SR 400 (I-4) Project Development and Environment (PD&E) Study
FM No.: 432100-1-22-01

Contamination Screening Evaluation Report

Segment 1: from west of CR 532 (Polk/Osceola County Line) to west of SR 528 Beachline Expressway

Polk County (16320), Osceola County (92130), Orange County(75280)

July 2016

Stantec
300 Primera Drive
Suite 300
Lake Mary, FL 32746

HNTB Corporation
610 Crescent Executive Court
Suite 400
Lake Mary, FL 32746

4 EXPRESS

TABLE OF CONTENTS

FIGURES

LIST OF TABLES

APPENDICES

1.0 Summary of Project

The Florida Department of Transportation (FDOT) is conducting an update/reevaluation for the Project Development and Environment (PD&E) studies for the extension of proposed express lanes for State Road 400 (SR 400)/Interstate 4 (I-4). The project limits in the original PD&E studies were:

- West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line, (29.5 miles)
- CR 532 (Polk/Osceola County Line) to West of SR 528 Beachline Expressway (13.7 miles), and
- West of SR 528 Beachline Expressway to SR 472 (43 miles).

The corresponding environmental documents associated with these PD&E studies include: Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for SR 400 (I-4) from West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line [FPN 201210 (1998)] and from CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) [FPN 242526 and 242483 (1999)] and Final Environmental Impact Statement (FEIS) for I-4 from SR 528 (Beachline Expressway) to SR 472 [FPN 242486, 242592 and 242703 (2002)].

The project limits of the current SR 400 (I-4) PD&E reevaluation, herein referred to as I-4 Beyond the Ultimate (BtU) PD&E Reevaluation Study, include a total of approximately 43 miles of roadway sections east and west of the 21-mile, I-4 Ultimate project. The I-4 Ultimate project consists of reconstruction, to include new express lanes, for the section of I-4 which extends from west of SR 435 (Kirkman Road) to east of SR 434, and began construction in early 2015. The current I-4 BtU project has been divided into the following five segments:

- Segment 1: SR 400 (I-4) from West of CR 532 (Polk/Osceola County Line) to West of SR 528 Beachline Expressway - Osceola County (92130) and Orange County (75280)
- Segment 2: SR 400 (I-4) from West of SR 528 Beachline Expressway to West of SR 435 Kirkman Road - Orange County (75280)
- Segment 3: SR 400 (I-4) from 1 Mile East of SR 434 to East of SR 15-600/US 17-92 (Seminole/Volusia County Line) - Seminole County (77160)
- Segment 4: SR 400 (I-4) from East of SR 15-600/US 17-92 (Seminole/Volusia County Line) to ½ Mile East of SR 472 - Volusia County (79110)
- Segment 5: SR 400 (I-4) from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County (16320)

This Contamination Screening Evaluation Report was prepared for Segment 1 of the I-4 BtU PD&E study. The purpose of this report is to update the original PD&E study by documenting any changes that have occurred since the studies conducted for the SR 400)/I-4 from West of CR 532 (Osceola/Polk County Line) to West of SR 528 (Beachline Expressway) PD&E study. This includes changes in the current proposed concept being analyzed (the original design concept showed two high occupancy vehicle (HOV) lanes), changes to the PD&E process, and changes in the environmental regulations that have occurred in support of the PD&E reevaluation of the FONSI for SR 400 (I-4) from CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) (FPN 242526 and 242483, December 23, 1999).

This reevaluation includes environmental analysis of the original design concept, which showed six general use lanes (GUL) and four special use lanes (SUL) from CR 532 to southwest of World Drive (6+4), six GUL and two High Occupancy Vehicle (HOV) lanes from southwest of World Drive to northeast of Lake Avenue (6+2) and six GUL and 4 HOV lanes from northeast

of Lake Avenue to SR 528 (Beachline Expressway) (6+4), to the current proposed design which includes six GULs and four express lanes operating under a variable price toll plan (6+4). Other changes being reanalyzed include stormwater management, access plan and interchange configurations.

