FLORIDA SOUTHEAST CONNECTION PROJECT

DRAFT RESOURCE REPORT 1

General Project Description

FERC Docket No. PF14-2-000

Pre-Filing Draft

June 2014

FLORIDA SOUTHEAST CONNECTION™

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Filing Requirement	**Location in Environmental Report**
☒ Provide a detailed description and location map of the project facilities (§ 380.12(c)(1)). • Include all pipeline and aboveground facilities. • Include support areas for construction or operation. • Identify facilities to be abandoned.	Section 1.2 Table 1.2-1 Table 1.2-2 Figure 1.2-1
☒ Describe any non-jurisdictional facilities that would be built in association with the project. (§ 380.12(c)(2)). • Include auxiliary facilities (See § 2.55(a)). • Describe the relationship to the jurisdictional facilities. • Include ownership, land requirements, gas consumption, megawatt size, construction status, and an update of the latest status of Federal, state, and local permits/approvals. • Include the length and diameter of any interconnecting pipeline. • Apply the four-factor test to each facility (see § 380.12(c)(2)(ii)).	Section 1.13
☒ Provide current, original United States Geological Survey (USGS) 7.5-minute series topographic maps with mileposts showing the project facilities (§ 380.12(c)(3)). • Maps of equivalent details are acceptable if legible (check with staff). • Show locations of all linear project elements, and label them. • Show locations of all significant aboveground facilities, and label them.	Appendix 1A Appendix 1B
☒Provide aerial images or photographs or alignment sheets based on these sources with mileposts showing the project facilities. (§ 380.12(c)(3)). • No more than 1-year old • Scale no smaller than 1:6,000	Appendix 1A
☒ Provide plot/site plans of compressor stations showing the location of the nearest noise-sensitive areas (NSA) within 1 mile. (§ 380.12(c)(3,4)). • Scale no smaller than 1:3,600 • Show reference to topographic maps and aerial alignments provided above.	Not Applicable – No Compressor Stations Proposed
☒ Describe construction and restoration methods. (§ 380.12(c)(6)).	Section 1.7
☒ Identify the permits required for construction across surface waters. (§ 380.12(c)(9)). • Include the status of all permits. • For construction in the Federal offshore area be sure to include consultation with the MMS. File with the MMS for rights-of-way grants at the same time or before you file with the FERC.	Section 1.11 Table 1.11-1
☒ Provide the names and addresses of all affected landowners as required and certify that all affected landowners will be notified; • Affected landowners are defined in § 157.6(d)(2) • Provide an electronic copy directly to the environmental staff.	Appendix 1D

RESOURCE REPORT 1—GENERAL PROJECT DESCRIPTION		
	Filing Requirement	**Location in Environmental Report**
Additional Information Often Missing and Resulting in Data Requests		
☒	Describe all authorizations required to complete the proposed action and the status of applications for such authorizations	Section 1.11 Table 1.11-1
☒	Provide plot/site plans of all other aboveground facilities that are not completely within the right-of-way.	Appendix 1A
☒	Provide detailed typical construction right-of-way cross-section diagrams showing information such as widths and relative locations of existing rights-of-way, new permanent rights-of-way, and temporary construction rights-of-way. See Resource Report 8 – Land Use, Recreation, and Aesthetics.	Appendix 1A
☒	Summarize the total acreage of land affected by construction and operation of the project.	Section 1.6 Table 1.6-1 Table 8.2-2
☒	If Resource Report 5 - Socioeconomics is not provided, provide the start and end dates of construction, the number of pipeline spreads that would be used, and the workforce per spread.	Section 1.7.4 Resource Report 5 provided
☐	Send two (2) additional copies of topographic maps and aerial images/photographs directly to the environmental staff of the Office of Energy Projects (OEP).	To Be Provided

Responses to FERC Comments on Resource Report 1		
Comment Number	**Comment Text**	**Comment Response and Location of Information**
FERC Comments Dated 2/12/14		
1.	In section 1.6.1 (Pipeline Construction Right-of-Way), clarify whether Florida Southeast Connection (FSC) is proposing to typically overlap a portion of the construction and/or operational right-of-way with existing rights-of-way and include the percent of overlap, if applicable. Provide a detailed justification for not overlapping each type of existing right-of-way that the FSC pipeline would abut.	See Section 1.6.1
2.	Include in Section 1.7 a general description of the following construction procedures:	
2a.	the management, placement, and accessibility of cut timber for landowner use, and measures to minimize right-of-way damage during timber movement;	See Section 1.7.1.2
2b.	high flow contingency plans;	See Section 1.7.1.2
2c.	a description of residential pipeline construction and mitigation measures;	See Section 1.7.1.2
2d.	the topsoil segregation practices that would be implemented during construction and restoration and where they would be applied;	See Section 1.7.1.2
2e.	the construction and restoration methods used in agricultural areas such as citrus groves and ditches;	See Section 1.7.1.2
2f.	a plan to prevent the spread of noxious and invasive species and agricultural pests and pathogens during horizontal directional drilling operations and general construction; and	See Appendix 1E
2g.	the methods to control pipeline buoyancy in saturated or non-cohesive soil conditions.	See section 1.7.1.2
3.	Include the economic assessment conducted by Fishkind & Associates referenced.	See Appendix 5A in RR 5
4.	Revise table 1.7-1 to include the provision of FERC staff's Procedures that would be modified; a description of the modification; and an explanation how the modification would provide equal or greater environmental protection.	The proposed FERC procedures will not be modified and have been adopted as FSC's Procedures. See Appendix 7C
5.	Include in section 1.7.1.1 (Hydrostatic Testing) a brief discussion of measures that would be implemented to avoid the transfer of invasive or nuisance aquatic species between water basins during the hydrostatic testing.	See Section 1.7.1.1
6.	In section 1.7.1.2 (Wetland and Waterbody Crossings):	
6a.	provide the specific timelines that would be required for completing crossings of minor and intermediate waterbodies and the minimum depth of cover over the pipelines at these crossings;	See Section 1.7.1.2
6b.	provide a description of the pipeline construction, installation, and restoration measures FSC would implement to cross lakes, ponds, and springs, as applicable;	Refer to FSC's Procedures provided in Appendix 7C to RR 7
6c.	summarize key provisions of the Spill Prevention, Control, and Countermeasures Plan referenced in appendix 1C, including any requirements for construction crews to carry spill kits; and	Construction crews will carry spill kits. Refer to FSC's SPC plan in Appendix 7D in RR 7

Responses to FERC Comments on Resource Report 1		
Comment Number	**Comment Text**	**Comment Response and Location of Information**
6d.	Clarify whether the placement of clean rock would be allowed by permitting agencies to prevent scouring at culvert outlets.	Refer to Section 1.7.1.2
7.	In section 1.7.1.2, describe the horizontal directional drilling (HDD) technique. Identify all locations where the HDD method is planned and indicate whether or not supporting geotechnical investigations would be conducted and the timeline for submitting the results of these investigations to staff.	At present HDD is proposed in three locations. Refer to section 1.7.1.2 and draft Site Specific HDD Plans in Appendix 1A
8.	Include in section 1.10 (Public - Landowner/Agency Consultation) a summary of the key issues raised by agencies or stakeholders during outreach and how those issues have been addressed or where they are evaluated further in FSC's Resource Reports.	See response to scoping comments filed with the FERC on 5/2/14, and tables of agency correspondence in Appendix 1C.
9.	In section 1.10, include a description of the landowner complaint resolution process that would be implemented during construction, restoration, and operation of the project.	Refer to Section 1.10.5
10.	Include in section 1.13 (Non-Jurisdictional Facilities) a discussion of any modifications required at the Martin Power Plant in Martin County, Florida as a result of the Project.	No non-jurisdictional facilities associated with modifications at the Martin Power Plant are proposed.
11.	Section 1.14.1 describes cumulative impacts on several environmental resources; however, geology, recreation, and visual resources were not discussed. Include a discussion of cumulative impacts on these resources.	Refer to Section 1.14.1
12.	Consult with land managing agencies and state and local planning agencies to identify the location, timeframe, and type of recently completed, current, and reasonably foreseeable future projects (e.g., roads, bridges, mining, large commercial/industrial/residential developments) in the areas affected by the FSC Project. Include a table in section 1.14.1 that includes: a. the project type/name and county; b. approximate distance from the planned facilities; c. a description of the development; and d. the current status of the development (e.g., proposed, under construction, completed). Include a detailed discussion of cumulative, overlapping impacts that these projects and the FSC Project would have on each environmental resource and the measures that FSC would implement to minimize cumulative impacts. The area of cumulative impact, as determined by FSC with FERC staff approval, should be appropriate for each resource considered.	Refer to Table 1.14-1
13.	Include agency consultation letters and correspondence as an appendix to Resource Report 1, or the corresponding resource report. For example, Native American consultation correspondence should be appended to either Resource Report 1 or 4.	Refer to Appendix 4A for correspondence related to cultural resources Refer to Appendix 1C for other correspondence that has occurred.

Responses to FERC Comments on Resource Report 1			
Comment Number	**Comment Text**		**Comment Response and Location of Information**
14.	For each non-jurisdictional facility that would be constructed as a result of the new gas volumes associated with the FSC Project, include a description of the facility (e.g., acres, power output), an aerial map of the planned site, approximate construction schedule, major regulatory approvals required for construction and operation, and anticipated environmental impacts (e.g., wetlands, surface waters, vegetation, air quality).		No nonjurisdictional facilities are proposed
FERC Comments Dated 3/18/14			
1.	Confirm the capacity of the Florida Southeast Connection Project (FSC Project) and explain the proposed phasing of the capacity.		Upon its in-service date of May 2017, the FSC Project will be capable of providing 640 million cubic feet per day of natural gas. The FSC Project capacity will not be phased.
2.	On February 12, 2014, staff issued comments on Draft Resource Reports 1 and 10. Comment 12 addressed cumulative impacts. The following table is a supplement to comment 12 and should be used as guidance for determining the area of cumulative impact associated with the FSC Project.		Comment noted and used to assess cumulative impacts as applicable
	Environmental Resources	**Area of Impact (AOI)**	
	Surface Waters, Wetlands Groundwater, Vegetation, Wildlife and Fisheries (including T&E and Migratory Birds), Soils, Geology	Hydrologic Unit Code 12 Watersheds.	Comment noted and used to assess cumulative impacts as applicable
	Cultural	Overlapping impacts on historic properties.	Comment noted and used to assess cumulative impacts as applicable
	Land Use (including visual and residential). For other projects requiring more than 10 acres of land, use 5 miles.	0.5 mile.	Comment noted and used to assess cumulative impacts as applicable
	Noise	Overlapping noise-sensitive areas (0.5 mile).	Comment noted and used to assess cumulative impacts as applicable
	Air Quality	County (pipeline and stationary sources near a county border the AOI is a 50-kilometer radius from the source.	Comment noted and used to assess cumulative impacts as applicable
	In addition, include a map that shows the projects with the AOI in relation to the FSC Project.		Refer to Figure 8.3-1.

ACRONYMS AND ABBREVIATIONS

API	American Petroleum Institute
ATWS	Additional temporary workspace
BMP	Best Management Practice
CFR	Code of Federal Regulations
DEF	Duke Energy Florida
EI	Environmental Inspector
ERP	Environmental Resource Permit
FERC	Federal Energy Regulatory Commission
FERC Plan	Upland Erosion Control, Revegetation, and Maintenance Plan
FERC Procedures	Wetland and Waterbody Construction and Mitigation Procedures
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FGT	Florida Gas Transmission Company, LLC
FPL	Florida Power & Light Company
FPSC	Florida Public Service Commission
FSC	Florida Southeast Connection, LLC
FWC	Florida Fish and Wildlife Conservation Commission
HDD	Horizontal directional drill
MAOP	Maximum allowable operating pressure
MLV	Mainline Valves
MMcf/d	Million cubic feet per day
NEPA	National Environmental Policy Act
NSA	Noise Sensitive Area
NWI	National Wetlands Inventory
O&M	Operation and Maintenance
RFP	Request for Proposal
Sabal Trail	Sabal Trail Transmission Pipeline Project
SCADA	Supervisory Control and Data Acquisition System
SPC Plan	Spill Prevention and Control Plan
TBD	To be determined
Transco	Transcontinental Gas Pipe Line Company, LLC
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 RESOURCE REPORT 1 - GENERAL PROJECT DESCRIPTION

1.1 INTRODUCTION

Florida Southeast Connection, LLC ("FSC"), a subsidiary of NextEra Energy, Inc., is seeking a certificate of public convenience and necessity ("Certificate") from the Federal Energy Regulatory Commission ("FERC") pursuant to Section 7(c) of the Natural Gas Act authorizing the construction and operation of an approximately 127 mile natural gas pipeline known as the Florida Southeast Connection Project ("FSC Project"). The FSC Project is designed to meet the growing demand for natural gas by the electric generation, distribution and end use markets in Florida. It will also provide additional source diversity through a connection to a new interconnection hub in central Florida ("Central Florida Hub") to be constructed as part of the Sabal Trail Transmission Pipeline Project ("Sabal Trail"). The Sabal Trail Project is the subject of a separate, but related, certificate filing to the FERC.

The FSC Project will increase natural gas transportation capacity and availability to southern Florida by adding a new, third pipeline in central and southern Florida. Upon the anticipated in-service date of May 2017, the FSC Project will be capable of providing up to 640 million cubic feet per day ("MMcf/d") of natural gas to an existing gas yard at Florida Power & Light Company's ("FPL") Martin Clean Energy Center.

The FSC Project involves the construction and operation of approximately 127 miles of up to 36-inch-diameter pipeline and the construction and operation of one meter station (known as the Martin Meter Station). The FSC Project pipeline will start in Osceola County, Florida at the interconnection with Sabal Trail within the Central Florida Hub and will traverse Polk, Osceola, Okeechobee, St. Lucie, and Martin Counties, terminating at the FPL Martin Clean Energy Center in Martin County, Florida. The Martin Meter Station will be located at the terminus of the FSC Project at the FPL Martin Clean Energy Center. In addition, FSC will install a pig launcher at the start of the FSC Project and a pig receiver at the end of the FSC Project.

A complete summary of the FSC Project facilities is provided in Tables 1.2-1 and Table 1.2-2 and a location map of the FSC Project facilities is provided as Figure 1.2-1. This Resource Report identifies the organization of the Environmental Report (Section 1.3), the purpose and need for the proposed FSC Project (Section 1.4), the locations and descriptions of FSC Project facilities (Section 1.5), and the land requirements associated with facility construction and operation (Section 1.6). This Resource Report also discusses the proposed construction procedures (Section 1.7), construction schedule and work force (Section 1.7), operation and maintenance ("O&M") procedures (Section 1.8), potential plans for future expansion or abandonment of the proposed facilities (Section 1.9), agency consultation and landowner notification (Section 1.10), permits and approvals required to construct and operate the FSC Project (Section 1.11), status of field surveys (Section 1.12), proposed non-jurisdictional facilities (Section 1.13), and an assessment of cumulative impacts from other reasonably foreseeable future projects (Section 1.14). A checklist showing the status of the FERC filing requirements for Resource Report 1 is included following the table of contents.

1.2 PROJECT DESCRIPTION

1.2.1 Pipeline Facilities

The FSC Project involves the construction and operation of approximately 127 miles of up to 36-inch-diameter pipeline. The FSC Project starts in Osceola County, Florida at the interconnection with Sabal Trail within the Central Florida Hub and will traverse Polk, Osceola, Okeechobee, St.

Lucie, and Martin Counties, terminating at the Martin Clean Energy Center in Martin County, Florida. A summary of the FSC Project pipeline and aboveground facilities is provided in Table 1.2-1 and Table 1.2-2. A location map of the FSC Project pipeline facilities is provided as Figure 1.2-1.

