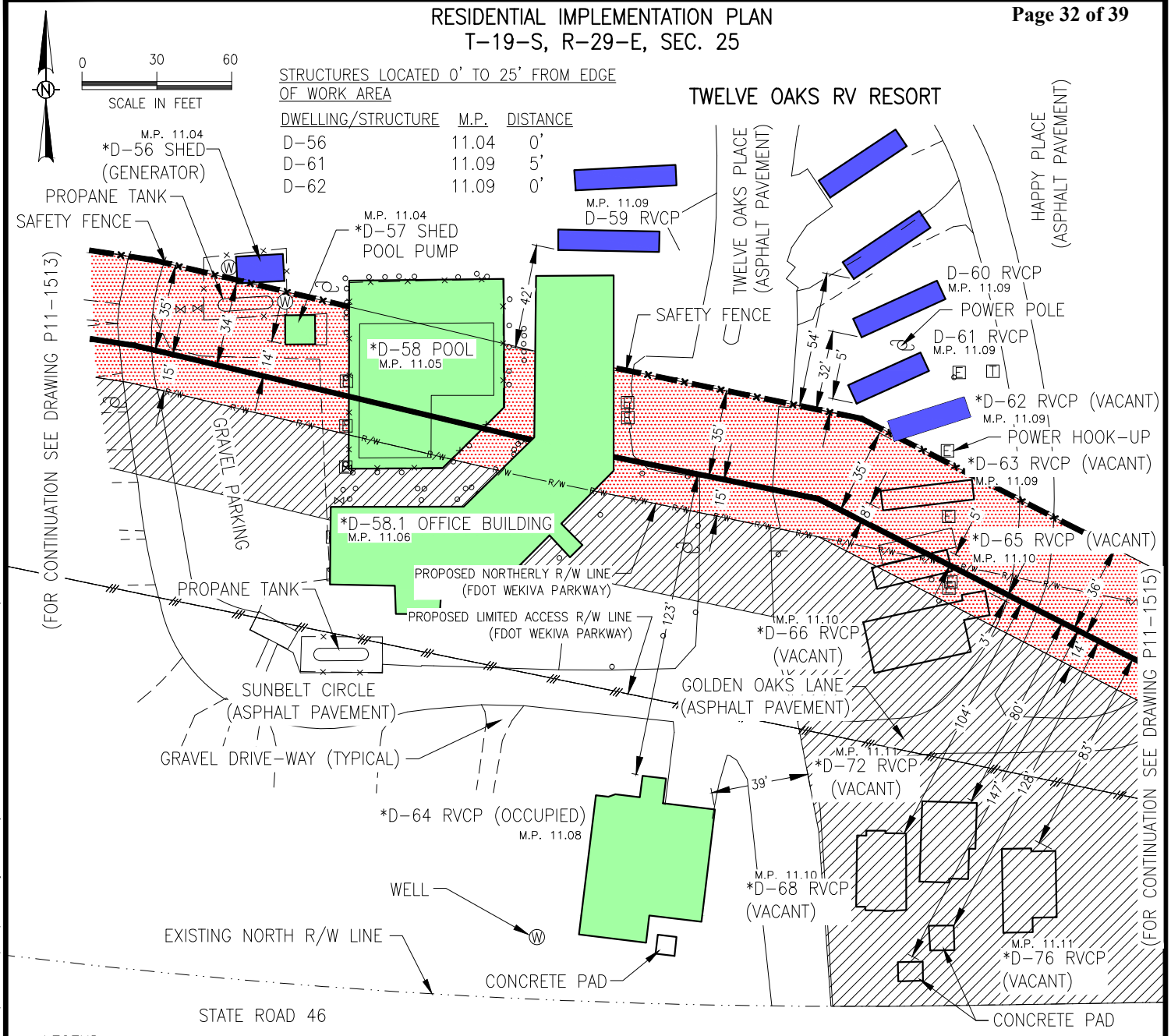
SHT. OF

DWG. NO.
P11-1513
SHT. 14 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12ln and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1513.dwg
Saved by: JOHN.STILLWELL on: Mar. 10, 17 - 11:53 AM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:56 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION
= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT
= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY
= TEMPORARY WORKSPACE (PRIVATE)
= CONTRACTOR YARD
= TEMPORARY ACCESS ROAD
= PROPOSED PERMANENT RIGHT OF WAY
= STRUCTURES TO REMAIN IN PLACE
= STRUCTURES TO BE REMOVED BY FDOT
= CONCRETE PADS TO BE REMOVED BY FDOT
RVCP = RECREATIONAL VEHICLE CONCRETE PAD

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWING P3-19.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY THE STOVE PIPE CONSTRUCTION METHOD IF PAD D-61 IS OCCUPIED AT THE TIME OF FGT CONSTRUCTION.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1514.DWG/MODEL	BEC / 3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.08
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