1.1 Description of Proposed Action

FDOT is proposing to reconstruct and widen I-4 as part of the I-4 BtU concept. This involves the build-out of I-4 to its ultimate condition through Central Florida, including segments in Polk, Osceola, Orange, Seminole and Volusia Counties. The concept design proposes the addition of two new express lanes in each direction, resulting in a total of ten dedicated lanes. The project limits for the segment analyzed in this report are within an approximate 14-mile segment of I-4 which extends from just west of CR 532 (Polk/Osceola County Line) to west of SR 528 (Beachline Expressway), from Milepost (MP) 31.607 to MP 32.022 in Polk County, MP 0.000 to MP 7.885 in Osceola County and from MP 0.000 to 5.650 in Orange County (herein referred to as I-4, Segment 1) and as shown in **Figure 1.1**. Although, the interstate is a designated east-west corridor, the alignment follows a southwest to northeast orientation through the limits of Segment 1. The study area in this section from west of CR 532 to west of SR 528 includes the following interchanges:

Osceola County

- I-4 and CR 532 (Osceola Polk Line Road)
- I-4 and SR 429 (Daniel Webster Western Beltway)
- I-4 and World Drive
- I-4 and SR 417 (Southern Connector)
- I-4 and US 192/SR 530 (W. Irlo Bronson Memorial Highway)
- I-4 and W. Osceola Parkway

Orange County

- I-4 and SR 536 (Epcot Center/World Center Drive)
- I-4 and SR 535 (S. Apopka Vineland Road)
- I-4 and Daryl Carter Parkway*
- I-4 and Central Florida Parkway

*Formerly Fenton Street/Wildwood Avenue (previously identified as Lake Avenue in the December 1999 FONSI). Daryl Carter Parkway is currently an existing overpass; alternative evaluations include a proposed full-access interchange.

The proposed improvements to I-4 include widening the existing six lane divided urban interstate to a ten lane divided highway. Generally speaking, the typical section will be consistent throughout Segment 1 and will have three 12-foot general use travel lanes with 10-foot inside and 12-foot outside shoulders and two 12-foot express lanes with 4-foot inside and 10-foot outside shoulders in each direction. A barrier wall between the adjacent shoulders will separate the express lanes from the general use lanes. Twelve-foot auxiliary lanes will be provided in some areas in both the eastbound and westbound directions. The typical section includes a 44-foot rail envelope in the median within a minimum 300 foot right of way. **Figure 1.2** illustrates the proposed mainline typical section for I-4 Segment 1.

1.2 Purpose and Need

The proposed improvements to I-4 include widening the existing six lane divided urban interstate to a ten lane divided highway in order to improve traffic operations, enhance connectivity and improve mobility by providing travel choices to the motoring public. I-4 is an east-west limited access freeway which links the west and east coasts of Florida, from I-275 in Tampa to I-95 in Daytona Beach. I-4 spans across six counties in Central Florida, traversing through many cities including Lakeland, Celebration, Orlando, Altamonte Springs, Sanford and DeLand. I-4 is a critical component of Florida's Strategic Intermodal System (SIS) which links seaports, rail, airports and other intermodal facilities. This aspect of I-4's significance is evidenced through connectivity provided by major junctions with I-275, I-75, SR 429 (Daniel Webster Western Beltway), SR

417 (Southern Connector/Central Florida Greenway/Seminole Expressway), SR 528 (Martin Andersen Beachline Expressway), SR 91 (Florida's Turnpike), SR 408 (Spessard Lindsay Holland East-West Expressway) and I-95.