1.2.2 Aboveground Facilities

The proposed aboveground facilities of the FSC Project involve the construction and operation of a meter station to be located at the terminus of the FSC Project at the Martin Clean Energy Center (Martin Meter Station), a pig launcher at the start of the FSC Project and a pig receiver at the end of the FSC Project. The number and locations of Main Line Valves ("MLVs") will be dependent on the results of class studies currently being conducted. The aboveground facilities for the FSC Project are listed in Table 1.2-2 and their locations shown on Figure 1.2-1.

1.3 ENVIRONMENTAL REPORT ORGANIZATION

This Environmental Report is composed of 12 separate Resource Reports and has been prepared in accordance with FERC Order No. 603, which governs the filing of applications for Certificates of Public Convenience and Necessity authorizing the construction, operation, and abandonment of facilities to provide service under Section 7 of the Natural Gas Act.

The FSC Project's certificate application and accompanying Environmental Reports have been organized into separate volumes, in compliance with FERC's requirements for Public, Privileged & Confidential, and Critical Energy Infrastructure Information classes of information. The contents of each volume are outlined below.

Volume I (Application and Exhibits (except F-1)

Volume II (Exhibit F-1)

- Volume II-A: Environmental Reports.
- Volume II-B: Supporting Drawings and Maps.

Volume III: Privileged & Confidential - Landowner Lists and Cultural Resources Information

Appendix 1A (bound separately in Volume II-B) includes drawings and maps for all proposed FSC Project facilities (including alignment sheets). Appendix 1A also contains typical drawings for the various rights-of-way, metering and regulating station, and other aboveground facilities (e.g., MLVs and launchers/receivers) as well as drawings showing the FSC Project components on U.S. Geological Survey (USGS) 7.5 minute series topographic quadrangle maps. USGS Quadrangle excerpts are located in Appendix IB.

1.4 PROJECT PURPOSE AND NEED

1.4.1 Background

The FSC Project will create a new pipeline system with a planned capacity to initially transport 640 MMcf/d of natural gas. The FSC Project will interconnect to the proposed Sabal Trail project at a point in central Florida south of Orlando. Sabal Trail proposes to lease capacity from Transcontinental Gas Pipe Line Company, LLC ("Transco") and construct approximately 463 miles of mainline pipeline terminating in central Florida. In addition, Sabal Trail will construct new facilities in central Florida that will provide interconnections with Florida Gas Transmission, LLC ("FGT") and Gulfstream Natural Gas System, LLC. These interconnections, as well as the interconnection to FSC, will be known as the Central Florida Hub.

In December of 2012, FPL issued a Request for Proposals ("RFP") for new natural gas transportation service. Specifically, the RFP requested proposals for one pipeline, i.e., the Upstream Pipeline Project, extending from Transco's Station 85 in Alabama to a new interconnection hub to in central Florida to create the Central Florida Hub, and a second pipeline, i.e., the Downstream Pipeline Project, from the Central Florida Hub to FPL's Martin Clean Energy Center in Indiantown, Florida. In July of 2013, FPL announced FSC as the winning bidder for the Downstream Pipeline Project. FSC and FPL entered into a precedent agreement for 400,000 MMcf/d beginning May 1, 2017, increasing to 600,000 MMcf/d on May 1, 2020. The precedent agreement with FPL requires an in-service date of May 1, 2017.

1.4.2 Purpose

The purpose of the FSC Project is to (i) meet the natural gas fuel supply needs of existing and future electric generators by May 2017 and other natural gas users in Florida; (ii) add a new natural gas transmission pipeline to enhance the reliability of the existing pipeline system serving Florida; and (iii) satisfy the anchor shipper's (FPL) RFP requirement to create new pipeline infrastructure to allow for additional generation sites to be directly served with minimal need for additional facilities. The FSC Project may also permit natural gas Local Distribution Companies to expand natural gas service to parts of Florida that currently are not served given the absence of gas infrastructure, thus permitting industrial and commercial customers the benefits of natural gas. In conjunction with the Sabal Trail Project, FSC will allow diversified access to growing natural gas supplies for natural gas users in Florida, increase the overall reliability of the region's natural gas transmission grid, reduce reliance on offshore supply sources and lessen the vulnerability to supply disruptions that can result from severe weather in the Gulf of Mexico.

In 2009, as a result of interest expressed by FPL, the Florida Public Service Commission ("FPSC") determined that "increased gas transportation infrastructure is needed to meet future electricity needs, given the uncertainty surrounding both coal-fired and nuclear generation" in the state of Florida (FPSC, 2009). The FPSC then directed FPL to conduct an RFP to meet the long term natural gas needs of FPL. Florida's use of natural gas for electric generation is projected to continue growing for years to come. The Florida Reliability Coordinating Council has reported that natural gas-fired electric generation has grown from less than 40 percent of total electric generation in 2007 to approximately 65 percent in 2012 and is expected to continue near this level for the next ten years. Further, Energy Information Administration data indicates that total natural gas demand in Florida has increased by 24 percent over the past 5 years and will continue to increase. Yet, unlike many other parts of the country where gas-fired generation is prevalent, e.g., Texas and California, Florida has no natural gas storage, almost no natural gas production and the two existing pipelines that serve the majority of the state are at or nearing their full capacity.

In addition to providing increased gas deliverability to meet the region's growing natural gas needs, FSC will also benefit the state of Florida by providing increased competition for gas transportation needs and economic benefits to Florida. The FSC pipeline will be expandable at the outset via compression expansions or other modifications, whereas the existing FGT and Gulfstream pipelines can only be expanded through pipeline looping and additional compression. FSC also creates a new market dynamic that can generate pipe-on-pipe competition for interstate gas transportation services. These features of the FSC Project should positively impact the economics of the state's overall natural gas supply portfolio, benefitting all gas consumers in Florida.

In addition to the foregoing, FSC is projected to provide economic benefits. There will be an average of approximately 350 workers active per day over the expected 420-day construction period and direct wages associated with construction of the FSC Project are anticipated to

amount to more than $71 million dollars. In addition to the wages paid for FSC construction workers, wages for jobs created indirectly as the result of FSC Project construction are anticipated to amount to approximately $69 million (Fishkind & Associates, 2014 – see Appendix 5A). Over the 60-year lifetime of the FSC Project, FSC estimates that it will pay $299 million in state, local and county taxes (Fishkind & Associates, 2014 – see Appendix 5A).

1.5 LOCATION AND DESCRIPTION OF FSC PROJECT FACILITIES

1.5.1 Pipeline Facilities

The FSC Project, which is approximately 127 miles in length, will be located in Polk, Osceola, Okeechobee, St. Lucie, and Martin Counties in Florida. The FSC Project will interconnect to the new Sabal Trail Project near Intercession City, Florida. Both FSC and Sabal Trail propose in-service dates in May 2017.

The FSC Project will involve the creation of a new greenfield pipeline that will connect with Sabal Trail within the proposed Central Florida Hub to FPL's Martin Clean Energy Center in Martin County. The pipeline route originates in Osceola County near County Road 532 and runs generally south through Polk County for approximately 25 miles, until turning east where it traverses approximately 46 miles through Polk and Osceola Counties before turning southeast for approximately 45 more miles through Okeechobee and St. Lucie Counties. For the last 11 miles, the proposed route runs almost due south from the St. Lucie/Martin County boundary terminating at a point within the existing FPL Martin Clean Energy Center property north of Indiantown in Martin County, Florida. The proposed route falls within the municipal limits of four municipalities: the City of Davenport, the City of Haines City, the City of Lake Wales, and the Town of Dundee. The proposed route will be collocated with existing utility rights-of-way and along existing road rights-of-way where practicable.

1.5.2 Above Ground Facilities

1.5.2.1 Meter Station

A gas metering/regulating station (Martin Meter Station) is proposed at the pipeline terminus at the FPL Martin Clean Energy Center. This station will include a filter/separator to remove small amounts of entrained liquids and debris from the gas stream, prefabricated skid-mounted metering runs, prefabricated skid-mounted pressure regulators, a gas chromatograph to measure the gas composition, and building enclosures. Additional process piping, electrical power, and pressure monitoring devices will also be installed. A meter station plot plan is located in Appendix 1A.

1.5.2.2 Mainline and Block Valves

MLVs will be located along the pipeline with the spacing of the MLVs meeting the requirements of the Pipeline and Hazardous Materials Safety Administration pipeline safety regulations for the pipe class requirements of each segment of the pipeline. A typical MLV is shown in Figure 1.5-1.

1.5.2.3 Launchers and Receivers

An inline pipe inspection device, or pig, launcher will be located at the origination of the pipeline where it will interconnect with the Sabal Trail Project (see Figure 1.5-2 for a depiction of a typical pig launcher and receiver). A pig receiver will be installed at the Martin Meter Station to be located at the FPL Martin Clean Energy Center. The necessity for a pig launcher/receiver at an intermediate location along the pipeline route is still under consideration. If it is determined that a pig launcher/receiver is necessary, the exact location will be provided at a future date.

1.5.3 Contractor Yards

FSC has identified four contractor yards, one staging area, and two storage areas for use during construction. The yards and staging/storage areas are primarily cited within agricultural land, open land, and commercial/industrial land. The locations of these yards are shown on Figure 1.5-3.

1.6 LAND REQUIREMENTS

The proposed FSC Project will result in the temporary disturbance to existing land use during construction of the proposed facilities and, to a lesser degree, in the future during O&M of the facilities. A summary of land requirements for the FSC Project are provided in Table 1.6-1. Preliminary land requirements for the pipeline facilities are provided in Table 1.6-2 and discussed in Section 1.6.1 and Section 1.6.2. Preliminary land requirements for the proposed aboveground facilities are discussed in Section 1.6.3. Launcher/receivers and MLVs do not require additional land and are therefore included in the land requirements for the pipeline or other aboveground facilities, as applicable. Preliminary land requirements for the proposed access roads and contractor yards are provided in Tables 8.2-5 and 1.6-4, respectively, and discussed in Sections 1.6.4 and 1.6.5, respectively.

1.6.1 Pipeline Construction Right-of-Way

The FSC Project will require a minimum 100-foot-wide construction right-of-way. The 100-foot-wide right-of-way includes a 50-foot-wide permanent right-of-way. Depending on the location, the 50-foot-wide right-of-way may be centered within the 100-foot-wide construction right-of-way or it may be off-centered. Typical right-of-way configurations are shown on figures provided in Appendix 1A.

An exception to the 100-foot-wide construction right-of-way width is within wetlands where the right-of-way width is reduced to 75 feet wide. In some locations, additional workspace will be needed outside the nominal 100-foot corridor where conditions require additional workspace such as where the construction right of way is in close proximity to existing residences, roads, railroads, power line structures and wires, topography, soils, wetlands, and waterbodies. FSC has considered these factors in combination with the size of the equipment necessary to safely install the proposed pipeline. To accommodate this varying workspace width, a study corridor of 300 feet in width has been employed for biological and cultural resource field surveys, with the study area expanded as needed to evaluate potential visual impacts on historic structures. The cultural resources survey area is described in Resource Report 4 – Cultural Resources and shown on figures provided with this resource report.

The proposed route was selected to maximize opportunities for collocation with other existing linear features and as much as practicable to avoid impacting land that is not already encumbered by utility infrastructure, or roads. Approximately 101 miles (79%), of the pipeline corridor is collocated within or immediately adjacent to other linear facilities. The permanent right-of-way will overlap existing utility right-of-ways at varying widths in areas where such overlap is possible. The amount of overlap varies depending on field conditions such as existing facility locations, environmentally sensitive lands, proposed construction, landowner coordination, or other workspace restrictions. Several locations exist where, based on field conditions, the proposed route switches from one side of the linear facility right-of-way to the other. FSC is coordinating with the appropriate linear facility owners to safely cross under or over these existing facilities. Table 8.2-3 in Resource Report 8 – Land Use, Recreation, and Aesthetics, summarizes existing right-of-way adjacent to the FSC Project pipeline facilities. When feasible the proposed FSC right-of-way is located adjacent to, but not within, the Florida Department of Transportation (“FDOT”)

right-of-way. FDOT does not issue easements within their right-of-way and instead issues a permit to allow non-FDOT features to be located within FDOT right-of-way. If FDOT chooses to perform work within their right-of-way, any impacted non-FDOT facilities would have to be relocated at the cost of the owner. FSC has been coordinating with FDOT staff throughout the route selection process in order to minimize potential future conflicts with proposed FDOT construction projects.

Collocation areas include approximately 12 percent, or 15 miles adjacent to a Duke Energy Florida ("DEF") power line easement and approximately 67 percent, or 85 miles adjacent to highways or other roads.

To minimize conflicts between the pipeline and possible future expansions by DEF or by highway authorities to their systems, the proposed pipeline right-of-way is planned to be adjacent to these rights-of-way, except for a few locations where conflicts exist that require the pipeline to be located in either the power line right-of-way or highway right-of-way.

1.6.2 Additional Temporary Workspace

In addition to the construction right-of-way, additional temporary workspace ("ATWS") may be required in areas such as the following:

- Adjacent to crossings of roadways, railroads, waterbodies, wetlands, or other utilities;
- Areas of steep terrain or other construction constraints that require special construction techniques, such as horizontal directional drilling ("HDD") entry and exit locations;
- HDD pullbacks;
- Areas requiring extra trench depth;
- Areas for spoil storage;
- Areas for temporary storage of segregated topsoil;
- Locations with soil stability concerns;
- Truck turnarounds;
- Equipment passing lanes;
- Hydrostatic test water withdrawal and discharge locations; and
- Staging and fabrication areas.

Upon completion of construction, the rights-of-way will typically be limited to the 50-ft-wide permanent right-of-way and designated facility areas.

The areal extent (size) of ATWS will be determined on a site-specific basis. The ATWS area will be restricted to the minimum size necessary to safely construct the pipeline with respect to the existing conditions anticipated at the time of construction. In the case of wetlands and waterbodies, the ATWS will be located in accordance with the setback requirements contained in FSC's *Wetland and Waterbody Construction and Mitigation Procedures* ("Procedures") to the extent practicable and in consultation with other federal and state agencies. Where conditions do not permit a 50-foot setback, FSC is requesting deviations from the Procedures. Table 2.3-3 in Resource Report 2 – Water Use and Quality, identifies the locations where ATWS wetland setback deviations are requested along the FSC pipeline.

1.6.3 Aboveground Facilities

The Martin Meter Station will be located at the pipeline terminus at the FPL Martin Clean Energy Center. Operation of the meter station will require approximately 0.92 acres of previously cleared area. Land requirements for the meter station are identified in Table 1.6-3.

MLVs will be located along the pipeline route in accordance with the applicable class locations. Each MLV site will encompass a fenced-in area of approximately 40 by 55 feet (approximately 0.05 acres). A typical MLV within a pipeline right-of-way is shown in Figure 1.5-1**.** MLVs in areas adjacent to electric transmission line rights-of-way will have the vent located a safe distance from the electric transmission lines. A typical drawing of this MLV and vent orientation is provided in Figure 1.5-1.

A pig launcher will be located at the origination of the FSC Project at the Central Florida Hub meter station (see Figure 1.5-2 for a depiction of a typical pig launcher and receiver), and a pig receiver will be installed at the Martin Meter Station to be located at the FPL Martin Clean Energy Center. The pig launcher at the origination of the FSC Project will be approximately 0.45 acres and the pig receiver at the terminus of the FSC Project will be located within the operation area for the Martin Meter Station.

The necessity for a pig launcher/receiver at an intermediate location along the pipeline route is still under consideration. If it is determined that a pig launcher/receiver is necessary, the exact location will be provided at a future date. The pig launcher and receiver located at an intermediate location along the pipeline route would occur primarily within the existing permanent right-of-way, with small extensions on each side of the permanent right-of-way.