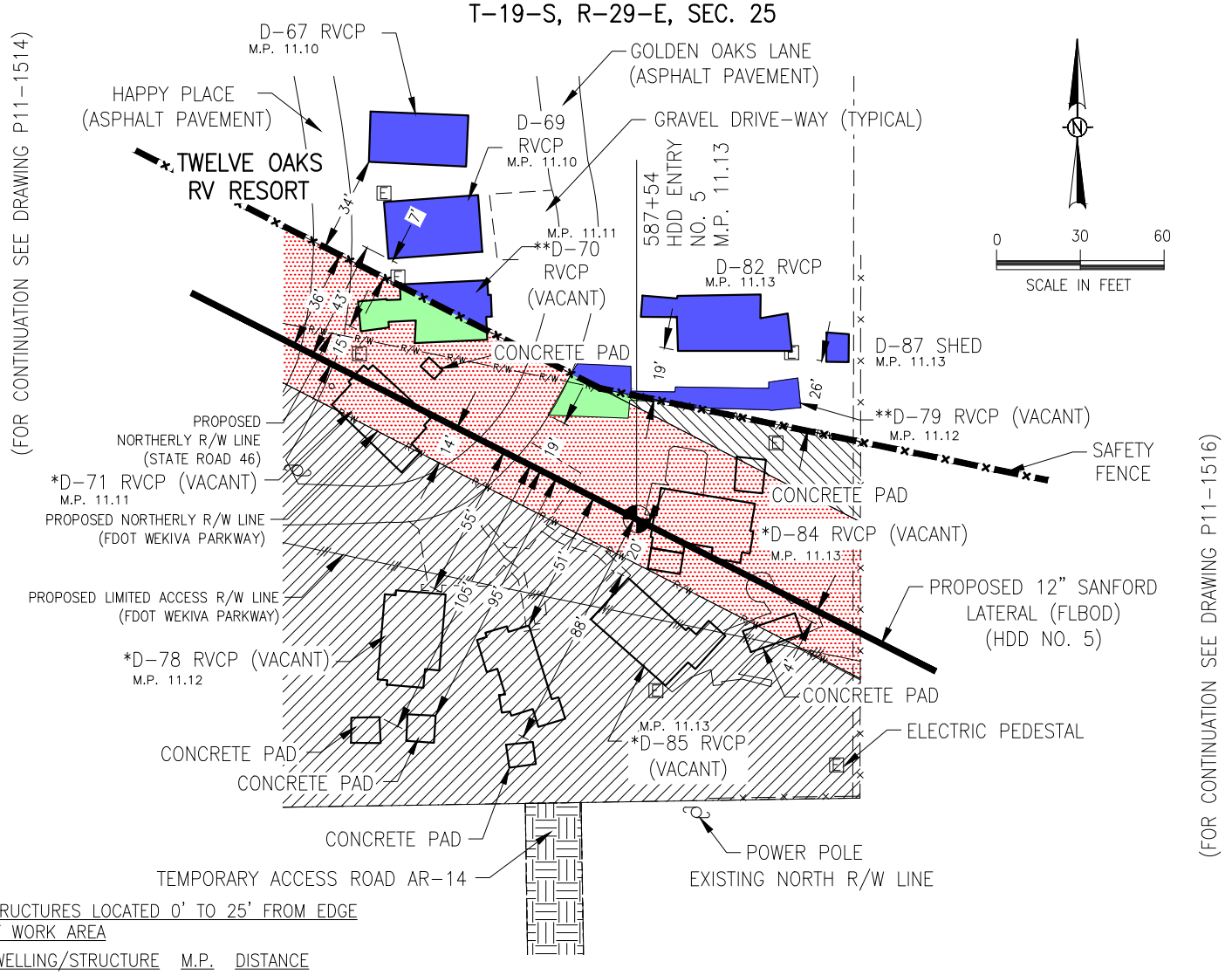
SHT. OF

DWG. NO.
P11-1514
SHT. 15 OF 22
E

UPI NO. 21493-505-SSW-13001

File Path: P:\Other Projects\21493-12ln and 26in Wekiva Relocation\ENGINEERING\12_26in Sanford Lateral(FERC)\12 - RES-STRUC IMP PLANS P11-1500\CLIENT REVIEW\REV E\P11-1514.dwg Saved by: JOHN.STILLWELL on: Mar. 9, 17 - 2:17 PM Plotted by: STILLWELL, JOHN on: Mar. 10, 17 - 11:54 AM

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-69	11.10	7'
D-70	11.11	(SEE NOTE 1)
D-79	11.12	(SEE NOTE 1)
D-82	11.13	19'

LEGEND

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- = TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT
- = TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY
- = TEMPORARY WORKSPACE (PRIVATE)
- = CONTRACTOR YARD
- = TEMPORARY ACCESS ROAD
- = PROPOSED PERMANENT RIGHT OF WAY
- = STRUCTURES TO REMAIN IN PLACE
- = STRUCTURES TO BE REMOVED BT FDOT
- = CONCRETE PADS TO BE REMOVED BY FDOT
- RVCP = RECREATIONAL VEHICLE CONCRETE PAD

NOTES:
1. FDOT WILL REMOVE THE PORTION OF RVCP D-70 AND D-79 WITHIN THE PROPOSED FGT PERMANENT RIGHT OF WAY. FDOT WILL REFACE THE RVCP D-70 AND D-79 NORTH OF THE FGT RIGHT OF WAY AND THE LANDOWNER WILL CONTINUE TO USE THE RVCP. RVCP D-70 AND D-79 WILL CONTINUE TO BE UNOCCUPIED THROUGH FGT CONSTRUCTION.
2. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
4. REFERENCE ALIGNMENT DRAWING P3-19.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY THE STOVE PIPE CONSTRUCTION METHOD IF PAD D-69 AND D-82 ARE OCCUPIED AT THE TIME OF FGT CONSTRUCTION, EXCEPT WHERE PIPE IS INSTALLED BY HDD METHOD.