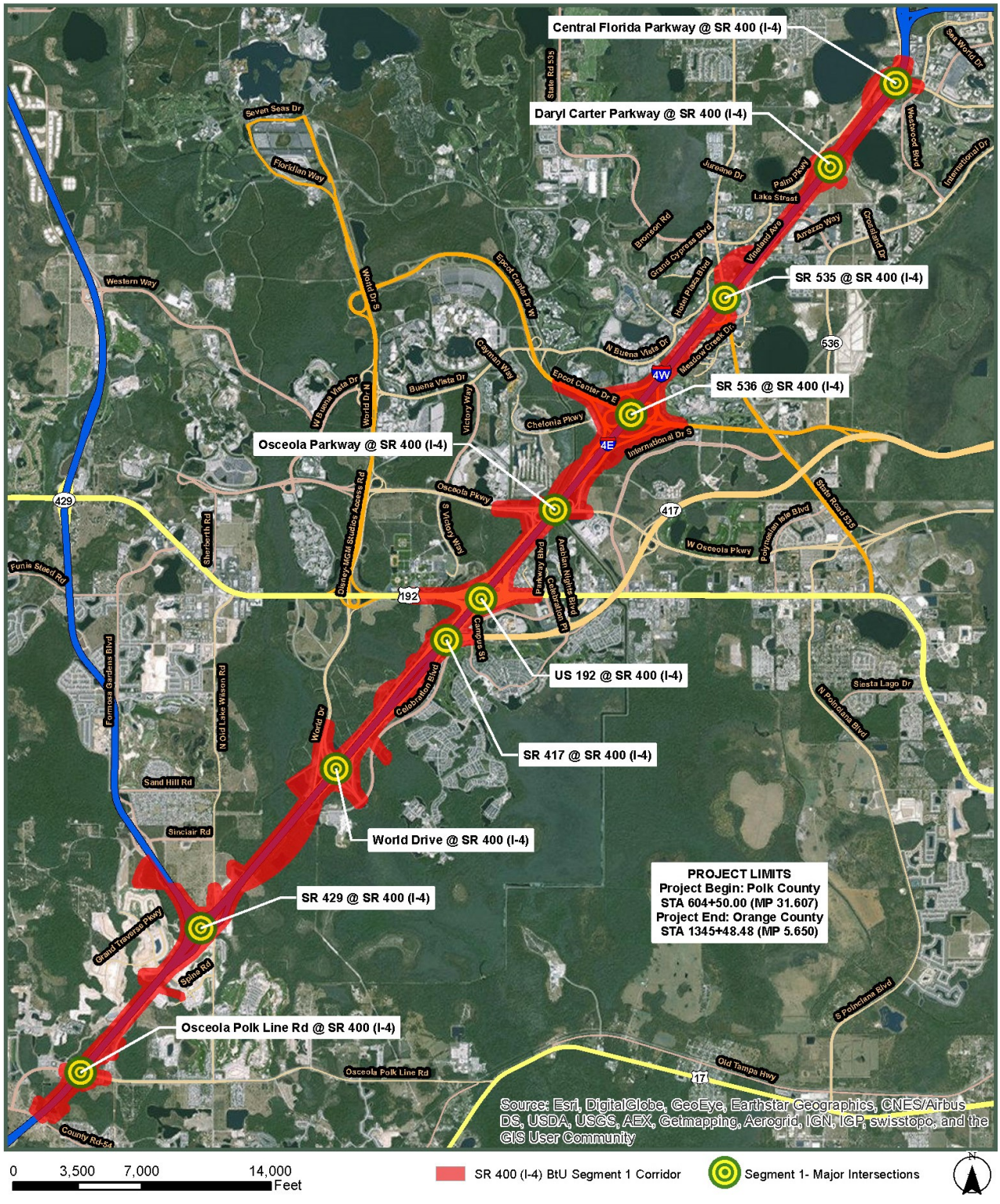
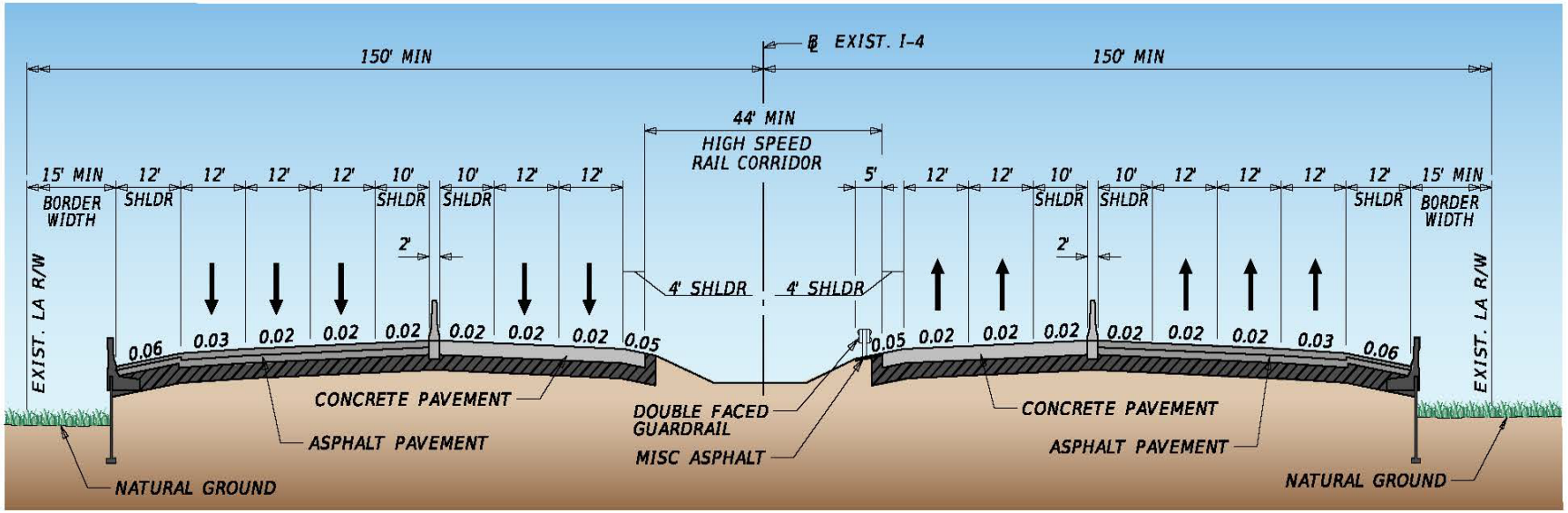