1.6.4 Access Roads

Existing public and private road crossings along the proposed pipeline route will be used, to the extent practicable, as the primary means of accessing the FSC Project right-of-way. FSC will also use existing public and private roads to the extent practicable to access the proposed aboveground facilities. FSC has identified 246 existing roads that are proposed to be used as temporary access roads to access the right-of-way for construction of proposed pipeline.

A summary of proposed access roads associated with the FSC Project is provided in Table 8.2-5 in Resource Report 8. This table provides a detailed listing of each proposed access road, the improvements needed and the reasons why each access road is proposed. Proposed access roads are shown on USGS Quadrangle mapping and FSC Project alignment sheets located in Appendix 1A.

FSC will continue to use certain access roads for the life of the pipeline to access permanent facilities such as MLVs, meters, or inline inspection device launcher/receiver facilities or to access the pipeline right-of-way at other locations where access along the pipeline right-of-way is not practicable after temporary bridges are removed, fencing replaced, or terrain conditions inhibit access (e.g., wetlands, marshes, waterbodies, etc.). These other locations are to allow access to cathodic protection test stations or perform right-of-way maintenance, such as keeping the right-of-way clear, and other requirements. Generally, access roads will be 15 feet wide but could be up to 25 feet wide in certain instances.

1.6.5 Contractor Yards

FSC has identified four contractor yards, one staging area, and two storage areas for use during construction which will encompass approximately 229.23 acres of land (Note: actual acreage will not be known until after surveys are complete and adjustments have been made per landowner

agreement). To the extent practicable, these areas will utilize existing industrial sites or other already impacted areas. Land requirements for contractor yards and staging/storage areas are identified in Table 1.6-4.

1.7 CONSTRUCTION PROCEDURES

1.7.1 Pipeline Facilities

1.7.1.1 Standard Construction and Restoration Techniques

FSC will conduct all construction activities in accordance with applicable Federal and state regulations and guidelines, as well as the specific requirements of applicable permits. FSC has adopted the Commission's Plan and Procedures and will construct the FSC Project in accordance with the Plan and Procedures.

Prior to initiating construction-related activities, FSC will secure right-of-way easements, or other required authorizations, from landowners whose properties will be crossed by the proposed pipeline route. Owners, tenants, and lessees of private land and lessees and managers of public lands along the right-of-way will be notified in advance of construction activities that could affect their property, business, or operations.

After necessary property interests have been obtained, the pipeline centerline, construction right-of-way, ATWS, drainage centerlines and elevations, and highway and railroad crossings will be surveyed and staked. Access roads will be clearly marked using temporary signs or flagging, and wetlands and other environmentally sensitive areas, such as water wells and springs, will be marked.

The contractor will contact the State One-Call system to locate, identify, and flag existing underground utilities (e.g., cables, conduits, pipelines) to prevent accidental damage during pipeline construction.

FSC's construction contractor will construct the proposed pipeline along the construction right-of-way using sequential pipeline construction techniques, including survey, staking, and fence crossing; clearing and grading; trenching; pipe stringing, bending, and welding; lowering-in and backfilling; hydrostatic testing; cleanup and restoration; and commissioning. Conventional overland installation of the pipeline is essentially a moving assembly line with a construction spread (construction crew and equipment) proceeding along the construction right-of-way in a continuous operation, as depicted in Figure 1.7-1.

The contractor is expected to construct the proposed pipeline using one or two construction spreads. The majority of the pipeline construction process will be accomplished using conventional open-cut methods, which typically include the steps described in the following paragraphs. The proposed methods for accomplishing pipeline installation across wetlands and waterbodies, as well as other specialized construction procedures, are also described in the following paragraphs describing special construction procedures.

Construction at any single point along the pipeline, from clearing to backfill and finish grading, would typically last approximately two to four months. The construction process would be coordinated to limit the time of active disturbance of an individual area and the time the trench is open to limit the potential for erosion and the loss of normal use.

Clearing and Grading Operations

After completion of the surveys and staking, large obstacles, such as trees, rocks, brush, and logs, will be removed from the right-of-way and ATWS areas. Trees will be removed only when

necessary for construction purposes. Timber and other vegetative debris may be chipped into mulch for use as erosion control or otherwise disposed in accordance with applicable local regulations and landowner requirements. This may include burning when allowed by authorities and the landowner. The construction right-of-way and ATWS areas will then be cleared and, where necessary, graded to provide a relatively level surface for trench-excavating equipment and the movement of other construction equipment along the right-of-way.

Within wetlands, FSC will segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated, in accordance with FSC's Procedures. Unless the landowner or land management agency specifically approves otherwise, FSC will also segregate a maximum of 12 inches of topsoil in uplands, to the extent it exists, within residential and agricultural lands, and other areas at the request of the managing agency. The topsoil removal will typically occur over the trench, in storage areas for excavated materials, and areas where cut and fill activities would be conducted (e.g., on side-slopes). Topsoil will be stockpiled along one side of the right-of-way, allowing the other side to be used for access, material transport, and pipe assembly. Where necessary, topsoil will be replaced with appropriate imported material in residential areas.

Where needed for erosion control, best management practices ("BMPs") will be implemented as needed along the construction right-of-way and will be properly maintained throughout construction. BMPs will remain in place until permanent erosion controls are installed or restoration is completed.

Trench Excavation

Following completion of grading, the trench centerline will be staked and then excavated using a track-mounted excavator, or similar equipment. Excavated materials will be stockpiled along the right-of-way on the side of the trench away from the construction traffic and pipe assembly areas. The proposed pipeline will be buried below the ground surface to a depth that will meet or exceed the United States Department of Transportation ("USDOT") standards presented in 49 CFR §192.327. Except in unanticipated rocky areas, the trench will be excavated to a sufficient depth to allow a minimum of 30 inches of cover between the top of the pipe and the final land surface after backfilling. FSC will comply with applicable regulations at railroad crossings and railroad drainages.

Trench breakers (barriers to subsurface water flow placed in the trench) will typically be used to create segments within the open trench to reduce erosion and allow access across the trench. Trench breakers will typically consist of unexcavated trench segments or excavated trenches temporarily filled with sandbags or polyurethane foam placed across the ditch.

Blasting

Though not expected for this project, blasting may be used if necessary in areas where rock substrates occur at depths that interfere with conventional excavation or rock-trenching methods (generally within 5 feet of the ground surface). Blasting would be conducted in accordance with a site-specific blasting plan and in accordance with all other applicable regulations.

The blasting plan will be designed to prevent damage to underground structures (e.g., cables, conduits, and pipelines) and springs, water wells, or other water sources. Blasting mats or soil cover would be used as necessary to prevent the scattering of loose rock. If required, blasting would be conducted during daylight hours and would not begin until occupants of nearby buildings, stores, residences, places of business, and farms have been notified.

Stringing, Bending and Welding

Pipe will typically be transported by truck from the contractor or pipe yards to the right-of-way. Sections of straight steel pipe, generally either 40 or 80 feet long, will be placed in a single, continuous line (termed stringing) within the construction right-of-way. Pipe sections will be protected on the outside with a factory-applied fusion-bonded epoxy coating; the beveled ends of the sections will be uncoated to allow for welding.

Some pipe sections will be bent at the work site to follow the natural grade and direction changes of the right-of-way. Bending will be accomplished using track-mounted hydraulic bending machines. Where multiple, complex, or large-angle bends (generally 15 degrees or higher) are required, induction bends (also known as hot bends) with a bend radius of 5 degrees or greater that are fabricated in a factory will typically be shipped to the work sites pre-bent. The bends can be manufactured to meet the known or expected angle requirements, or they can be manufactured with higher fabrication tolerances that will allow them to be segmented in the field by the contractor to the degree needed at each location.

The pipe joints will typically be aligned, welded together into a long segment, and placed on temporary supports at the edge of the trench. Welders will use multiple passes to complete a full-penetration weld. FSC will only use experienced welders who are qualified according to applicable American Welding Society, American Society of Mechanical Engineers, and American Petroleum Institute ("API") standards. Each weld will be visually inspected and nondestructively tested using radiographic (X-ray) or other approved test methods in accordance with API standards. After welding is completed, a coating crew will coat the area around the weld. The entire coated pipeline will be inspected electronically for faults or voids in the coating and will be visually inspected for faults, scratches, or other defects. If damage to the coating is discovered, the coating will be repaired before the pipe is lowered into the trench.

Lowering-In

Prior to lowering-in the proposed pipeline, the trench will be cleaned of debris and foreign material. The pipe and trench will also be inspected to ensure that the pipe and trench configurations are compatible.

During construction, the open trench may accumulate water either from groundwater seepage or precipitation and will be typically dewatered periodically to allow for proper and safe construction. During trench dewatering, water will typically be pumped from the trench into stable upland areas through a filter bag, straw bales, or equivalent to remove sediment. The rate of flow from the pump will be regulated, and energy dissipation devices will be used as necessary to prevent erosion from runoff and to prevent the flow of heavily silt-laden water directly into adjacent waterbodies. Dewatering will be conducted in accordance with applicable federal, state, and local permitting requirements.

In areas of rock, the bottom of the trench may be padded with sandbags or support pillows to protect the pipe coating. Topsoil will not be used as padding material. Where the previously excavated material contains large rocks or other materials that could damage the pipe or its coating, screened fill, protective coating, or rock shield wraps will typically be placed around the pipe prior to backfilling.

The pipeline will then be lowered into the trench by appropriately spaced, sideboom tractors working in unison to avoid buckling of the pipe.

Backfilling

After the proposed pipeline is lowered into the trench and adequately protected, previously excavated materials will be used to backfill the trench using bladed equipment or excavators. Subsoil in all cultivated areas will typically be decompacted after backfilling and prior to replacing topsoil. If decompaction is necessary after topsoil has been replaced, the contractor will use a tiller (or similar equipment) to loosen compacted areas.

Topsoil previously segregated from the trench material in all agricultural and residential areas will typically be returned as nearly as possible to its original horizon. The right-of-way, ATWS, and other disturbed areas will typically be finish-graded and restored as closely as possible to preconstruction contours and to conform to the adjacent areas except for areas directly over the trench location where some crowning will be allowed (except in wetland areas) to accommodate soil settlement.

Any excess excavated materials or materials deemed unsuitable for backfill will typically be evenly spread over the right-of-way in uplands or disposed in accordance with applicable regulations and landowner requirements.

Hydrostatic Testing

Once installation and backfilling are completed and before the proposed FSC Project begins operation, the pipeline will be hydrostatically pressure tested in accordance with USDOT safety standards (49 CFR Part 192) to verify its integrity and ensure its ability to withstand the maximum allowable operating pressure. The HDD pipe string will be tested after its installation either separately or as part of the hydrostatic test of the entire pipeline. MLV and trap assemblies will be hydrostatically tested separately from the pipeline and then installed into the pipeline after the pipeline has been hydrostatically tested.

Hydrostatic test water will be obtained and discharged in accordance with applicable permit conditions. The construction contractor will test the pipe in segments. Where reasonable, the contractor may transfer the hydrostatic test water to the next segment for reuse.

Hydrostatic test water will be discharged into a straw bale dewatering structure in a well vegetated area and located at least 100-feet from wetlands and waterbodies where practicable. Test water will not be discharged directly into wetlands. No direct discharges to waterbodies are anticipated, and if necessary, will only be conducted upon approval from the applicable regulatory agencies. The discharged water would be directed through an energy dissipation device onto a stable spill pad constructed of material such as straw bales, rock fill, weighted timbers, or woven geotextile fabric within the dewatering structure. Surrounding topography would be reasonably level and stabilized to allow filtered water to continue as sheet flow away from the work area. Discharge rates into the dewatering structure would be monitored to avoid overflow and damage to the structure. Hydrostatic test water from HDD segments will be discharged into the same basin that it was drawn from. All hydrostatic test water will be discharged in accordance with the applicable federal and state approvals.

Restoration and Revegetation

After the proposed pipeline has been successfully tested, the trash, debris, surplus materials, and temporary structures present along the construction right-of-way will be removed and disposed in accordance with applicable federal, state, and local regulations.

As necessary, permanent erosion control measures, such as diversion terraces and slope breakers, would be installed during this phase in accordance with the FSC Project's Plan and

Procedures. Disturbed upland areas may be seeded as required by the FSC Project's reclamation plan, and written recommendations for seed mixes, rates, and dates would be obtained from the local soil conservation authority or as requested by the landowner or land management agency, and in accordance with permits.

Disturbed pavement and other road surfaces along access roads will be restored to preconstruction or better conditions, unless otherwise specified by the property owner and approved by applicable regulatory agencies. Likewise, any private or public property damaged during construction, such as fences, gates, and driveways, will be restored to original or better condition, consistent with individual landowner agreements.

Pipeline markers and/or warning signs will typically be installed along the pipeline centerline at specified intervals to identify the pipeline location, specifying FSC as the operator of the pipeline, and provide telephone numbers for emergencies and inquiries.

1.7.1.2 Special Construction Procedures

Residential Land

Residential structures within 50 feet of construction work areas are identified in detail in Resource Report 8. Special care will be taken in residential areas to minimize neighborhood and traffic disruption and to control noise and dust to the extent practicable.

In general, the following measures will be taken in residential areas:

- Fence the boundary to the construction work area for a distance of 100 feet on either side of the residence to ensure construction equipment, materials and spoil remain in the construction right-of-way;
- Notify local residents two weeks in advance of construction activities;
- Preserve trees and landscaping to the extent practicable;
- Utilize topsoil segregation procedures, as required, in accordance with the FERC Plan;
- Ensure piping is welded and installed as quickly as reasonably possible consistent with prudent pipeline construction practices to minimize construction time affecting a neighborhood;
- Backfill the trench and complete cleanup as soon as the pipe is laid or temporarily steel plate the trench;
- Complete cleanup (including grading) and installation of permanent erosion control measures within 10 days after the trench is backfilled, weather conditions permitting;
- Restore lawns and landscaping immediately following final clean-up, or as specified in landowner agreements, weather conditions permitting; and
- If weather conditions prevent immediate restoration of these areas, maintain and monitor temporary erosion controls until restoration is completed.

FSC is developing site-specific Residential Construction Plans for each of these residences, included in Appendix 8A of Resource Report 8 – Land use, Recreation, and Aesthetics.. These plans will show the construction area to be disturbed and safety measures that will be implemented, as described above and will be provided in the Environmental Report accompanying the Certificate Application in August 2014. Additional details regarding the

construction techniques to be used in residential areas are provided in Section 8.3.3 of Resource Report 8 – Land Use, Recreation, and Aesthetics.

Agricultural Land

Cultivated land will be crossed by the FSC Project as detailed in Table 8.2-1. During construction, FSC will perform topsoil segregation in agricultural lands, except citrus lands, as needed, which include permanent or rotated croplands and other areas at the request of resource agencies or landowners. FSC will stockpile topsoil separately from subsoil and will replace these soil horizons in the proper order during backfill and final grading. Erosion control will be used around stockpiled areas as needed to prevent spread of sediments off the work areas during rain events. FSC proposes to increase its typical workspace configuration to 120 feet in agricultural areas to allow for full right-of-way topsoil segregation where needed. The local agricultural extension agent and/or landowner will be consulted to determine the approximate amount of topsoil that will be stripped and stockpiled separately from the trench spoil.

During easement negotiations for areas crossing citrus groves, FSC will negotiate appropriate compensation with affected landowners for the loss of production on both a temporary and permanent basis. Following construction, the landowner may replant the temporary right-of-way and ATWS areas.

FSC will coordinate with the Florida Department of Agriculture and Consumer Services (“FDACS”) to comply with its Citrus Health Response Program, which was developed to manage impacts associated with the citrus canker and other citrus diseases. FSC will prepare and submit a plan as needed to the FDACS outlining its construction and operation procedures for the gas pipeline through citrus groves to help to limit the spread of the citrus canker and other diseases.

Timber Land

At the request of the landowner, trees felled during clearing activities will be placed off of the construction area for the landowner to sell at the time of their choosing. Moving timber off of the construction area during clearing activities will allow construction and restoration to proceed in accordance with FSC's Plan and Procedures and will avoid any post-restoration disturbance of the right-of-way for timber removal.