ISSUED FOR FERC FILING

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
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C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

PIPELINE, STATION, OR ACCOUNT NUMBER: FLBOC/FLBOD
SCALE: 1" = 60'
CONST. YR.: 2018
FILENUMBER:
CADD FILENAME: P11-1515.DWG/MODEL
DRAWN: BEC
DATE: 3/10/2017

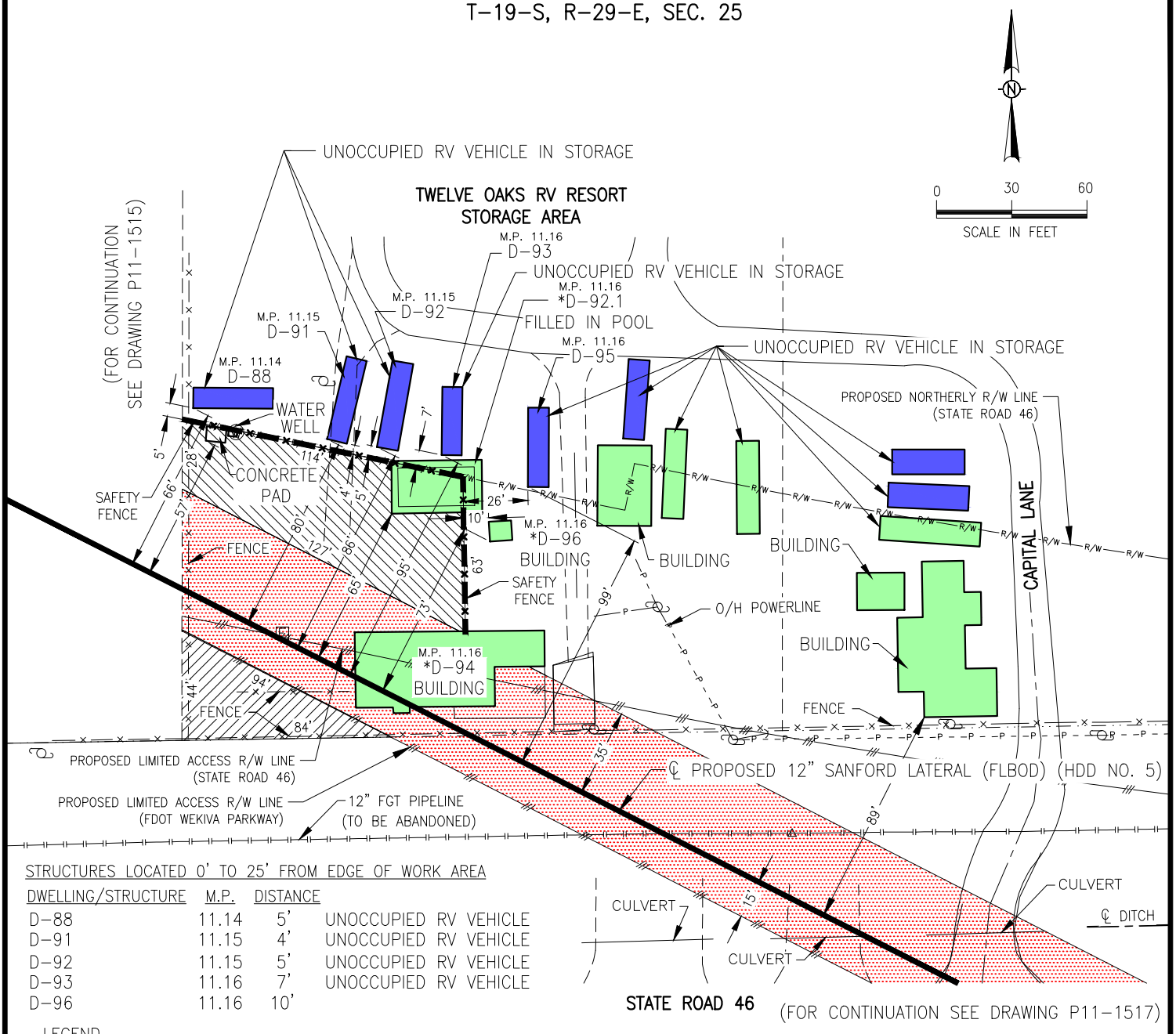
Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.12
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785
PREVIOUS DWG. NO.
SHT. OF
DWG. NO.
P11-1515
SHT. 16 OF 22
E

UPI NO. 21493-505-SSW-13001

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE	
D-88	11.14	5'	UNOCCUPIED RV VEHICLE
D-91	11.15	4'	UNOCCUPIED RV VEHICLE
D-92	11.15	5'	UNOCCUPIED RV VEHICLE
D-93	11.16	7'	UNOCCUPIED RV VEHICLE
D-96	11.16	10'	

LEGEND

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= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

= CONCRETE PADS TO BE REMOVED BY FDOT

RVCP = RECREATIONAL VEHICLE CONCRETE PAD

NOTES:
1. THE UNOCCUPIED RV VEHICLES IN STORAGE OUTSIDE OF THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWING P3-19.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY HDD CONSTRUCTION METHOD.