Figure 1.1 – Project Location Map



SR 400 (I-4) TYPICAL SECTION
Station 604 + 50.00 to Station 1345 + 48.48
MP 31.607 to MP 32.022 (Polk County)
MP 0.000 to MP 7.885 (Osceola County)
MP 0.000 to MP 5.650 (Orange County)

Figure 1.2 – SR 400 (I -4) Segment 1 Proposed Typical Section (6+4 with rail envelope)

I-4 serves as the primary corridor in the movement of people and freight between major population, employment and activity centers in the Central Florida region. When the entire Interstate was fully opened in the early 1960's, it was designed to serve intrastate and interstate travel by providing a critical link between the east and west coasts of Central Florida. Although this role continues to be a crucial transportation function of I-4, the highway also serves large volumes of local and commuter traffic with shorter trip distances. Today, the highway serves as the primary link between hotel/resort complexes and tourist attractions such as Walt Disney World, Universal Studios, Sea World, the International Drive Resort Area and downtown Orlando. Since I-4 is the only north-south limited access facility that is centrally located between the predominant employment centers and the major suburbs to the north, it has become the primary commuting corridor in the Central Florida metropolitan area.

Growth in Central Florida over the past decades has made it difficult for the transportation system to accommodate travel demand. Traffic congestion and crash incidents have resulted in major delays on the Interstate as well as other arterials surrounding the corridor. Increased congestion levels are experienced outside of the typical morning and afternoon rush-hour periods, affecting mobility levels for more hours of the day and impacting other non-commuter/non-weekday travel. The congestion on I-4 is further evidenced by the less than desirable levels of service on the Interstate as well as the crossroads.

Projections of future population and employment in the region indicate that travel demand will continue to increase well into the future. The ability to accommodate the new travel patterns resulting from growth must be provided to sustain the region's economy. Without the improvements, extremely congested conditions are expected to occur for extended periods of time in both the morning and evening peak periods. Due to these congested conditions, user travel times will continue to increase, the movement of goods through the urban area will be slower, and the deliveries of goods within the urban area will be forced to other times throughout the day. The need for improvements to I-4 is illustrated by the important transportation roles I-4 serves to the Central Florida region and the State of Florida. If no improvements are made to the Interstate, a loss in mobility for the area's residents, visitors, and commuters can be expected, resulting in a severe threat to the continued viability of the economy and the quality of life.

This reevaluation involves revising the original design concept showing 6 GUL + 4 SUL from CR 532 to southwest of World Drive , 6 GUL + 2 HOV lanes from southwest of World Drive to northeast of Lake Avenue and 6 GUL + 4 HOV lanes from northeast of Lake Avenue to SR 528, as recommended in the FONSI for SR 400 (I-4) from CR 532 (Polk/Osceola County Line to West of SR 528 (Beachline Expressway) (December 23, 1999), to the current proposed design of four (4) Express Lanes. The Express Lanes are tolled lanes and will extend the full length of the project. The access to/from the tolled lanes will be evaluated as part of this effort to determine if changes are needed from the previously approved concept for access to/from the SUL/HOV Lanes. The original I-4 PD&E Studies involved physical separation between the general use lanes and the SUL/HOV lanes on I -4, with demand management in the HOV lanes. The original demand management strategy was to control the use of the HOV lanes by requiring a minimum number of occupants per vehicle to maintain an acceptable level of service (Level of Service D).

This reevaluation also addresses revising the demand management tool to convert the HOV lanes to tolled express lanes. The express lanes will be separated from the general use travel lanes by two shoulders with a barrier wall between the shoulders. A variable pricing tolling plan is proposed for the express lanes. The tolls will vary by time of day and day of week to maintain acceptable levels of service in the express lanes. The tolls will be collected electronically through existing E-Pass, SunPass and other systems currently in place in the Orlando metropolitan area. The conversion to Express Lanes will maintain the same right of way limits as documented previously and will not change the impacts to the social, natural or

physical environment. An update to the Systems Access Modification Report (SAMR) prepared in January, 2013 is being completed in conjunction with this effort.

The purpose of this report is to present the findings of a contamination screening evaluation for the proposed improvements. This report identifies and evaluates known or potential contamination problems, presents recommendations concerning these problems, and discusses possible impacts to the proposed project. The discovery of all contamination problems as early in the project development process as possible is done in order to limit or avoid FDOT liability, establish remediation costs, prevent delay claims during construction, identify appropriate worker safety protocols, and supply information for the property valuation during the acquisition process. If the discovery is early enough, the problem may be avoided entirely. If avoidance is not possible, early discovery will allow proper handling in a logical, timely manner. The FDOT can be held liable for the acquisition of contaminated properties or the exacerbation of contamination due to its activities, even if the contamination source is not acquired.