High Flow Conditions

During construction, FSC will monitor the weather to determine if heavy precipitation events are forecasted for the construction area(s) where waterbody crossings are planned. Attempts will be made to conduct dry open-cut crossings outside of any forecasted heavy precipitation events. In waterbodies where no discernible flow is observed and no by-pass system is installed, supplies will be on site to construct a by-pass system if precipitation occurs and the stream begins to show a discernible flow. If an unexpected heavy precipitation event occurs during construction at a dry-crossing location, resulting in discernible flow in the waterbody channel, an alternate dry crossing method using the by-pass system will be employed. For proposed crossings where there is a discernible flow, if forecasted precipitation amounts are determined to potentially overwhelm the proposed by-pass system, the crossing will be postponed until the rain event has passed and it has been determined that the by-pass systems can safely flow water volume and velocity of the waterbody.

In the event that extreme weather is forecasted, FSC will remove personnel and construction equipment from work being conducted in streams in anticipation of the storm event to the extent the work cannot be performed safely and be performed in such a way as to meet the states turbidity limits and other environmental regulations. FSC employees will be trained on safety

procedures during storm events to understand inherent dangers during these times and measures required to protect the environment such as removing construction equipment from high flow areas and flood zones and ensuring that erosion control and sediment control devices are either secured in place, or removed to avoid displacement during flooding or high flows.

Top Soil Segregation Practices

Topsoil segregation will be performed in agricultural areas as discussed above under "Agricultural Land". In accordance with FSC's Procedures, the top 12 inches of soil over the trench line will be segregated in wetlands, except where standing water is present or soils are saturated. Trench spoil will be temporarily piled in a ridge along the pipeline trench. Gaps in the spoil pile will be left at appropriate intervals to provide for natural circulation or drainage of water. Segregated wetland topsoil will be restored to its original location immediately after backfilling is complete.

Measures to Prevent Pipeline Buoyancy

Concrete weights, saddle bags, anchors, or concrete coating will be used on the pipeline to control pipeline buoyancy in saturated or non-cohesive soil conditions. In accordance with FSC's Procedures, concrete coating activities will not be performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and FSC and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill.

Timing of Construction Work

FSC will adhere to the timing requirements for crossing streams as outlined in FSC's Procedures (see Resource Report 7 Appendix 7C). Specifically, minor stream crossings will be completed within 24 hours not including any time for rock breaking measures. Intermediate crossings will be completed within 48 hours not including rock breaking measures and unless site-specific conditions make completion of intermediate crossings within 48 hours infeasible.

Wetland and Waterbody Crossings

Construction across wetlands and waterbodies will be conducted in accordance with all of the measures set forth in FSC's Procedures. Deviations from the Procedures requested by FSC are included in Table 2.3-3 in Resource Report 2 – Water Use and Quality. FSC proposes to cross the Kissimmee River utilizing the HDD construction method. A typical HDD entry and exit are depicted in Figure 1.7-2. Smaller waterbodies will be crossed with a dry crossing method (i.e., Flume and Dam and Pump) with the final determination made at the time of the crossing depending on the existing flow in the waterbody. In locations where streams are dry at the time of construction and the EI verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature, standard upland construction techniques will be implemented in accordance with the FSC's Plan. Agricultural ditches will be crossed by dry crossing methods. Waterbody crossing methods are depicted in Figures 1.7-3, 1.7-4, and 1.7-5. Wetlands will be crossed using the Dry Wetland Crossing, Wet "Saturated" Wetland Crossing, or "Wet" Flooded Wetland Crossing methods depicted in Figures 1.7-6, 1.7-7 and 1.7-8, respectively, in compliance with FSC's Procedures.

To minimize potential impacts, waterbodies, streams and rivers will be crossed as quickly and as safely as possible. Adherence to FSC's Procedures will ensure stream flow will be maintained throughout construction. Most stream crossings will be completed using conventional trackhoe type equipment and dry crossing techniques. Proposed waterbody crossing methods for each

waterbody crossed by the proposed pipeline are provided in Resource Report 2 – Water Use and Quality.

Equipment Bridges across Waterbodies

Where necessary, FSC will install temporary equipment bridges across waterbodies for access along the proposed right-of-way. Equipment bridges will generally be constructed of culverts (or flumes) and clean rock-fill or free-spanning bridges. Placement of clean rock to bridge a wetland or waterbody will be used as necessary and as authorized by the Florida Department of Environmental Protection ("FDEP") and U.S. Army Corps of Engineers ("USACE").

A culvert or flume bridge (as depicted in Figure 1.7-9) involves using flume pipes to convey the flow of water, with the number of flumes needed dependent on the potential flow of water at the time of construction. The flumes will be laid on the streambed, and equipment pads or clean rock, purchased from a commercial source, will be used to cover the flumes up to the level of the stream bank to provide a travel surface for construction equipment.

Each bridge will typically be designed to accommodate the highest stream flow expected to occur and will be maintained to prevent soil from entering the waterbody and to prevent restriction of flow, bank erosion, and stream scour during the period of time that the bridge is in use. After the bridges are removed, disturbed areas will typically be restored to pre-installation conditions. Where an equipment bridge is part of a proposed permanent access road, the bridge will not be removed following the completion of the project.

Other Waterbody Crossing Methods

Other water body crossing methods including the open cut construction method, flume, dam-and-pump method, and horizontal directional drilling are discussed in detail in Resource Report 2, Water Use and Water Quality.

Foreign Pipelines

Foreign pipeline crossings will be open cut and have a minimum clearance of 12 inches between the proposed pipeline and the foreign pipeline. Minimum clearances will be in compliance with 49 CFR Part 192, as well as in accordance with pipeline crossing agreements with the foreign pipeline operators.

Road and Railroad Crossing Techniques

Open-Cut Method

Pipeline crossings of lightly traveled paved and unimproved rural dirt or gravel roads will typically be accomplished using the open-cut installation method. If open-cut road construction requires extensive construction time, provisions will be made for detours or other measures to permit traffic flow during construction. Figure 1.7-10 illustrates a typical open-cut public road crossing.

Conventional Bore Method

Railway crossings and major roadway crossings require special construction techniques such as boring. These crossings are normally constructed independently by separate construction crews and later tied into the rest of the pipeline. Typically, a jack-and-bore or other appropriate boring technique is used to install the pipeline under these transportation features. This method involves the excavation of pits on either side of the transportation feature and the placement of a bore machine within one of the pits. This device will bore under the road and install the pipeline segment. Once the bore has reached the other pit, the pipeline segment will be tied in with the pipeline installed on the other side. Figure 1.7-11 is a plan views of a typical bored road

crossing. With this method, the pipeline would pass under the railroad or roadway with little or no disturbance to traffic along the rail or roadway.

1.7.2 Aboveground Facilities

The aboveground facilities will be constructed in compliance with the same federal regulations and guidelines as the pipeline facilities, and in accordance with the specific requirements of applicable federal and state approvals. The construction and restoration methods and procedures in both FSC's Plan and Procedures will be followed, as applicable, for the aboveground facilities as well. Generally, aboveground facilities are sited to avoid cultural and natural resource impacts to the greatest extent practicable.

1.7.3 Environmental Training and Inspection for Construction

Consistent with FERC guidelines, environmental training will be given to the FSC personnel and to contractor personnel whose activities may impact the environment during pipeline and aboveground facility construction. The level of training will be commensurate with the type of duties of the personnel. All construction personnel from the chief inspector, Environmental Inspector ("EI"), craft inspectors, and contractor job superintendent to loggers, welders, equipment operators, and laborers will be given the appropriate level of environmental training. The training will be given prior to the start of construction and throughout the construction process, as needed. The training program will cover the FSC Project Plan and Procedures, job-specific permit conditions, contaminated sediment and groundwater management, health and safety, company policies, cultural resource procedures, threatened and endangered species restrictions, the Spill Prevention Control Plan, National Pollutant Discharge Elimination System, Stormwater Plan, and any other pertinent information related to the job. In addition to the EIs, all other construction personnel will play an important role in maintaining strict compliance with all permit conditions to protect the environment during construction.

At least one EI will be assigned to each construction spread during active construction or restoration. The EI will have peer status with all other activity inspectors and will report directly to the Resident Engineer/Chief Inspector who has overall authority on the construction spread. The EI will have the authority to stop activities that violate the environmental conditions of the FERC certificate (if applicable), other Federal and state permits, or landowner requirements, and to order corrective action.

1.7.4 Construction Schedule and Work Force

FSC plans to begin construction in 2016 and initiate service in May 2017. The majority of construction of the proposed FSC Project would occur from March 2016 through May 2017 using one or two construction spreads. A single spread would have an estimated peak workforce of 450 and an average workforce of 325. Two construction spreads would have an estimated average workforce of 650 personnel.

Construction at any single point along the proposed FSC Project, from initial surveying and clearing to backfilling and finish grading, would last approximately 2 to 4 months. However, the duration of construction may be longer at the proposed MLV and pig launcher and receiver sites, hydrostatic test tie-in locations, and the Martin Meter Station.

1.8 OPERATION AND MAINTENANCE

FSC will institute a comprehensive operations and maintenance program for the proposed facilities in accordance with the Pipeline and Hazardous Materials Safety Administration's pipeline safety regulations. Pipeline facilities will be clearly marked in accordance with 49 CFR §192.707,

Line Markers for Mains and Transmission Lines, at line-of-sight intervals and crossings of roads, railroads, and other key points. The markers will clearly indicate the presence of the pipeline and provide a telephone number and address where a company representative may be reached in the event of an emergency or prior to any excavation in the area of the pipeline by a third party.

FSC's operations and maintenance program includes a comprehensive corrosion control program using state-of-the-art inline inspection tools, leak inspection surveys that include regularly scheduled aerial and ground patrols of the pipeline right-of-way, and participation in the existing Sunshine State One-Call of Florida system. Use of the One-Call of Florida system is required by anyone planning excavation activities to call a single number to alert all utilities, including FSC, and thus prevent unintentional contact with the pipeline. Additionally, FSC representatives will visit any construction site close to the pipeline and mark the location identifying the existence of FSC's underground facilities. They will also remain onsite during any excavation activity within the pipeline right-of-way.

1.8.1 Right-of-Way Maintenance

In addition to the survey, inspection, and repair activities described herein, operation of the pipeline will include maintenance of the right-of-way. The right-of-way will typically be allowed to revegetate after restoration; however, large brush and trees will typically be periodically removed near the pipeline. Vegetation maintenance will not normally be required in agricultural or grazing areas.

Trees or deep-rooted shrubs could damage the pipeline's protective coating, obscure periodic surveillance, or interfere with potential repairs. Such vegetation will typically not be permitted to grow within the permanent right-of-way.

The frequency of the vegetation maintenance will depend upon the vegetation growth rate. Routine vegetation maintenance clearing will typically be performed on a sectionalized basis with higher regrowth areas receiving right-of-way maintenance necessary to adequately patrol the pipeline consistent with 49 CFR §192.705. However, to facilitate periodic corrosion and leak surveys, a corridor not exceeding 30 feet in width centered on the pipeline will typically be maintained annually in an herbaceous state.

Routine vegetation mowing or clearing of the permanent right-of-way will be reduced at wetland and waterbody locations. At wetland and waterbody crossings, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet on either side of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. No routine vegetation mowing or clearing is proposed in wetlands that are between HDD entry and exit points.

1.8.2 Pipeline Surveys and Inspections

As required by 49 CFR §192.615, FSC will include emergency procedures in its operation and maintenance plan to minimize the hazards in a natural gas pipeline emergency.

The operation and maintenance plan would address an operations and maintenance program that includes corrosion control, leak inspection surveys, class study changes, regularly scheduled aerial and/or ground patrols of the pipeline right-of-way, maintenance of the right-of-way, and inspection and testing of valves, cathodic protection, and other appurtenances as specified in 49 CFR Part 192.

A special pipeline inspection device called a smart inline pipe inspection device will be used to establish a baseline of the pipeline's conditions, which will be used to compare against future smart inline pipe inspection device results. USDOT safety standards (49 CFR Part 192) require periodic inspection of the pipeline to determine if sections of the pipe have developed active corrosion cells or have otherwise been damaged since the pipeline was first installed. The most common practice is to run internal smart inline pipe inspection devices in the pipeline approximately every 5 years.

The patrol program will typically include periodic pipeline facilities patrol using aerial, vehicle, or foot surveys. The surveys will be designed to monitor surface conditions on and adjacent to the pipeline right-of-way for evidence of leaks, unauthorized excavation activities, erosion and wash-out areas, areas of sparse vegetation, damage to permanent erosion control devices, exposed pipe, missing markers and signs, new residential developments, and other conditions that might affect the safety or operation of the pipeline. 49 CFR §192.705, Transmission Lines Patrolling, provides specifics for frequency of patrols based on the class location and whether the location is at a road or railroad crossing or not.

Some of the additional operating surveying requirements include (but are not all inclusive):

- 49 CFR §192.706, Transmission Lines: Leak Surveys—Provide a frequency that leak surveys must be completed based on class locations.
- 49 CFR §192.709, 711, 713, 715, 717, and 719—Provide minimal requirements for documenting inspections and completing and testing of repairs to the pipeline.
- 49 CFR §192.745, Valve Maintenance: Transmission Lines—Requires that MLVs needed for emergency shutdown of the pipeline be inspected and partially operated at least once each calendar year but not to exceed 15 months between inspections.
- The cathodic protection system is also inspected periodically in accordance with 49 CFR §192.465 to ensure that it is functioning properly.

In accordance with 49 CFR Part 192, Subpart O, Gas Transmission Pipeline Integrity Management, ongoing surveillance of the pipeline requires periodic hydrostatic tests or, more commonly, running internal inspection tools. Subpart O also provides the requirements for and frequency of inspection methods for corrosion and irregularities in the pipeline. FSC will keep detailed records of inspections and supplement the corrosion protection system as necessary to meet the requirements of 49 CFR Part 192.

For the purpose of emergency response, FSC also maintains a liaison with the appropriate fire, police, and public officials. FSC will develop a written emergency plan to identify the available resources and responsibilities of each organization that may need to respond to a natural gas pipeline emergency and assist in developing coordination responsibilities. The emergency plan will include reporting requirements with telephone numbers, proper reporting procedures, and information to report to federal and state agencies, as well as emergency contact numbers for FSC personnel and contractor personnel that can be used to respond to an emergency.

In addition, FSC will use a supervisory control and data acquisition ("SCADA") system, which continuously monitors gas pressure, temperature, and volume at specific locations along the pipeline. The SCADA system will be continuously monitored from FSC's gas control center in Riviera Beach, Florida. The control center also can remotely operate valves to isolate the pipeline section in the event of an emergency.

The SCADA system provides continuous information to the control center operators and has threshold and alarm values set such that warnings are provided to the operators if critical parameters are exceeded.

1.9 FUTURE PLANS AND ABANDONMENT

At this time, FSC has not identified any specific plans for future expansion or abandonment of the facilities proposed in this filing. If additional demand for natural gas requires future expansion, FSC will seek the appropriate authorizations from the FERC and other Federal and state agencies.