ISSUED FOR FERC FILING

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

PIPELINE, STATION, OR ACCOUNT NUMBER: FLBOC/FLBOD	SCALE: 1" = 60'	CONST. YR.: 2018	PROJECT NO.: 537000920241 537000921785
FILENUMBER	CADD FILENAME: P11-1516.DWG/MODEL	DRAWN: BEC / DATE: 3/10/2017	

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.15
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

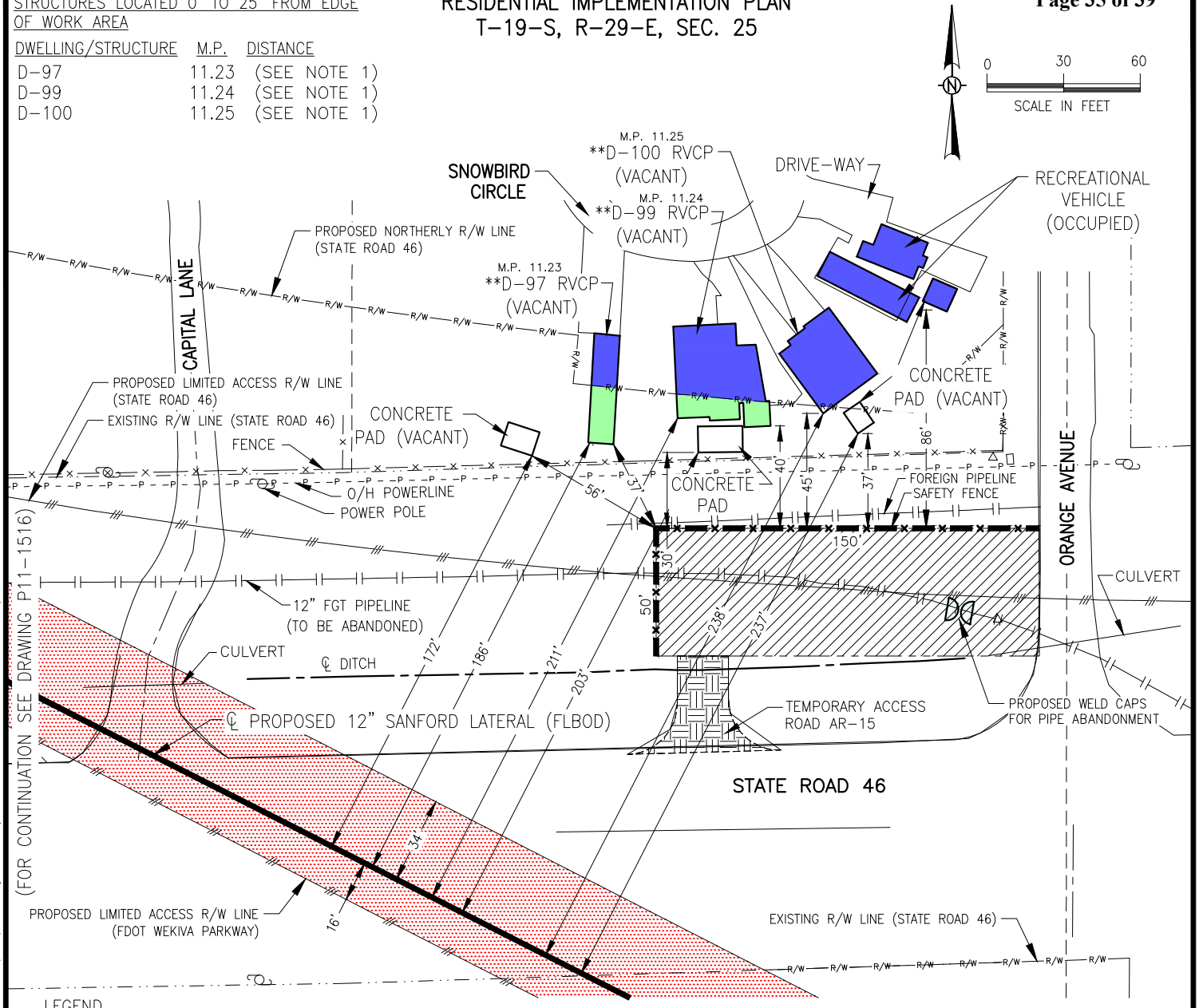
PREVIOUS DWG. NO.
SHT. OF
DWG. NO. P11-1516
SHT. 17 OF 22
E

UPI NO. 21493-505-SSW-13001

RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25

STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-97	11.23	(SEE NOTE 1)
D-99	11.24	(SEE NOTE 1)
D-100	11.25	(SEE NOTE 1)