The FHWA Technical Advisory T6640.8A, dated October 30, 1987 provides the following guidelines for conducting a contamination screening:

"Hazardous waste sites are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). During early planning, the location of permitted and non-regulated hazardous waste sites should be identified. Early coordination with the appropriate Regional Office of the EPA and the appropriate State agency will aid in identifying known or potential hazardous waste sites. If known or potential waste sites are identified, the locations should be clearly marked on a map showing their relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, information about the site, the potential involvement, impacts and public health concerns of the affected alternative(s) and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the Draft EIS. If the preferred alternative impacts a known or potential hazardous waste site, the Final EIS should address and resolve the issues raised by the public and government agencies."

A Contamination Screening Evaluation Report (CSER) is used to determine the likelihood of petroleum or other hazardous substance impacts to the project. The CSER is a requirement of the PD&E process.

This CSER, completed in accordance with Part 2, Chapter 22 (January 17, 2008 revision) of the PD&E Manual contains results from a physical site investigation of the project corridor, a limited investigation of properties along the corridor adjacent to the ROW as viewed from areas of public access, a review of Florida Department of Environmental Protection (FDEP) files, Polk, Osceola, and Orange County records, and available environmental databases.

This CSER is a professional opinion of the possibility of contamination impacts to the I-4 corridor resulting from direct visual observation and review of available file information compiled by others. The report is limited to conditions that existed at the time of the investigation and does not address such environmental issues as naturally occurring toxic substances in the subsurface soils, rocks, water and/or toxicity of on-site flora; toxicity of common household products, building materials or consumables; contaminants or contaminant concentrations that are not now a concern but may be under future regulations; contamination by asbestos-containing materials, radon gas, or lead in drinking water or paint.

This level of environmental investigation does not include intrusive testing or analysis of soils or groundwater to verify any suspected contamination. This report recommends whether any further investigative action may be prudent to confirm suspected contaminants.

Dewatering/excavation activities adjacent to known or suspect contamination sites could potentially cause a contamination plume to migrate into the ROW.

2.0 Land Use

The land use adjacent to I-4 within the proposed project limits consists primarily of Commercial and Services, Residential, and natural lands. Undeveloped natural areas are located between SR 429 and US 192 (Irlo Bronson Memorial Highway) and a few other small isolated patches along the right-of-way. Reedy Creek and Bonnet Creek pass underneath I-4 and several lakes are located along the project corridor. Five golf courses are located within the project corridor, as well as Disney's Wide World of Sports Complex. The Reunion and Celebration resorts, along with several apartment complexes or condominiums represent the majority of the residential land use within the project corridor. The majority of the project corridor between US 192 and SR 528 is commercial, retail, hotel and restaurants, and includes the Gaylord Palms Resort, Disney's Typhoon Lagoon Water Park, Downtown Disney (proposed Disney Springs), and the Orlando Premium Outlets (see Land Use and Habitat Coverage maps, **Figure A** in **Appendix A**).

3.0 Hydrologic Features

The project corridor is within Polk, Osceola, and Orange Counties, Florida and is underlain by the Upper and Lower Floridan aquifer. The Upper Floridan Aquifer is generally located from the surface to a depth of approximately 350 to 900 feet where it interfaces with the Lower Floridan Aquifer. This carbonate-rock aquifer consists of layers of limestone and dolomite. The Floridan aquifer spans most of Florida, Alabama, Georgia, and some of South Carolina (see **Figure 3.1**). The transmissivity ranges from 25,000 to 1,000,000 feet squared per day in areas where the upper confining material of the aquifer is less than 100 feet thick. Groundwater flow in this portion of Polk, Osceola, and Orange Counties is generally to the east within the Floridan Aquifer. According to the U.S. Department of the Interior Topographic Quadrangle maps for Intercession City, Windermere, and Lake Jessamine, the project corridor is relatively flat with areas of gently rolling hills (see USGS Topographical Map, **Figure B**, in **Appendix A**). The majority of the elevations along the project corridor generally range between 95 to 115 feet (NGVD) above mean sea level with the area between SR 429 and Epcot Center Drive/World Center Drive having a general elevation of between 80 and 90 feet (NGVD) above mean sea level. The highest elevation observed was approximately 140 feet above mean sea level near Osceola Polk Line Road; the lowest elevation observed was approximately 75 feet above mean sea level at Reedy Creek. The majority of the project corridor is located in an area described as having a moderate to high potential for recharge of the Floridan Aquifer, but the general area between SR 429 and Epcot Center Drive/World Center Drive is an area that is described as being a discharge area for the Floridan Aquifer.