1.10 PUBLIC-LANDOWNER/AGENCY CONSULTATION

1.10.1 Regulatory Agency and Stakeholder Organization Consultations

Extensive outreach has occurred to discuss the FSC Project and inform the public and project stakeholders of available project updates. The organizations that FSC has reached out to since the beginning of 2012 include:

- U.S. Army Corps of Engineers, Jacksonville District
- Florida Acquisition and Restoration Council
- Florida Department of Environmental Protection
- FDEP Division of State Lands
- FDEP Southwest District
- FDEP Southeast District
- FDEP Central District
- Florida Department of Transportation
- Florida Department of Historic Resources
- Florida Fish and Wildlife Conservation Commission
- Florida Forest Service
- Southwest Florida Water Management District
- South Florida Water Management District
- St. Johns River Water Management District
- Osceola County
- Polk County
- Okeechobee County
- St. Lucie County
- Martin County
- Town of Dundee
- Haines City
- City of Lake Wales

- City of Davenport
- East Central Florida Regional Planning Council
- Central Florida Regional Planning Council
- Treasure Coast Regional Planning Council
- Audubon of Florida
- Nature Conservancy
- Trust for Public Lands

1.10.2 Landowner Consultations

In mid-2012, meetings were held with landowners affected by the proposed route, explaining the potential FSC Project and how it may impact their lands. Site visits were conducted with many of the landowners to review field conditions, listen to landowner concerns and identify potential issues. The FSC Project team utilized the information obtained from these landowner meetings and site visits to adjust the route at various locations. In May of 2013, the FSC Project team began seeking survey permission from landowners affected by the proposed pipeline route as well as those within the environmental survey corridor. To date, FSC has contacted landowners along 99% of the route. Environmental survey permission has been secured for 95% of the route from landowners affected by the proposed pipeline route. Environmental survey permission from the remaining landowners is still being sought. Overall, the proposed pipeline project has been well received by the landowners.

1.10.3 Open Houses

FSC held six open houses in order to provide information about the FSC Project to all interested state and federal agencies, interested stakeholders, as well as the public. The dates and locations for the Open Houses that were held are as follows:

- November 12, 2013, Kenansville, Osceola County, FL;
- November 13, 2013, Lake Eva, Polk County, FL;
- November 14, 2013, Lake Wales, Polk County, FL;
- November 19, 2013, Indiantown, Martin County, FL;
- November 20, 2013, Fort Pierce, St. Lucie County, FL; and
- November 21, 2013, Okeechobee, Okeechobee County, FL.

1.10.4 Public and Agency Participation Plan and Ongoing Public Outreach

FSC has developed a comprehensive Public and Agency Participation Plan that outlines a commitment to engage actively with stakeholders throughout the life cycle of the FSC Project and provides the following activities that FSC has identified to ensure successful ongoing communication with stakeholders, including establishing a project website and a single point of contact.

- FSC held open houses (as previously described) in order to provide information about the FSC Project to all interested state and federal agencies, interested stakeholders, as well as the public. Comments received were very limited and have been addressed by FSC.

- FSC provided all required support needed for the Commission to conduct public its scoping meetings on March 18th, 2014 in Lakes Wales, Florida, March 19th, 2014 in Okeechobee, Florida, and March 20th, 2014 in Kissimmee, Florida.
- FSC continues to identify and hold meetings with local associations, affected public groups and other non-governmental organizations concerning the FSC Project.
- FSC continues to meet with state and local government representatives to seek input, provide updates as the FSC Project progresses, and extend an open invitation to all public meetings.
- FSC continues to meet frequently with state and federal agencies for guidance during permitting and with development of the Resource Reports. FSC will respond rapidly to requests for information from permitting agencies and the Commission, and will meet with them in person, if that assists in understanding the request and providing the best possible response.
- FSC has established and periodically updates a publicly available website providing pertinent information about the FSC Project including such items as those listed below. The website has the following address www.floridasoutheastconnection.com.
    1. FSC Project Overview
    2. FSC Project map
    3. Landowner Information
    4. Regulatory Information
    5. Public Meeting Information
    6. Construction Information
    7. Public Safety Information
    8. Frequently asked questions, and
    9. Contact information
- In addition to the website, informational brochures were provided at the Open Houses.
- A single point of contact has been established. The contact is

    Jena Mier
    Florida Southeast Connection
    Environmental Project Manager
    700 Universe Blvd.
    Juno Beach, Florida 33408

    Telephone: 561-691-2209
    e-mail: Jena.Mier@nee.com

FSC will provide copies of Environmental Resource Reports to any participating federal agency, county offices and public libraries along the proposed pipeline route and to certain state offices so the public will have the opportunity to view the materials and to comment. FSC will provide information on where the final reports can be viewed to these same stakeholders and locations.

FSC will continue to maintain the 24-Hour Project Hotline and update its FSC Project web site to provide the public with the most recent information, including a FSC Project overview, maps of the proposed facilities, list of frequently asked questions, list of FSC Project contacts, and announcements of public meetings on the FSC Project.

FSC is committed to identifying and resolving stakeholder issues and concerns related to the proposed FSC Project. FSC believes that successful resolution of stakeholder issues is best achieved by involving the appropriate federal, state, and local agencies, other potential stakeholders, and the public at the earliest possible stage of a project and prior to filing its application with the Commission.

1.10.5 Complaint Resolution Process

FSC will work to address and resolve complaints regarding the construction and or operation of the FSC Project in timely manner. FSC will use its website (as discussed in the Public Participation Plan) to also accept written complaints and will designate an FSC employee to receive complaints via phone or mail and coordinate resolving issues related to the complaint. The FSC employee will talk with the concerned individual about the issue at hand, channel information about the issue to the appropriate parties at FSC, track progress on resolution of the complaint, and help make sure that further coordination between the appropriate company employee(s) and the outside party takes place as needed.

1.11 PERMITS AND APPROVALS

The construction contractor(s) engaged by FSC will be required to observe and comply with all applicable federal, state and local laws, ordinances, and regulations that apply to the conduct of the work. During the performance of the work, contractors will be required to comply with the Minimum Federal Safety Standards adopted by the USDOT under the Natural Gas Pipeline Safety Act of 1968, as amended, Occupational Safety and Health Administration guidelines, and the Applicants' own internal standards.

Other safety construction codes and regulations may be enacted or adopted by duly constituted government agencies and bodies having jurisdiction over the locations where the work is to be performed. The contractor(s) will be required to observe and abide by all provisions that are applicable.

The construction, operation, and maintenance of the FSC Project will require multiple permits and regulatory approvals from various federal, state, and local agencies, as well as consultations with Native American Tribes and other interested parties. Consultations have been initiated with the USACE, U.S. Environmental Protection Agency ("USEPA"), National Marine Fisheries Service, U.S. Fish and Wildlife Service, and other state and/or federal wildlife management and environmental agencies. Consultations with these and other agencies will continue throughout the FSC Project review and permitting period.

The applicable federal, state, and local permits and approvals, responsible agencies, and the filing status and schedule for these permits and approvals are summarized in Table 1.11-1.

1.12 STATUS OF FIELD SURVEYS

FSC has completed the required field surveys along the pipeline route related to the identification of natural and cultural resources. FSC has continued informal consultations with federal and state resource agencies to update the known locations of federal- or state-listed threatened or endangered species and species of special concern that could potentially be affected by construction or operation of the FSC Project; and with the Florida State Historic Preservation

Officer ("SHPO") to update the locations of historic or architectural resources potentially eligible for the National Register of Historic Places ("NRHP"). Biological and cultural resource surveys have been completed for all tracts where landowner permission has been obtained. A summary of the field survey status is presented below.

1.12.1 Biological Surveys

FSC has completed waterbody and wetland, as well as threatened and endangered habitat field surveys within a 300-foot-wide study corridor over the entire route where survey permission has been obtained. Biological resource field surveys are therefore complete along approximately 91 percent of the proposed route. The remaining nine percent of the survey corridor was assessed using a desktop evaluation rather than field survey (see Section 2.4-1 of Resource Report 2 – Water Use and Quality).

Prior to clearing, FSC has agreed to perform listed species surveys along the route in appropriate habitats, according to currently accepted United States Fish and Wildlife Service ("USFWS") and Florida Fish and Wildlife Conservation Commission ("FWC") survey protocols. Species found will be reported to those agencies, and additional avoidance or mitigation measures may be employed (see Section 3.5 of Resource Report 3 – Fish, Wildlife, and Vegetation).

1.12.2 Cultural Resource Surveys

Preliminary cultural resources background research and literature file reviews at the Florida SHPO and identification-level field investigations have been conducted for the FSC Project. According to the available data reviewed to date, there are 16 previously recorded archaeological sites and 11 previously recorded architectural/industrial properties within or abutting the project Area of Potential Effects. Field surveys for archaeological resources have been completed along a 300-foot-wide study corridor and at proposed access roads, staging areas, contractor yards, pig launcher/receivers, and at the Martin Meter Station where access has been obtained (approximately 91.8 percent of the proposed mainline route, 98.8 percent of proposed access roads, 93.7 percent of contractor yards, and 100 percent of the Martin Meter Station, pig launchers/receivers, and staging areas).

A total of 25 archaeological sites, 15 archaeological occurrences, and 25 historic architectural/industrial resources have been identified within the FSC Project study corridor, access roads, or staging areas. All 25 archaeological sites, all 15 archaeological occurrences, and 21 historic architectural/industrial resources will be recommended as not eligible for listing in the NRHP. Three historic architectural/industrial resources have been previously been determined eligible for the NRHP, and the eligibility of one historic architectural/industrial resource has not been assessed. FSC plans to avoid impacts to those resources through use of a bore method, so no additional research or mitigation measures will be needed.

1.12.3 Civil Surveys

One hundred percent of the land based civil surveys have been completed for the pipeline route.

1.12.4 Geotechnical Borings for HDD Feasibility

FSC is in the process of conducting geotechnical investigations to document existing subsurface conditions and bedrock properties at multiple locations along the proposed pipeline route. This information and a preliminary plan and profile will be analyzed by FSC and will be included into a specific HDD crossing plan to be provided in the Environmental Report accompanying the Certificate Application in August 2014.

1.13 NON-JURISDICTIONAL FACILITIES

FSC has determined that there are no non-jurisdictional facilities associated with the FSC Project. FSC will interconnect to existing facilities at FPL's Martin Clean Energy Center.

1.14 CUMULATIVE IMPACTS

Cumulative impacts may result when the environmental effects associated with a proposed project are added to temporary (construction-related) or permanent (operations-related) impacts associated with other past, present, or reasonably foreseeable future projects. Although the individual impact of each separate project might not be significant, the additive or synergistic effects of multiple projects could be significant. FSC has identified reasonably foreseeable future projects from a review of their Project alignment sheets and topographic maps; field reconnaissance; internet research of publicly available information; through consultation with local planning departments and regional planning councils; and through the FERC scoping comment process. Projects included in this cumulative impact analysis are those located within the same municipalities directly affected by construction of the FSC Project and within 0.5 mile of the FSC Project right-of-way. A summary list of these projects is provided in Table 1.14-1 and the location of these projects in relation to the FSC Project is depicted in Figure 8.3-1 in Resource Report 8 – Land Use, Recreation, and Aesthetics.

1.14.1 Proposed Projects

Developments identified as of the date of this resource report include 26 developments in Polk County that are within 0.25 mile of the FSC Project, two developments in Polk County that are within 0.50 mile of the FSC Project, and one proposed development within 0.25 mile of the Project in Osceola County. FSC is currently in the process of obtaining additional information on the status of the Projects identified in Polk County.

A complete description of reasonably foreseeable projects in the area of the FSC Project will be provided in the next draft of the Resource Reports and each of the resources potentially affected will be discussed in the following paragraphs per the following examples.

Geology, Soils and Sediments

The facilities associated with the FSC Project are expected to have a temporary but direct impact on near-surface geology, soils, and sediments. Clearing and grading associated with construction of the FSC Project and the other projects listed in Table 1.14-1 could accelerate the soil erosion process and, without adequate protection, could result in discharge of sediment to adjacent waterbodies and wetlands. Because the direct effects will be localized and limited primarily to the period of construction, cumulative impacts on geology, soils, and sediments will only occur if other projects are constructed at the same time and place as the proposed FSC Project facilities. FSC will implement its Plan to establish a baseline for minimizing the potential for erosion as a result of water or wind action and to aid in reestablishing vegetation after construction. In addition, disturbance associated with construction activities will be minimized and mitigated through the application of BMPs that will be incorporated in the FSC Project Erosion and Sedimentation Control Plan. Should hazardous materials or contaminated soils and/or sediments be encountered during construction, they will be disposed of at fully licensed and permitted disposal facilities in accordance with applicable state and federal laws and regulations. As a result, the cumulative effect on geological resources, soils, and sediments are expected to be temporary and minor.

Water Resources and Wetlands

Each proponent for the projects listed in Table 1.14-1 above that affects a wetland will be required by the terms and conditions of their respective Section 404 permits to provide compensatory mitigation for unavoidable wetland impacts. The construction and operation of the FSC Project, along with the other potential projects, could result in a cumulative reduction in the amount and/or type of wetland within the respective municipalities. As discussed in Section 2.4.5 of Resource Report 2 – Water Use and Quality, impacts from the FSC Project on wetlands will generally be temporary, and there will be no loss of wetlands as a result of the pipeline installation, though in some cases forested wetland will be converted to scrub shrub wetland.

Vegetation and Wildlife

When projects are constructed at or near the same time, the combination of construction activities could have a cumulative impact on vegetation and wildlife in the immediate area. Clearing and grading and other construction activities associated with the projects will result in the removal of vegetation, alteration of wildlife habitat, displacement of wildlife, and other secondary effects such as forest fragmentation and establishment of invasive plant species.

As part of each project's permit conditions, mitigation measures should be implemented to minimize the potential for erosion, revegetate disturbed areas, increase the stabilization of site conditions, and control the spread of noxious weeds, and therefore minimize the degree and duration of the cumulative impact on vegetation and wildlife from these projects. The total amounts of vegetation and wildlife that may be affected by these projects are relatively minor given the intensely urbanized environment in the FSC Project area. Because a significant portion the proposed pipeline facilities will be within existing pipeline rights-of-way, public roadways, railways and/or other utility rights-of-way, impacts on vegetation and wildlife associated with the FSC Project will be minimal.

Past disturbances to cultural resources in the FSC Project area are typically related to urban development; accidental disturbances; intentional destruction or vandalism; lack of awareness of the historic value; and construction, maintenance, and operations associated with existing infrastructure. Federally regulated projects will include mitigation measures designed to avoid or minimize additional direct impacts on cultural resources. Non-federal actions will need to comply with any identification procedures and mitigation measures required by the state of Florida. FSC has developed Project-specific plans to address unanticipated discoveries of cultural resources and human remains in the event they are discovered during construction in Appendix 4C of Resource Report 4 – Cultural Resources.

Socioeconomics

The FSC Project and the projects listed in Table 1.14-1 above will generate temporary construction jobs. The local supply of construction workers needed for these projects may be derived from workers employed in the area, which would provide a direct economic benefit to those individuals and the communities in which they reside. The non-local laborers could represent an increase in the percent of the total population in the FSC Project area; however, the potentially vacant rental units available in the FSC Project area will offer enough housing for non-local workers. In addition, the FSC Project counties have the necessary infrastructure to provide public services and utilities to support the projects. There will be positive cumulative economic benefits from these projects. Taxes generated from operation of the projects will result in an annual tax revenue increase. Permanent employment will also increase as a result of the operation of many of these projects, with the cumulative benefit of potentially lowering local unemployment rates.

Recreation

The pipeline and MLVs will be buried and above ground facilities are very limited in size (valve actuators), therefore, no cumulative impact on recreational facilities is expected either during the relative short construction time or during operation. The crossing of the Kissimmee River will take place via HDD to preserve and protect the water quality and fishery resources of the river, and other wetland and aquatic resources along the route will be protected through the use of FSC's Procedures during construction. As such no cumulative impacts on recreation are anticipated with any other reasonably foreseeable projects in the area.

Land Use

The FSC Project area includes agricultural, industrial, commercial, recreational, and/or residential developments. The projects listed in Table 1.14-1, as well as the FSC Project, include those that are compatible with these existing land uses. Most land uses along the pipeline will be allowed to revert to pre-construction uses following construction. Some land uses will be restricted or prohibited on the new permanent pipeline right-of-way, such as construction of aboveground structures. Approximately 127 miles of the FSC Project will be new pipeline, establishing a new right-of-way. Given the mostly agricultural nature of the FSC Project area, the presence of a new pipeline will only be noticeable where pipe markers are placed adjacent to local roadways and where decals may be placed on paved areas identifying the pipeline location beneath these hard surfaces.