LEGEND

- * = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION
- ** = INDICATES STRUCTURE TO BE MODIFIED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION
- = TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT
- = TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY
- = TEMPORARY WORKSPACE (PRIVATE)
- = CONTRACTOR YARD
- = TEMPORARY ACCESS ROAD
- = PROPOSED PERMANENT RIGHT OF WAY
- = STRUCTURES TO REMAIN IN PLACE
- = STRUCTURES TO BE REMOVED BY FDOT
- = CONCRETE PADS TO BE REMOVED BY FDOT
- RVCP = RECREATIONAL VEHICLE CONCRETE PAD

NOTES:
1. FDOT WILL REMOVE THE PORTION OF RVCP D-97, D-99, AND D-100 WITHIN THE PROPOSED FGT PERMANENT RIGHT OF WAY. FDOT WILL REFACE THE RVCP D-97, D-99, AND D-100 NORTH OF THE FGT RIGHT OF WAY AND THE LANDOWNER WILL CONTINUE TO USE THE RVCP. RVCP D-97 AND D-99, AND D-100 WILL CONTINUE TO BE UNOCCUPIED THROUGH FGT CONSTRUCTION.
2. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
4. REFERENCE ALIGNMENT DRAWING P3-20.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY HDD CONSTRUCTION METHOD. WELD CAPS FOR PIPE ABANDONMENT TO BE INSTALLED BY OPEN TRENCH METHOD.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1517.DWG/MODEL	BEC / 3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.24
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1517
SHT. 18 OF 22
E

UPI NO. 21493-505-SSW-13001

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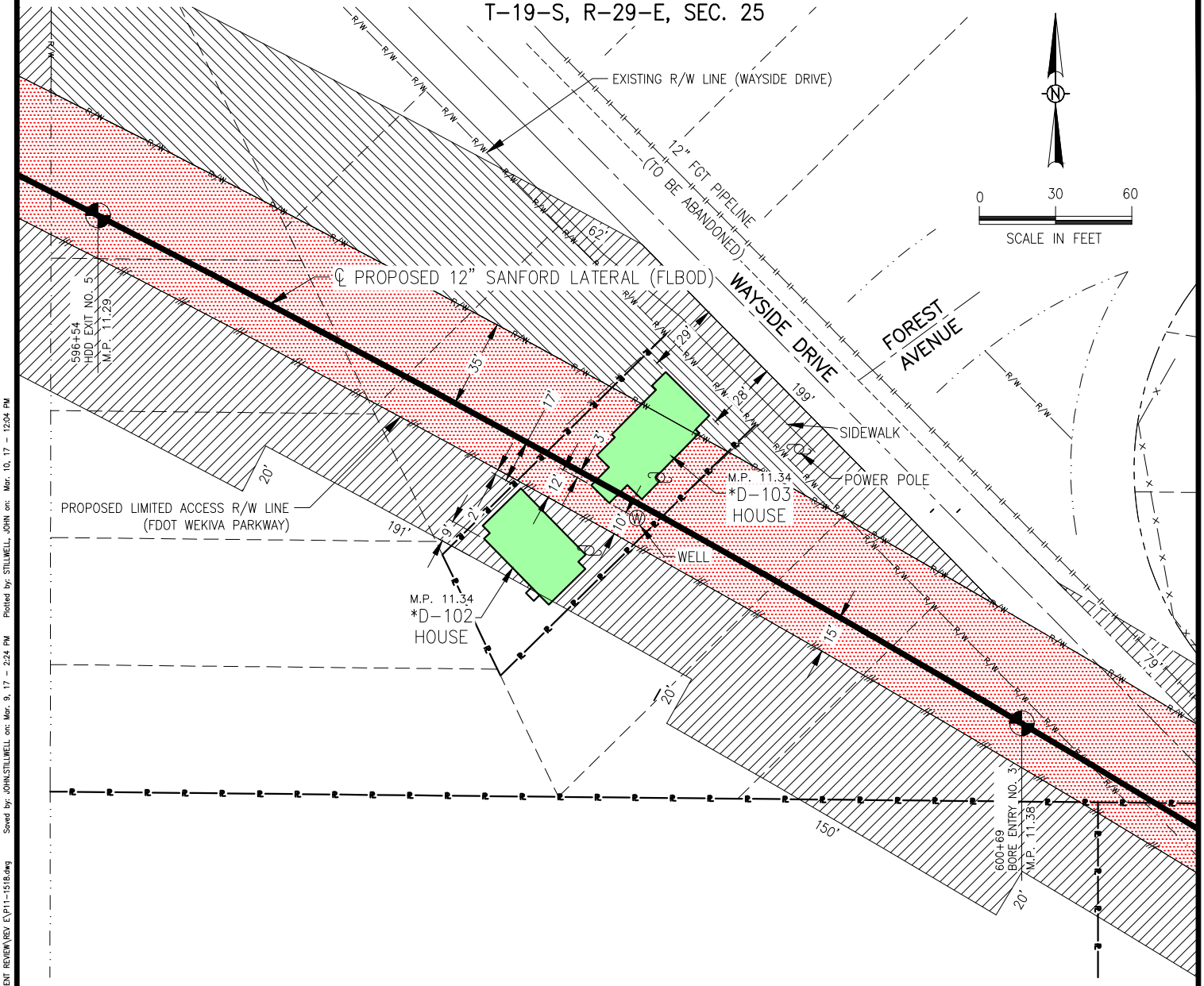
RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWINGS P3-20.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1518.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.34
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1518
SHT. 19 OF 22
E