Figure 3.1 Floridan Aquifer Map

According to the Soil Survey of Polk County, Florida (1990), the Soil Survey of Osceola County, Florida (1979), and the Soil Survey of Orange County, Florida (1989), the proposed Project (I-4 with 500 ft. buffer) area consists of six mapped soil types in Polk County, nineteen mapped soil types in Osceola County, and sixteen mapped soil types in Orange County. There is some overlap of the same identification name of several soils for the counties, but they are described differently and have different numbers by county.

The soil types in Polk County are Candler sand, 0 to 5 percent slopes (3), Samsula muck (13), Tavares fine sand, 0 to 5 percent slopes (15), Smyrna and Myakka fine sands (17), Placid and Myakka fine sands, depressional (25), and Basinger mucky fine sand, depressional (36).

The soil types in Osceola County are Adamsville Sand (1), Arents, 0 to 5 percent slopes (4), Basinger fine sand (5), Basinger fine sand, depressional (6), Candler sand, 0 to 5 percent slopes (7), Candler sand, 5 to 12 percent slopes (8), Hontoon muck (15), Immokalee fine sand (16), Myakka fine sand (22), Ona fine sand (27), Pits (31), Placid fine sand (33), Pomello fine sand, 0 to 5 percent slopes (34), Pompano fine sand, depressional (37), Riviera fine sand (38), Samsula muck (40), Smyrna fine sand (42), Tavares fine sand, 0 to 5 percent slopes (44), and Vero fine sand (45).

The soil types in Orange County are Archbold fine sand (2), Basinger fine sand, depressional (3), Candler fine sand, 0 to 5 percent slopes (4), Immokalee fine sand (20), Ona fine sand (26), Pits (33), Pomello fine sand, 0 to 5 percent slopes (34), St.

Johns fine sand (37), St. Lucie fine sand (38), Sanibel muck (42), Seffner fine sand (43), Smyrna fine sand (44), Tavares fine sand, 0 to 5 percent slopes (46), Tavares-Millhopper fine sands, 0 to 5 percent slopes (47), Urban land (50), and Zolfo fine sand (54).

A brief description of each of the mapped soil types occurring within the project site is provided below.

Polk County:

Candler sand, 0 to 5 percent slopes (3) – Candler sand, 0 to 5 percent slopes is an excessively drained, nearly level to gently sloping soil found on the uplands or knolls in the flatwoods. Typically, the surface layer is dark brown sand about 6 inches thick. The subsurface layer is sand to a depth of about 63 inches that is brownish yellow that grades to yellow. The next layer is yellow sand that has very thin, strong brown lamellae to a depth of 80 inches or greater.

The water table in this soil is typically 80 inches or more below the surface. The natural vegetation consists of turkey oak, post oak, live oak and slash pine and other pines. The understory consists of sparse indiangrass, pineland threeawn, hairy panicum, and annual forbs.

Samsula muck (13) – Samsula muck is a very poorly drained, nearly level, organic soil found in freshwater marshes and swamps. Typically, the surface layer is black to dark reddish brown muck about 31 inches thick. The underlying material is sand to a depth of 80 inches or more. It is black in the upper park and dark grayish brown in the lower part.

The water table is at or above the surface level except during extended dry periods. The natural vegetation consists mainly of loblolly bay, cypress, red maple, blackgum, and other water-tolerant trees and pine trees. The ground cover is greenbrier, fern, and other aquatic plants, which may dominate many areas.

Tavares fine sand, 0 to 5 percent slopes (15) – Tavares fine sand, 0 to 5 percent slopes is a moderately well drained, nearly level to gently sloping soil found on broad uplands and knolls in the flatwoods. Typically, the surface layer is dark grayish brown fine sand about 8 inches thick. The underlying material to a depth of at least 80 inches is light yellowish brown fine sand that grades to very pale brown.

The water table is at a depth of between 40 and 80 inches during the seasonally high period of 6 months or more. It recedes to a depth of greater than 80 inches during extended dry periods. The natural vegetation consists mainly of slash pine, longleaf pine, turkey oak, bluejack oak, and post oak. The understory includes creeping bluestem, lopsided indiangrass, hairy panicums, low panicums, purple lovegrass, and pineland threeawn.