Visual Impacts

The FSC Project will be entirely buried under the ground except for the very small and low profiles of the Martin Meter Station, pipeline markers, MLVs, and pig launcher/receiver. As such the FSC Project is not expected to have any cumulative visual impacts with any other Projects that might be constructed in the area.

Traffic, Parking, and Transit

There is potential for cumulative traffic, parking and transit impacts if other projects are scheduled to take place at the same time and in the same area as the FSC Project. Several factors would minimize the potential for cumulative traffic impacts, including the total distance of the FSC Project and the tendency for construction workers to frequently share rides and travel to and from work during off-peak hours. Construction will be scheduled for work within roadways and specific crossings so as to avoid commuter traffic and schedules for school buses and local city transit buses to the greatest extent practical. To minimize traffic delays at open-cut road crossings, FSC will establish detours before cutting these roads. If no reasonable detours are feasible, at least one traffic lane of the road will be left open, except for brief periods when road closure will be required to lay the pipeline. Appropriate traffic management and signage will be set up and necessary safety measures will be developed in compliance with applicable permits for work in the public roadway. Traffic safety personnel will be on hand during periods of construction. Provisions will be made for detours or otherwise to permit traffic flow. On-street parking may also be temporarily impacted during construction. Given the FSC Project's short duration of construction activities on any street where road-side parking is permitted, the number of parking spots temporarily removed would be minimal.

Air and Noise

Construction activities have the potential to produce noise levels that may disturb nearby residents. In addition, construction equipment and vehicles emit air pollutants in the immediate vicinity of the construction, and fugitive dust emissions are generated by soil excavation and other

construction activities. Dust will be controlled by watering down the construction workspace at regular intervals. The cumulative impact of the FSC Project on air quality and noise will depend on the number of projects undergoing construction at the same time and how close in proximity the construction activities are occurring. Because construction activities for the FSC Project will be temporary along different sections of the pipeline route and would only result in short-term air and noise impacts to nearby residents and businesses, construction activities for the FSC Project along with the other projects are not expected to result in significant adverse air quality or noise impacts.

Infrastructure and Public Services

The cumulative impact of the FSC Project and other projects on infrastructure and public services could depend on the number of projects under construction at one time and the specific services required for each project. Operation of the FSC Project will not have a major impact on public services since it will not require the construction of new public roads, extensive new sewer or water systems, or result in significant changes in local population levels. During construction of the FSC Project, utilization of an underground boring technology, were applicable, will eliminate potential effects on existing infrastructure and public services.

1.15 REFERENCES

[FPSC] Florida Public Service Commission. 2009. Memorandum Regarding Docket No. 090172-EI – Petition to determine need for Florida EnergySecure Pipeline by Florida Power & Light Company. Accessed online on June 3, 2014 at: www.psc.state.fl.us/library/.../090172.rcm.do.

TABLES

Table 1.2-1

Proposed Pipeline Facilities for the FSC Project

State/Facility	Pipe Diameter (inches) a/	Milepost Begin b/	Milepost End b/	Length (miles) c/	County
Florida					
Pipeline	36	0.0	0.4	0.4	Osceola
		0.4	53.9	53.5	Polk
		53.9	77.8	23.9	Osceola
		77.8	102.8	25.0	Okeechobee
		102.8	115.5	12.7	St. Lucie
		115.5	127.1	11.6	Martin
			Project Total	127.1	

a/ All facilities are new and require new land development.
b/ Approximate MP along the Proposed pipeline rounded to the nearest tenth.
c/ Horizontal distance.

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Table 1.2-2

Proposed Aboveground Facilities for the FSC Project

Facility Type/Facility	County, State	Milepost	Scope of Work
Pig Launcher			
Launcher	Osceola, FL	0.0	New pig launcher located at the origination of the pipeline where it will interconnect with the Sabal Trail Project.
Main Line Valves			
MLV1	Polk, FL	8.1	New MLV
MLV2	Polk, FL	16.0	New MLV
MLV3	Polk, FL	27.7	New MLV
MLV4	Polk, FL	35.2	New MLV
MLV5	Polk, FL	52.5	New MLV
MLV6	Osceola, FL	55.0	New MLV
MLV7	Okeechobee, FL	88.9	New MLV
MLV8	St. Lucie, FL	108.2	New MLV
Pig Receiver			
Receiver	Martin, FL	127.1	New pig receiver located at the Martin Meter Station.
Meter Station			
Martin Meter Station	Martin, FL	127.1	Meter Station on Martin Clean Energy Center. The station will include a filter/separator to remove small amounts of entrained liquids and debris from the gas stream, prefabricated skid-mounted metering runs, prefabricated skid-mounted pressure regulators, a gas chromatograph to measure the gas composition, and building enclosures. Additional process piping, electrical power, and pressure monitoring devices will also be installed.

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Table 1.6-1

Summary of Land Requirements for the FSC Project a/

State/Facility Type/Facility	Construction Area (acres)	Operation Area b/ (acres)
Florida		
Pipeline Right-of-Way	**760.18**	**688.41**
Temporary Easement	**660.01**	**0.00**
Additional Temporary Workspace	**140.79**	**0.00**
Launcher Site	**0.45**	**0.45**
Martin Meter Station	**2.63**	**0.92**
Contractor yards	**224.92**	**0.00**
Staging Area	**4.31**	**0.00**
Access Roads	**108.40**	**0.00**
Project Total	**1,901.69**	**689.78**

a/ Pig receiver and MLV facilities are located within the operation right-of-way of the pipeline or within the M&R station footprint and do not contribute additional acres affected.
b/ Land Affected During Operation for the pipeline right-of-way includes only the new permanent right-of-way.

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Table 1.6-2

Pipeline Land Requirements for the FSC Project

State/Segment/Facility	Length (miles)/ Number of Sites	Land Affected During Construction (acres) a/		Land Affected During Operation (acres) b/	
		Within Existing Maintained/ Operational Easement	Outside Existing Maintained/ Operational Easement	Within Existing Maintained/ Operational Easement	Outside Existing Maintained/ Operational Easement (New Permanent Impact)
Florida					
Pipeline	127.1	1.44	1429.51	1.41	769.07
ATWS	688.0	0.07	140.87	0.00	0.00
Project Total		**1.51**	**1570.38**	**1.41**	**769.07**

a/ All areas required for construction, including areas that would be identified as operational right-of-way after Project completion.
b/ Acreages are included within the reported acreage for "Land Affected During Construction."

Table 1.6-3

Aboveground Facility Land Requirements for the FSC Project a/

State/Facility	Milepost	Approximate Site Dimensions (feet)	Construction Area (acres)	Operation Area (acres)
Florida				
Martin Meter Station	127.1	242 x 472	2.63	0.92
Launcher Site	0.0	143 x 138	0.45	0.45
		Project Total	**3.08**	**1.37**

a/ Pig receiver facilities and MLVs are located within the meter station boundaries or pipeline right-of-way and therefore are not included in this table.

Table 1.6-4

Contractor / Pipe Storage Yard Land Requirements for the FSC Project

State/Facility	Nearest Milepost	Approximate Site Dimensions a/ (feet)	Construction Area (acres)	Operation Area (acres)
Florida				
Contractor Yard	4.4	548 x 1,305	14.05	0.00
Lake Wales Contractor Yard	28.6	484 x 647	7.53	0.00
Contractor Yard	72.7	2,688 x 2,102	112.96	0.00
Yeehaw Junction Staging Area	73.6	441 x 434	4.31	0.00
Pipe Storage Yard	77.5	978 x 1,011	20.54	0.00
Contractor Yard	125.7	3,198 x 579	42.84	0.00
Martin Pipe Storage Yard	127.1	288 x 5,915	27.00	0.00
		Project Total	**229.23**	**0.00**

a/ Sites are irregularly shaped and dimensions are approximate.

FLORIDA SOUTHEAST CONNECTION

Table 1.11-1

Major Permits, Approvals, and Consultations for the FSC Project

Agency	Permit/Approval/ Consultation	Contact	Status
FEDERAL			
Federal Energy Regulatory Commission	Section 7(c) of the Natural Gas Act	John Peconom (202) 502-6352 Jessica Harris (202) 502-6805	Anticipate Filing August 2014
U.S. Environmental Protection Agency (EPA) Region 4	Oversight of Federal and State delegated permits	Heinz Muller (404) 562-9611	Ongoing during Federal and State regulatory process
U.S. Army Corps of Engineers (USACE) Jacksonville District (JAX)	Dredge and Fill Permit under Section 404 (CWA) and Section 10 (Rivers and Harbors Act) Section 408 Authorization	Mark Evans (904) 232-2028	Submitted March 2014
U.S. Department of Interior, Fish and Wildlife Service (USFWS) (Florida Field Office)	Section 7 of Endangered Species Act Consultation Migratory Bird Treaty Act Coordination	Ted Martin (772) 469-4232	Initiated Informal Consultation 2013 Ongoing during FERC NEPA process
U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service	Section 7 of Endangered Species Act for Marine Mammals Essential Fish Habitat Consultation	TBD	Initiated Informal Consultation 2013
STATE (FLORIDA)			
Florida Department of Environmental Protection (FDEP)	Environmental Resource Permit (ERP) Coastal Zone Consistency 401 Water Quality Certification NPDES permit for construction stormwater discharges Trench dewatering and hydrostatic test dewatering NPDES permit (if into surface waters) Turbidity Variance	Tim Rach (850) 245-8015 Lisa Prather (407) 897-2847	Submitted March 2014
Florida Board of Trustees of the Internal Improvement Trust Fund	Sovereign Submerged Lands Easements Easements over State-owned Uplands	Lisa Prather (407) 897-2847 Scott Woolam (850) 245-2806	Submitted March 2014 Easements Approved, December 14, 2012
Florida Department of State, Division of Historic Resources (SHPO)	NHPA, Section 106 Consultation	Robert Bendus (850) 245-6319	Submitted Report March 2014, received approval of CRA report, Anticipate filing Addendum reports in June 2014.

Table 1.11-1

Major Permits, Approvals, and Consultations for the FSC Project

Agency	Permit/Approval/ Consultation	Contact	Status
Florida Fish and Wildlife Conservation Commission (FWCC)	State listed species consultation. Threatened and Endangered Species relocation/ handling permit	Ben Shepard (407) 858-6170, Ext 226	Initiated Informal Consultation 2013
FL Department of Agriculture and Consumer Services	State T&E plant species clearance	TBD	Initiated Informal Consultation 2013
St. Johns River Water Management District	Consumptive Water Use Permit Trench Dewatering Permit Canal/ Lands Crossing Permits and Easements	Hans Tanzler (386) 329-4500	Anticipate Filing August 2014
Southwest Florida Water Management District	Consumptive Water Use Permit Trench Dewatering Permit Canal/Lands Crossing Permits and Easements	Robert Beltran (352) 796-7211	Anticipate Filing August 2014
South Florida Water Management District	Consumptive Water Use Permit Trench Dewatering Permit Canal/Lands Crossing Permit	Nicholas Vitani (561) 686-8800	Anticipate Filing August 2014
Florida Department of Transportation (FDOT)	State road, highway, or interstate crossing permits	TBD	Prior to Construction
LOCAL			
Osceola, Polk, Okeechobee, St. Lucie & Martin Counties	Tree Removal Road Crossings	TBD	Prior to Construction
Davenport, Dundee, Lake Wales & Haines City	Tree Removal Road Crossings	TBD	Prior to Construction

Table 1.14-1

Projects with Potential Cumulative Impacts on Resources within the General Area of the FSC Project

Project	Location of Project Activity (Approximate Distance and Direction from Milepost, or Distance Crossed) a/	Description	Anticipated Construction Date/Project Status
Polk County			
Progress Energy Florida Loughman Substation	Crosses MP 1.35 to 1.42	Non-residential	Approved Site Plan
New Destiny Church	Crosses MP 1.45 to 1.52	Non-residential	Approved Site Plan
Tropical Lakes	Crosses MP 2.1 to 2.25	Subdivision Site Review TR	Approved Site Plan
Aviana Two A	Crosses MP 2.3 to 2.5	Subdivision Site Review Plan	Approved Site Plan
Providence N4	Crosses MP 2.3 to 2.51	Subdivision Site Review Plan	Approved Site Plan
N. Davenport MHE #2 Verizon	Crosses MP 2.65 to 2.85	Non-Residential Site Plan	Approved Site Plan
Campbell Crane Company 6713	Crosses MP 3.01 to 3.08	Non-residential	Approved Site Plan
Haines City East Substation 7819	Crosses MP 2.67 to 2.85	Non-Residential Site Plan	Approved Site Plan
Watersong AKA Country Creek	Crosses MP 5.35 to 5.72	Subdivision Site Review WA	Approved Site Plan
Sand Hill Fire Rescue Station	Crosses MP 16.39 to 16.42	Non-residential	Approved Site Plan
St. Helena Sand Mine 9713	Crosses MP 23.58 to 23.82	Non-residential	Approved Site Plan
Mountain Lake Corporation	Crosses MP 25 to 25 5	Non-Residential Site Plan	Approved Site Plan
Mountain Lake Corporation	Crosses MP 25.7 to 25.71	Non-Residential Site Plan	Approved Site Plan
Mountain Lake Corporation	Crosses MP 25.8	Non-Residential Site Plan	Approved Site Plan
The Pentecostals of Lake Wales 0804	Crosses MP 30.61	Non-Residential Site Plan	Approved Site Plan
Florida Rock-Diamond Sand Mine	2,038 feet north of MP 30.89	Subdivision Site Review Plan	Approved Site Plan
Monier Lifetile Training Center	Crosses MP 31.4	Non-Residential Site Plan	Approved Site Plan
Lake Wales Facility Rinker 0803	Crosses MP 31.4 to 31.65	Non-Residential Site Plan	Approved Site Plan
Monier Lifetile 0803	Crosses MP 31.41 to 31.62	Non-Residential Site Plan	Approved Site Plan