UPI NO. 21493-505-SSW-13001

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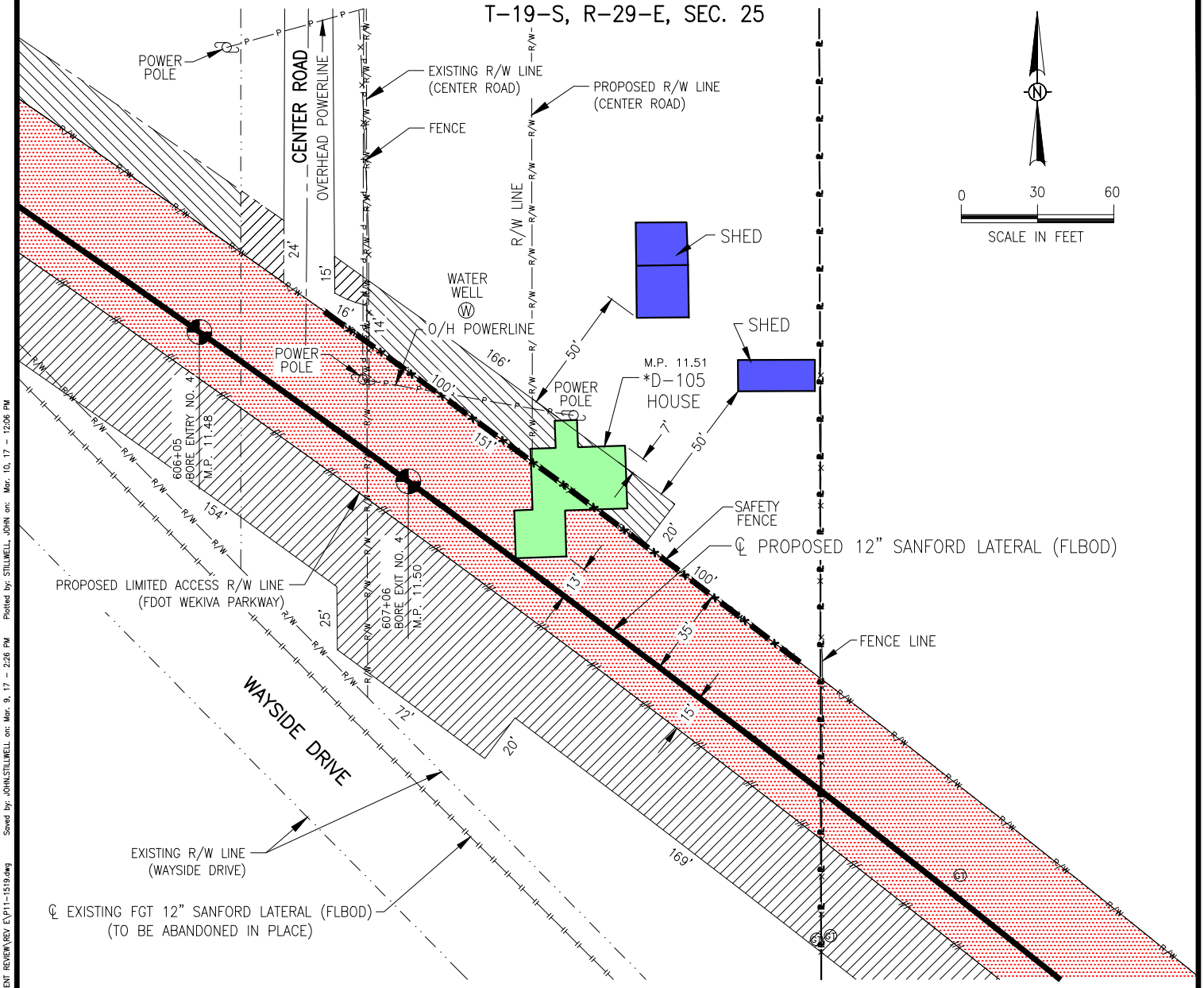
RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWINGS P3-21.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1519.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
B	REVISED PER CLIENT COMMENTS	UPI	08/25/16	AMT
C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
D	REVISED PER CLIENT COMMENTS	UPI	01/25/17	LEH
E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. M.P. 11.51
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1519
SHT. 20 OF 22
E