Smyrna and Myakka fine sands (17) – Smyrna and Myakka fine sands are poorly drained, nearly level soils found on broad areas in the flatwoods. Typically, the surface layer of the Smyrna soil is black fine sand about 4 inches thick. The subsurface layer is gray fine sand to a depth of about 12 inches. The subsoil is dark brown and brown fine sand to a depth of about 25 inches. Below that is very pale brown fine sand to a depth of about 42 inches and very dark brown fine sand to a depth of about 48 inches. The underlying material is brown and light brownish gray fine sand to a depth of at least 80 inches. Typically, the surface layer of the Myakka soil is very dark gray fine sand about 7 inches thick. The subsurface layer is gray fine sand to a depth of about 25 inches. The subsoil to a depth of about 36 inches is fine sand. It is black in the upper part and dark brown in the lower part. The underlying material is yellowish brown fine sand to a depth of at least 80 inches.

The water table is at a depth within 12 inches of the surface during the seasonally high period of between 1 and 4 months in most years. The natural vegetation on Smyrna and Myakka soils is mostly longleaf pine and slash pine. The understory

includes saw palmetto, running oak, gallberry, wax myrtle, huckleberry, pineland threeawn, and scattered fetterbush lyonia. A few areas around large lakes are in oak hammocks.

Placid and Myakka fine sands, depressional (25) – Placid and Myakka fine sands, depressional are very poorly drained, nearly level soils found in depressions, primarily in the flatwoods. Typically, the surface layer of the Placid soil is black fine sand about 18 inches thick. The underlying material is dark gray fine sand to a depth of about 28 inches, light gray fine sand to a depth of about 60 inches, and grayish brown fine sand to a depth of at least 80 inches. Typically, the surface layer of the Myakka soil is very dark gray fine sand about 3 inches thick. The subsurface layer is grayish brown fine sand to a depth of about 25 inches. The subsoil is black fine sand to a depth of about 35 inches. The underlying material is dark gray fine sand to a depth of at least 80 inches.

The water table is at or above the surface of these soils for 6 months or more for both of these soils. The natural vegetation consists mostly of bay, scattered cypress, blackgum, St. John's wort, maidencane, and other water-tolerant plants.

Basinger mucky fine sand, depressional (36) – Basinger mucky fine sand, depressional is a very poorly drained, nearly level soil found in wet depressions in the flatwoods. Typically, this soil has a very dark gray mucky fine sand surface layer about 7 inches thick. The subsurface layer is light gray fine sand to a depth of about 35 inches. The subsoil is a mixture of grayish brown and very dark grayish brown fine sand to a depth of about 45 inches. The underlying material is brown fine sand to a depth of at least 80 inches.

The water table is at or above the surface of these soils for 6 months or more. The natural vegetation consists of broomsedge bluestem, chalky bluestem, maidencane, cutgrass, St. John's wort, pineland threeawn, cypress, and other water-tolerant trees.

Osceola County:

Adamsville sand (1) – Adamsville sand is a somewhat poorly drained, nearly level soil found on narrow ridges adjacent to and slightly higher than sloughs, marshes, and lakes, as well as on low knolls in the flatwoods. Typically, the surface layer is dark gray sand about 4 inches thick. The upper part of the underlying material is gray sand to a depth of 16 inches, followed by light brownish gray sand to a depth of 33 inches. The next 22 inches is white sand and has yellow, dark brown, and light brownish gray mottles, and is followed by white sand with yellow mottles to a depth of about 80 inches.

The high water table is within 20 to 40 inches of the surface for 2 to 6 months a year. The natural dominant vegetation consists of large live oak with laurel oak, water oak, longleaf pine and slash pine. The understory includes saw palmetto, sumac, American beautyberry, greenbriers, Virginia creeper, wild grape, blackberry, sparse partridgeberry, bracken fern, uniolas, pineland threeawn, lopsided indiangrass, and bluestem species.

Arents, 0 to 5 percent slopes (4) – Arents soil consists of material dug from several areas that have different kinds of soil. It is fill material, which is the result of earth moving operations and is used to fill, cover, or level terrain. Typically, Arents soils have no orderly sequence of layers because they are the combination of many other subsoils. The water table of these soils is highly variable because the high water table depends on the amount and type of fill material and presence of artificial drainage. In general, the water table can be at a depth of 20 to 60 inches in wetter months but can be much deeper below the surface during extended dry periods. Arents soil is mainly used for urban development.

Basinger fine sand (5) – Basinger fine sand is a poorly drained, nearly level soil found in low, broad flats and sloughs in the flatwoods. The underlying layers are sand to a depth of 80 inches. The upper subsurface layer is light gray fine sand that

contains dark brown and light gray mottles to a depth of 19 inches; the next 16 inches is dark brown fine sand that contains dark grayish brown mottles and black and dark reddish brown fragments of weakly cemented fine sand. The upper part of the substratum is light gray fine sand to a depth of 58 inches, and the lower part is brown fine sand with brown and very dark grayish brown mottles to a depth of about 80 inches.