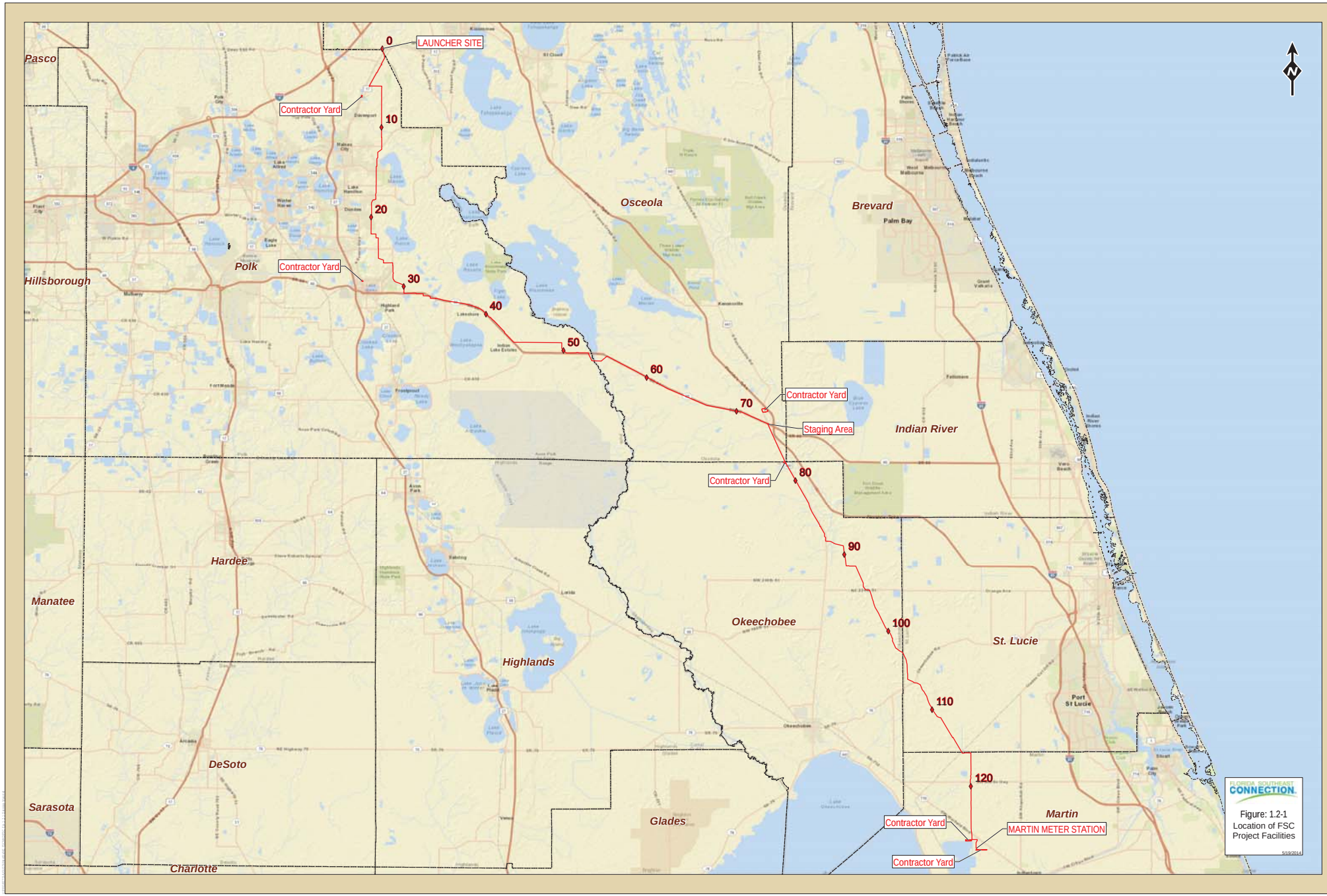
Table 1.14-1

Projects with Potential Cumulative Impacts on Resources within the General Area of the FSC Project

Project	Location of Project Activity (Approximate Distance and Direction from Milepost, or Distance Crossed) a/	Description	Anticipated Construction Date/Project Status
CEMEX Construction Materials Florida, LLC 0810/0811	Crosses MP 31.62 to 31.88	Non-Residential Site Plan	Approved Site Plan
Citrosuco North America, Inc.	Crosses MP 31.88 to 32.7	Non-Residential Site Plan	Approved Site Plan
Carson Mini-Warehouses 0812	Crosses MP 33.32 to 33.36	Subdivision Site Review TR	Approved Site Plan
Lake Aurora Christian Assembly	Crosses MP 34.2 to 34.39	Non-Residential Site Plan	Approved Site Plan
Jay Bee's Restaurant	Crosses MP 35.28 to 35.39	Non-Residential	Approved Site Plan
Calvary Baptist Church 0914	Crosses MP 38.89 to 39.1	Non-Residential	Approved Site Plan
Central Polk Parkway	1,500 feet west of approximate MP 20.0	Florida Department of Transportation Project. The Central Polk Parkway is proposed as a six-lane, new alignment highway in Polk County that will serve as additional north/south routes in the central Polk County regional transportation network.	Project Development and Environmental Study Phase. Not scheduled for construction.
State Route 60 Widening	Crossed / Co-located approximate MP 31.0 - 74.0	Florida Department of Transportation road widening project.	Project Development and Environmental Study Phase. Not scheduled for construction.
Oakwood Subdivision	Crossed, Approximate MP 28.0 / 29.0	Residential Subdivision	Preliminary Plan Approved; No recent activity.
Osceola County			
Industrial Site	65 feet East of MP 73.6	Proposed Industrial Site	Proposed

a/ FSC is currently reviewing mapping provided by Polk County and working to identify the location of each planned development in relation to pipeline mileposting and to obtain any available additional information on project description and status.

FIGURES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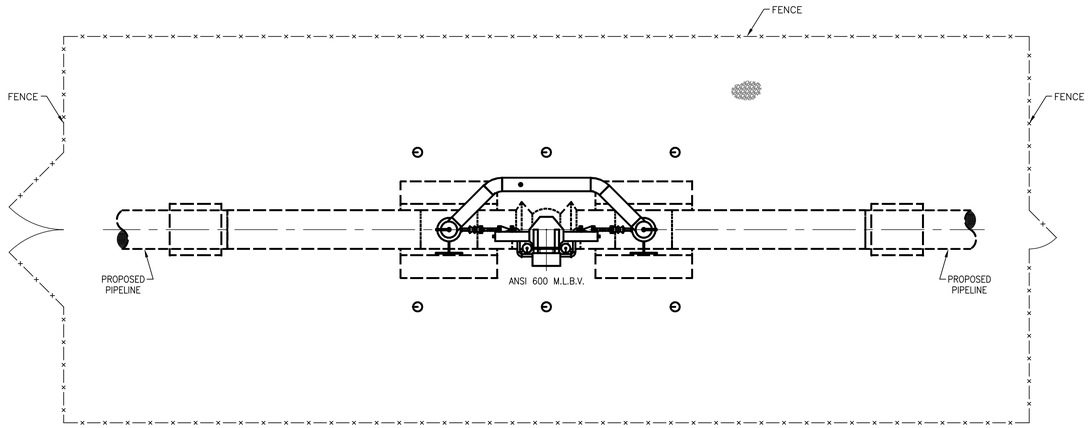
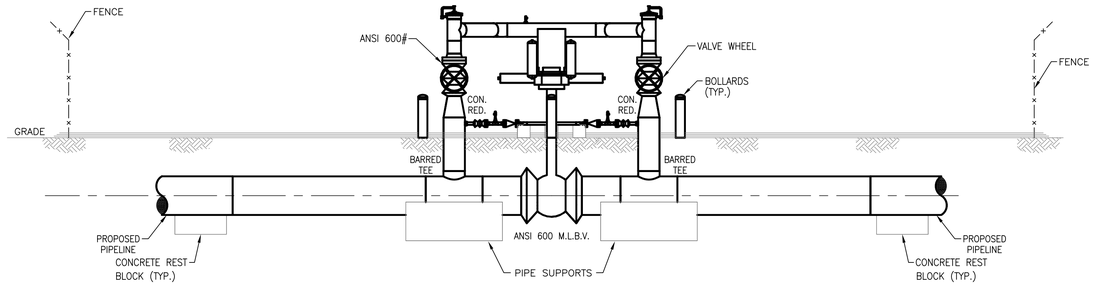
LAUNCHER SITE
Contractor Yard
10
20
30
40
50
60
70
Contractor Yard
Staging Area
Contractor Yard
80
90
100
110
120
Contractor Yard
MARTIN METER STATION
Contractor Yard
Pasco
Hillsborough
Polk
Osceola
Brevard
Palm Bay
Indian River
Hardee
Manatee
Okeechobee
St. Lucie
Port St Lucie
Highlands
DeSoto
Sarasota
Glades
Martin
Charlotte
N
FLORIDA SOUTHEAST CONNECTION
Figure: 1.2-1
Location of FSC
Project Facilities
5/19/2014

TYPICAL 36"/30" MAINLINE BLOCK VALVE



PLOT PLAN



ELEVATION

MAINLINE BLOCK VALVES

VALVE TAG NO.	MP	CLASS	DF
FSC-1	__.__	_	_.__
FSC-2	__.__	_	_.__
FSC-3	__.__	_	_.__
FSC-4	__.__	_	_.__
FSC-5	__.__	_	_.__
FSC-6	__.__	_	_.__
FSC-7	__.__	_	_.__
FSC-8	__.__	_	_.__
FSC-9	__.__	_	_.__

NOTES:

1. DESIGN FACTOR IS BASED ON CLASS LOCATION.

ISSUED FOR PRE-FERC FILING REPORT
11/13/13

UniversalPegasus INTERNATIONAL

DWG. NO.	REFERENCE DRAWING TITLE	NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
		B	ISSUED FOR PRE-FERC FILING REPORT	CO	11/13/13	CF	LD
		A	ISSUED FOR REVIEW	CO	11/07/13	CF	LD

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:		FILE NAME:			

P.L./STA. NO.
ACCOUNT NO.
CONSTRUCTION YEAR

	BY	DATE
DESIGN	CF	11/13
DRAWN	CO	11/13
ASBUILT		

FILE NO.
SCALE: N.T.S.

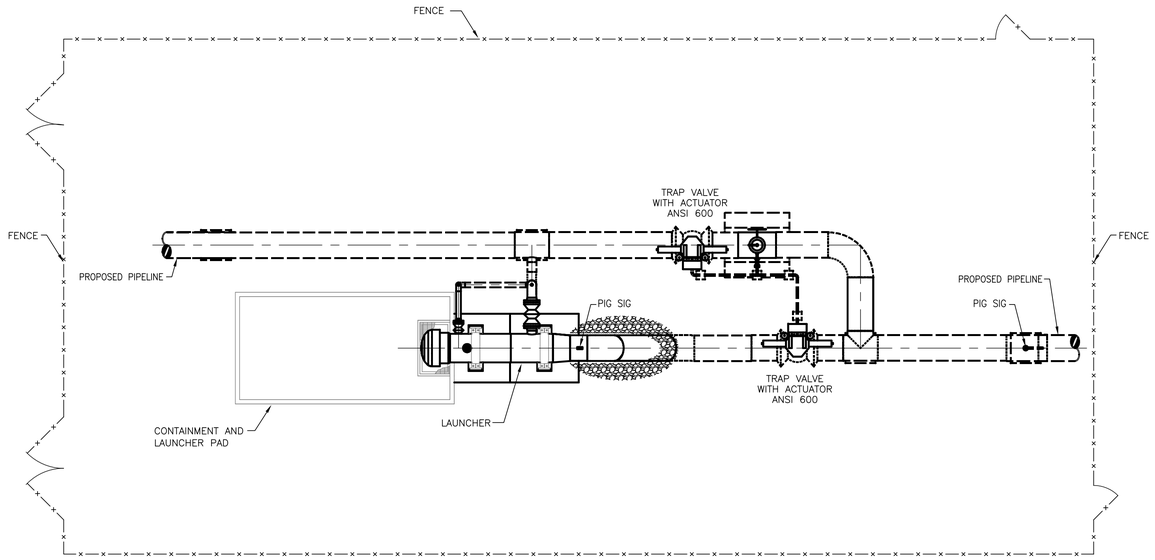
FLORIDA SOUTHEAST CONNECTION

FLORIDA SOUTHEAST CONNECTION, LLC

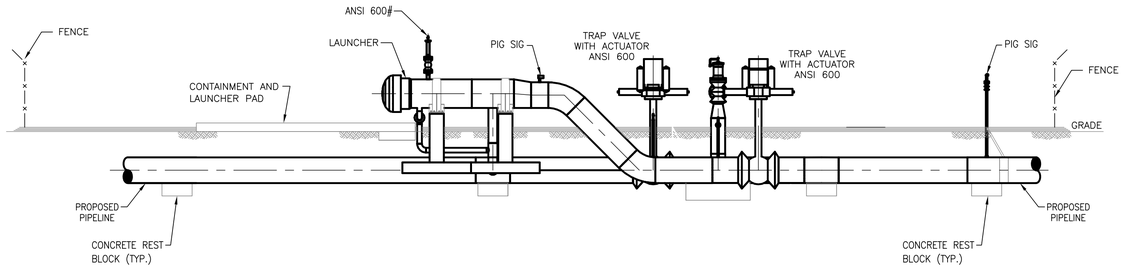
FLORIDA SOUTHEAST CONNECTION PIPELINE PROJECT
36" AND 30" MAINLINE BLOCK VALVE
TYPICAL PLOT PLAN
Figure 1.5-1

PROJECT NO. 21040
PREVIOUS DWG. NO.
SHEET 1 OF 1
DWG. NO. 21040-505-GNW-00010 B
SHEET 1 OF 1

TYPICAL 36"/30" LAUNCHER



PLOT PLAN



ELEVATION

NOTES:

1. DESIGN FACTOR IS BASED ON CLASS LOCATION.

ISSUED FOR
PRE-FERC FILING REPORT
11/13/13

UniversalPegasus INTERNATIONAL

DWG. NO.	REFERENCE DRAWING TITLE	NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
		B	ISSUED FOR PRE-FERC FILING REPORT	CO	11/13/13	CF	LD
		A	ISSUED FOR REVIEW	CO	11/07/13	CF	LD

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME:					

P.L./STA. NO.			
ACCOUNT NO.			
CONSTRUCTION YEAR			
	BY	DATE	
DESIGN	CF	11/13	
DRAWN	CO	11/13	
ASBUILT			
FILE NO.			
SCALE: N.T.S.			

FLORIDA SOUTHEAST CONNECTION

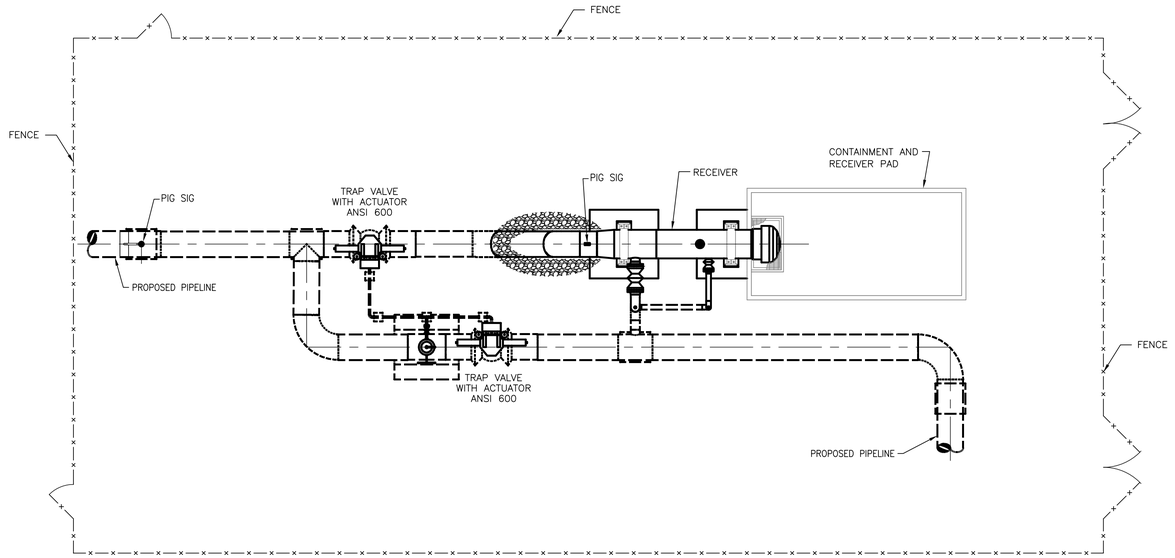
FLORIDA SOUTHEAST CONNECTION, LLC

FLORIDA SOUTHEAST CONNECTION
PIPELINE PROJECT
36" AND 30" LAUNCHERS
TYPICAL PLOT PLAN
Figure 1.5-2A

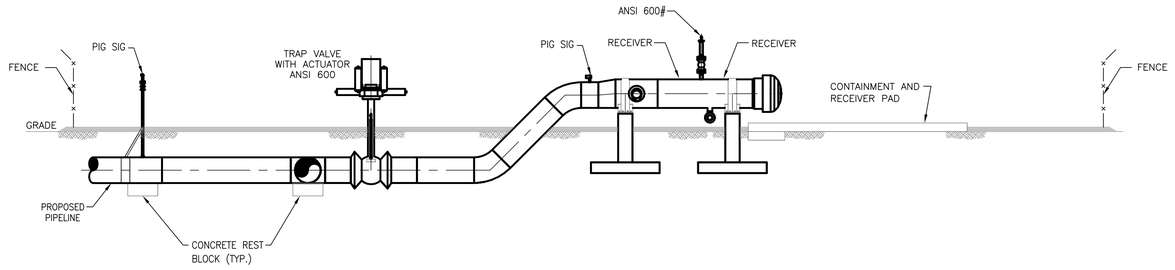
PROJECT NO. 21040
PREVIOUS DWG. NO.
SHEET 1 OF 1
DWG. NO. 21040-505-GNW-00020 B
SHEET 1 OF 1

File Path: \\universalensco.com\CAD\Houston-Loop-Users\21040 - FPL - Florida Southeast Connection Project\500 Engineering Design\505 Pipeline Drawings\GNW General Drawings\21040-505-GNW-000020.dwg Saved by: CARLOS.ORTIZ on: Nov. 13, 13 - 9:15 AM Plotted by: ORTIZ, CARLOS on: Nov. 14, 13 - 6:51 AM

TYPICAL 36"/30" RECEIVER



PLOT PLAN



ELEVATION

NOTES:

1. DESIGN FACTOR IS BASED ON CLASS LOCATION.

ISSUED FOR PRE-FERC FILING REPORT
11/13/13

UniversalPegasus INTERNATIONAL

DWG. NO.	REFERENCE DRAWING TITLE	NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
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		A	ISSUED FOR REVIEW	CO	11/07/13	CF	LD

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME:					

P.L./STA. NO.			
ACCOUNT NO.			
CONSTRUCTION YEAR			
	BY	DATE	
DESIGN	CF	11/13	
DRAWN	CO	11/13	
ASBUILT			
FILE NO.			
SCALE: N.T.S.			