UPI NO. 21493-505-SSW-13001

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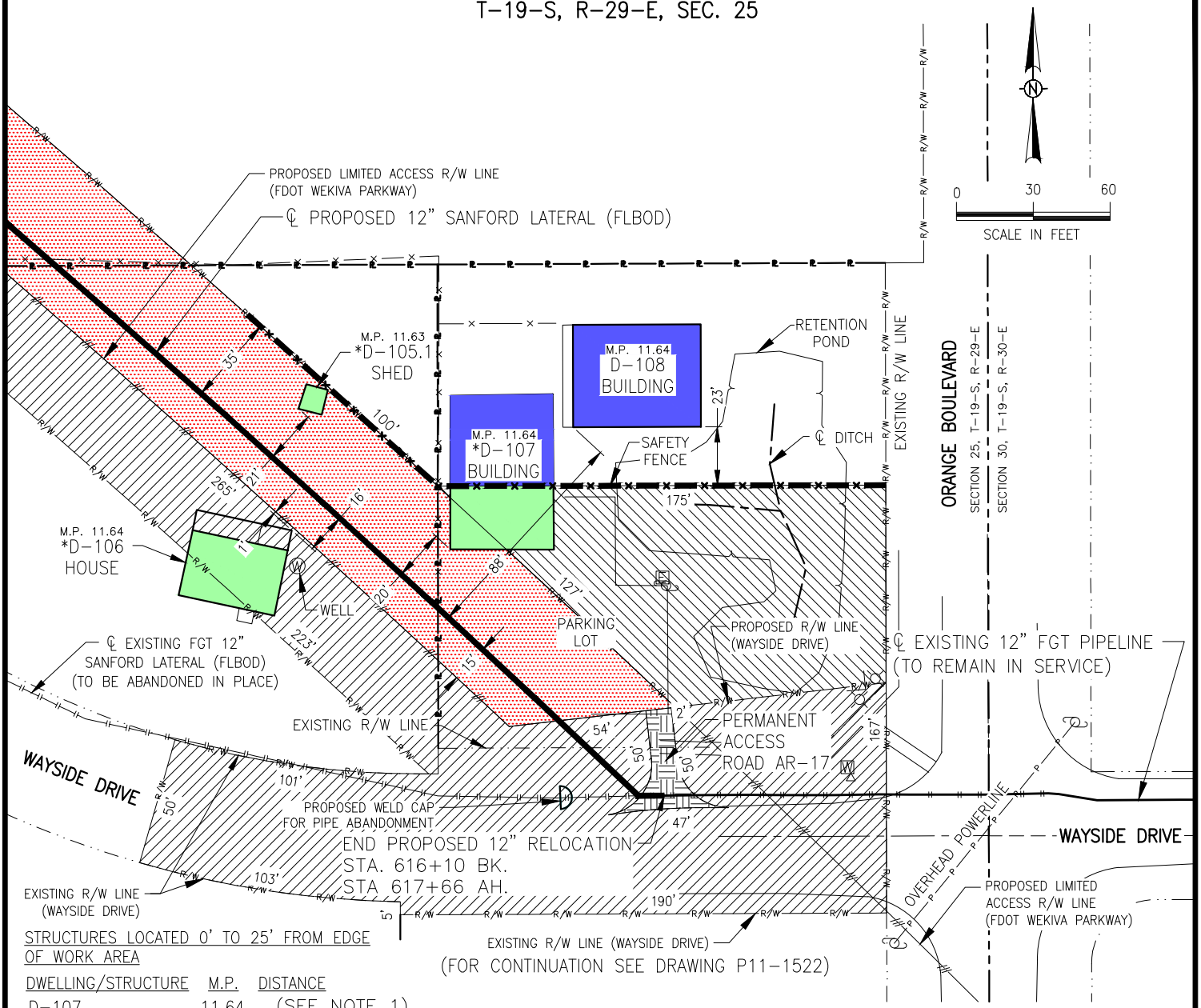
RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



STRUCTURES LOCATED 0' TO 25' FROM EDGE OF WORK AREA

DWELLING/STRUCTURE	M.P.	DISTANCE
D-107	11.64	(SEE NOTE 1)
D-108	11.64	23'

LEGEND

* = INDICATES STRUCTURE TO BE REMOVED BY FDOT PRIOR TO THE START OF FGT CONSTRUCTION

= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

= TEMPORARY WORKSPACE WITHIN EXISTING FGT RIGHT OF WAY

= TEMPORARY WORKSPACE (PRIVATE)

= CONTRACTOR YARD

= TEMPORARY ACCESS ROAD

= PROPOSED PERMANENT RIGHT OF WAY

= STRUCTURES TO REMAIN IN PLACE

= STRUCTURES TO BE REMOVED BY FDOT

NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWINGS P3-21.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
2. PIPE TO BE INSTALLED BY OPEN CUT INSTALLATION.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018

FILENUMBER	CADD FILENAME	DRAWN	DATE
	P11-1520.DWG/MODEL	BEC	3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
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C	REVISED PER CLIENT COMMENTS	UPI	12/07/16	LEH
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E	REVISED PER CLIENT COMMENTS	UPI	03/08/17	LEH

Florida Gas Transmission Company
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FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. MP 11.64
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1520
SHT. 21 OF 22
E

UPI NO. 21493-505-SSW-13001

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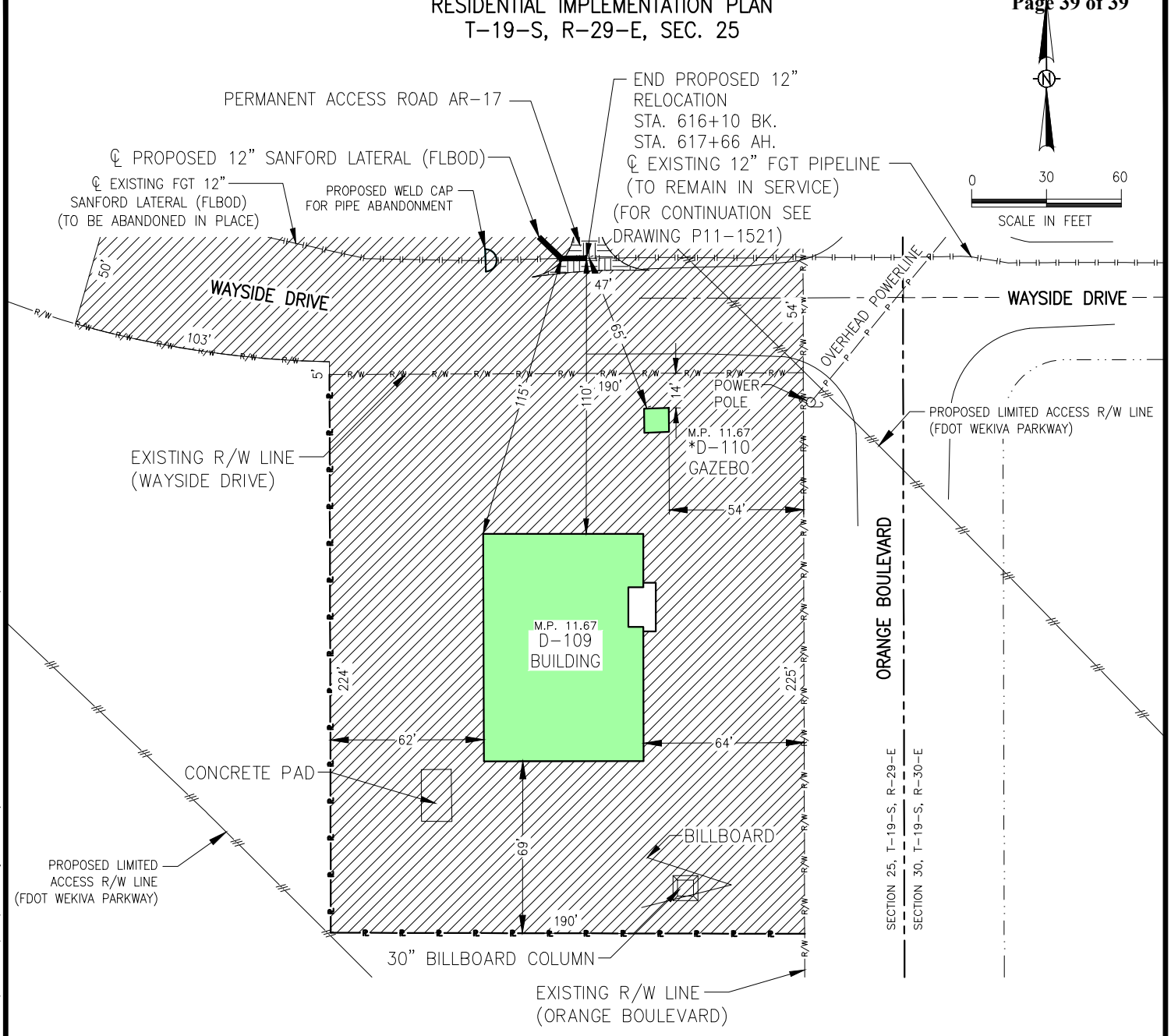
RESIDENTIAL IMPLEMENTATION PLAN
T-19-S, R-29-E, SEC. 25



LEGEND

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= TEMPORARY WORKSPACE WITHIN FDOT CONSTRUCTION FOOTPRINT

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NOTES:
1. THE STRUCTURES OUTSIDE OF THE WEKIVA PARKWAY PROJECT FOOTPRINT AND THE FGT PERMANENT AND TEMPORARY WORKSPACE RIGHT OF WAY WILL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES.
2. FOR ADDITIONAL CONSTRUCTION PROCEDURES FOR STRUCTURES OUTSIDE OF THE FGT PERMANENT AND TEMPORARY RIGHT OF WAY, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES ON DWG. P11-1500.
3. REFERENCE ALIGNMENT DRAWINGS P3-21.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL PREFERRED CONSTRUCTION TECHNIQUE
1. FGT WILL INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE CONSTRUCTION WORKSPACE AREA, SAFETY FENCE TO EXTEND 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.

ISSUED FOR FERC FILING

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE	CONST. YR.
FLBOC/FLBOD	1" = 60'	2018
FILENUMBER	CADD FILENAME	DRAWN / DATE
	P11-1521.DWG/MODEL	BEC / 3/10/2017

REV. NO.	DESCRIPTION	BY	DATE	APP.
A	ISSUED FOR REVIEW	UPI	08/10/16	AMT
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Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION COMPANY, LLC

WEKIVA PARKWAY RELOCATION PROJECT
RESIDENTIAL IMPLEMENTATION PLAN
APPROX. MP 11.67
0' TO 25' EDGE OF WORK AREA
SEMINOLE COUNTY, FLORIDA
(FDOT SECTION 7A)

PROJECT NO.
537000920241
537000921785

PREVIOUS DWG. NO.

SHT. OF

DWG. NO.
P11-1521
SHT. 22 OF 22
E

UPI NO. 21493-505-SSW-13001

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