FLORIDA SOUTHEAST CONNECTION

FLORIDA SOUTHEAST CONNECTION, LLC

FLORIDA SOUTHEAST CONNECTION
PIPELINE PROJECT
36" AND 30" RECEIVERS
TYPICAL PLOT PLAN
Figure 1.5-2B

PROJECT NO. 21040
PREVIOUS DWG. NO.
SHEET 1 OF 1
DWG. NO. 505-GNW-00030 A
SHEET 1 OF 1

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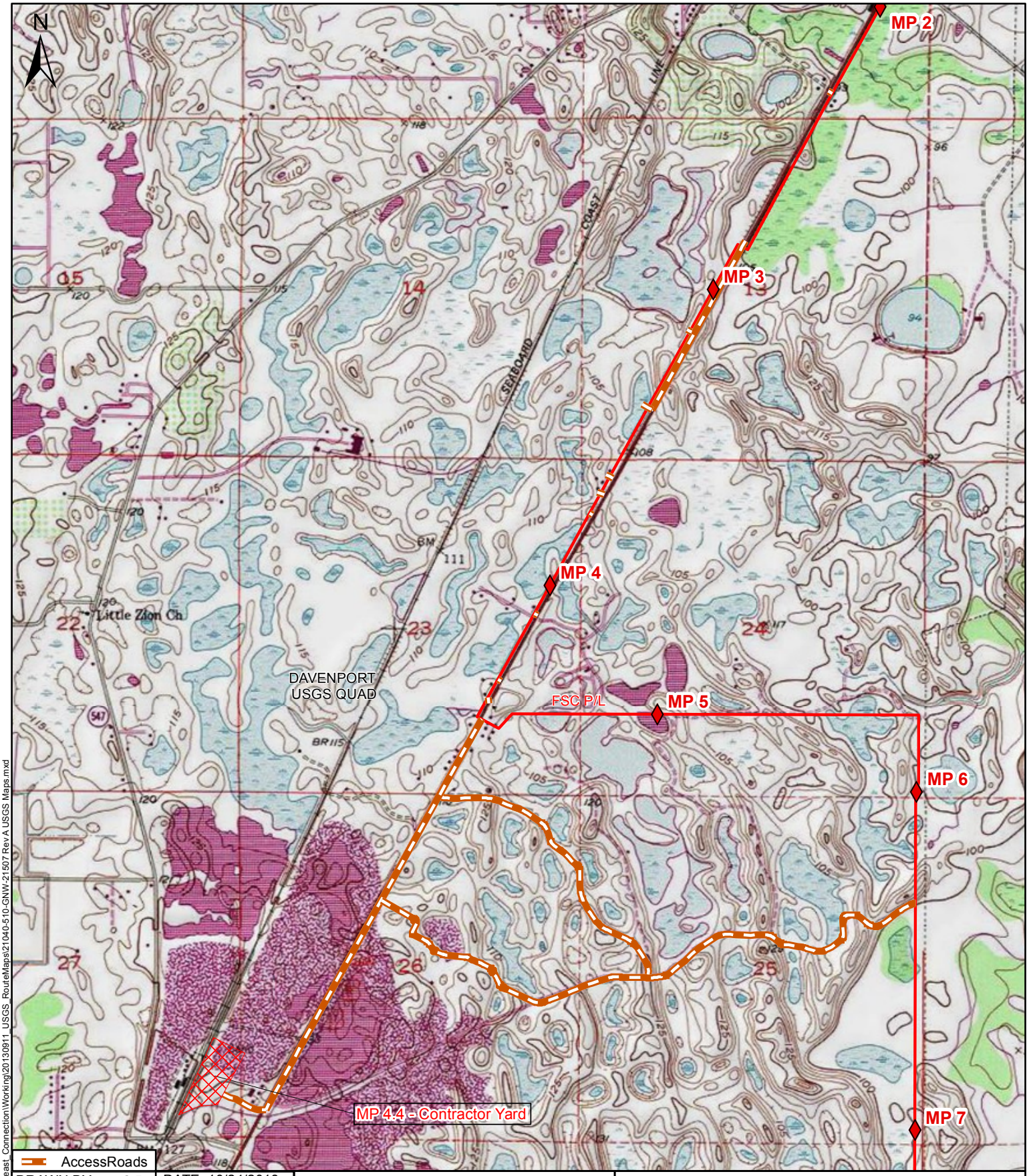

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REVIEWED BY: M.B.	DATE: 10/24/2013
APPROVED BY:R.G.	DATE: 10/24/2013
SCALE: 1 ' = 2,000 "	SHEET: 2 OF 38

0 1,000 2,000 4,000
Feet

A	09/20/2013	ISSUED FOR REVIEW
B	10/07/2013	ISSUED FOR REVIEW
C	10/24/2013	ISSUED FOR 30% DESIGN

FLORIDA SOUTHEAST CONNECTION™

UniversalPegasus INTERNATIONAL

USGS TOPOGRAPHIC MAPS

FLORIDA SOUTHEAST CONNECTION LLC
FLORIDA SOUTHEAST CONNECTION
PIPELINE PROJECT
PROPOSED PIPELINE AND FACILITIES
Polk County, Florida

DRAWING NO: 21040-510-GNW-21510 REV. C

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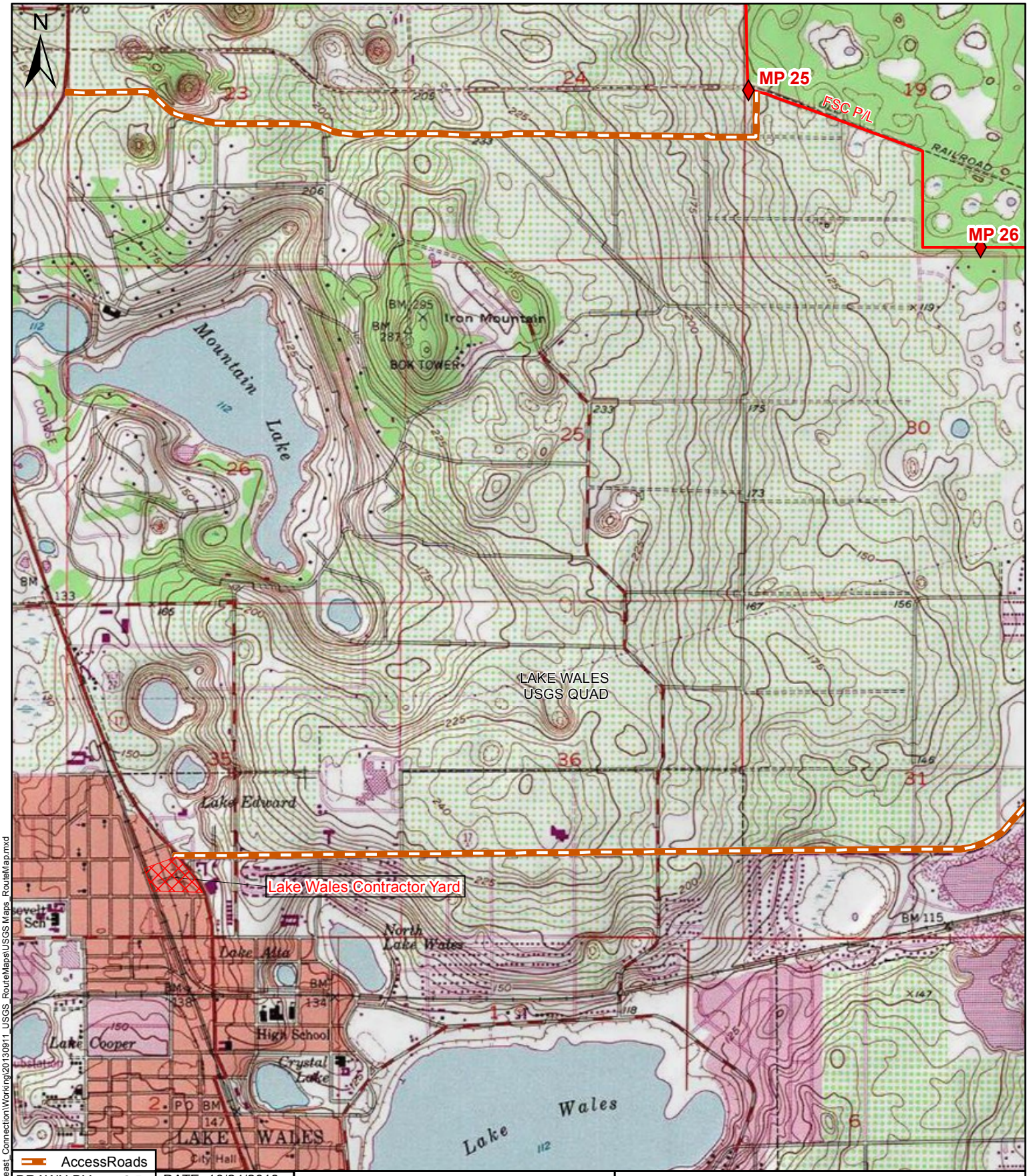
Figure 1.5-3A



DRAWN BY: C.R.	DATE: 10/24/2013
REVIEWED BY: M.B.	DATE: 10/24/2013
APPROVED BY:R.G.	DATE: 10/24/2013
SCALE: 1 ' = 2,000 "	SHEET: 8 OF 38

0 1,000 2,000 4,000
Feet

A	09/11/2013	ISSUED FOR REVIEW
B	10/24/2013	ISSUED FOR 30% DESIGN

FLORIDA SOUTHEAST CONNECTION

UniversalPegasus INTERNATIONAL

USGS TOPOGRAPHIC MAPS

FLORIDA SOUTHEAST CONNECTION LLC
FLORIDA SOUTHEAST CONNECTION
PIPELINE PROJECT
PROPOSED PIPELINE AND FACILITIES
Polk County, Florida

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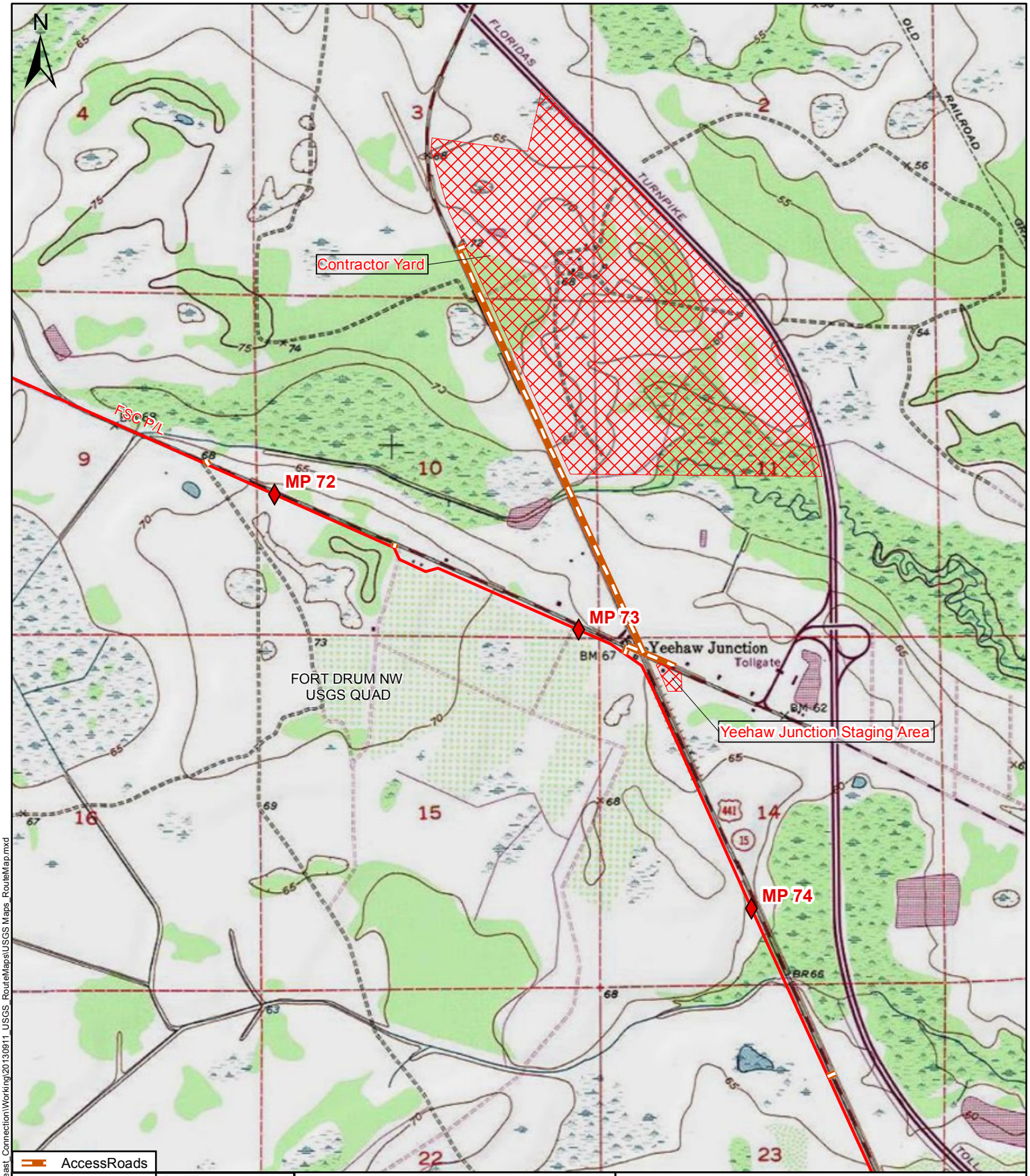
Figure 1.5-3B



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Feet

A	09/11/2013	ISSUED FOR REVIEW
B	10/24/2013	ISSUED FOR 30% DESIGN

FLORIDA SOUTHEAST CONNECTION

UniversalPegasus INTERNATIONAL

USGS TOPOGRAPHIC MAPS

FLORIDA SOUTHEAST CONNECTION LLC
FLORIDA SOUTHEAST CONNECTION
PIPELINE PROJECT
PROPOSED PIPELINE AND FACILITIES
Osceola County, Florida

DRAWING NO: 21040-510-GNW-21532 REV. B

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Figure 1.5-3C