The water table is seasonally at its highest within 10 inches of the surface for 2 to 6 months a year and between 10 to 30 inches of the surface during the dry season. In extended dry periods, the water table can drop below 40 inches from the surface. The natural vegetation consists mostly of scattered longleaf pine, saw palmetto, wax myrtle, and grasses such as maidencane, pineland threeawn, chalky bluestem, Florida threeawn, low panicum, and sand cordgrass.

Basinger fine sand, depressional (6) – Basinger fine sand, depressional is a poorly drained, nearly level sandy soil found mainly in depressions, sloughs, and poorly defined drainage ways in the flatwoods. Typically, the surface layer is black fine sand at about 7 inches thick. The underlying layers are sand to a depth of 80 inches. The upper subsurface layer is light gray fine sand that contains dark brown and light gray mottles to a depth of 19 inches; the next 16 inches is dark brown fine sand that contains dark grayish brown mottles and black and dark reddish brown fragments of weakly cemented fine sand. The upper part of the substratum is light gray fine sand to a depth of 58 inches, and the lower part is brown fine sand with brown and very dark grayish brown mottles to a depth of about 80 inches.

The water table is above the surface for 6 to 12 months a year depending on available rainfall. Vegetation in this soil type is typically dominated by water-tolerant grasses and small woody shrubs, but can also be dominated by trees in swamp systems. The natural vegetation consists of cypress, blackgum, tupelo gum, red bay, loblolly bay, red maple, sawgrass, maidencane, cutgrass, pickerelweed, St. John's wort, sand cordgrass, low panicum, stiff paspalum, and species of nut rushes.

Candler sand, 0 to 5 percent slopes (7) – Candler sand, 0 to 5 percent slopes is an excessively drained, nearly level to gently sloping soil found on the uplands. Typically, the surface layer is dark grayish brown sand about 3 inches thick. The subsurface layer is sand to a depth of about 62 inches. In sequence from the top of this layer, the upper three inches is yellowish brown, the next 11 inches is brownish yellow, the next 18 inches is light yellowish brown, and the next 27 inches is brownish yellow. The lowest layer is brownish yellow sand containing lamellae of reddish yellow loamy sand between 1/16 and 1/4 inch thick and 2 to 6 inches long to a depth of 80 inches or greater.

The water table in this soil is at its highest at 72 inches below the surface, and commonly recedes below 80 inches. The natural vegetation is dominated by turkey oak and longleaf pine. The understory consists of creeping bluestem, indiangrass, grassleaf goldaster, pineland threeawn, gopher apple, prickly pear, and a variety of legumes.

Candler sand, 5 to 12 percent slopes (8) – Candler sand, 5 to 12 percent slopes is an excessively drained, sloping to strongly sloping soil found on the uplands. Typically, the surface layer is dark grayish brown sand about 7 inches thick. It is underlain by 52 inches of sand. The upper 21 inches is pale brown, and the lower 31 inches is yellow and contains many uncoated white sand grains. Below a depth of 59 inches and extending to a depth of 80 inches or more is very pale brown sand that contains light gray with white mottles and lamellae of brownish yellow sandy loam 1/16 to 1/4 inch thick and 1 to 4 inches long.

The water table in this soil is at its highest at 72 inches below the surface, and commonly recedes below 80 inches. The natural vegetation is dominated by turkey oak and longleaf pine. The understory consists of creeping bluestem, indiangrass, grassleaf goldaster, pineland threeawn, gopher apple, prickly pear, and a variety of legumes.

Hontoon muck (15) – Hontoon muck is a very poorly drained, nearly level organic soil found in depressional areas, freshwater marshes and swamps. Typically, the surface layer is dark reddish brown muck about 5 inches thick. The next layer is black muck about 24 inches thick and underlain by dark reddish brown muck to a depth of 70 inches or more.

The natural water table is above the surface or within 10 inches of it except during extended dry periods. The natural vegetation consists mostly of sawgrass, maidencane, cattails, giant cutgrass, arrowheads, and a variety of sedges. Some areas have thick stands of willow, elderberry, and buttonbush, and other areas have mixed stands of cypress, red maple, loblolly bay, black tupelo, and sweetgum with a ground cover of greenbriers and ferns.

Immokalee fine sand (16) – Immokalee fine sand is a poorly drained, nearly level sandy soil found in broad flatwoods. Typically, the surface layer of this soil is very dark gray fine sand about 7 inches thick. The fine sand subsurface layer is 30 inches thick. The upper 6 inches is light gray, and the lower 24 inches is white and has faint brown mottles. The subsoil is 10 inches thick and consists of fine sand weakly cemented by organic matter. The upper 4 inches is black and has very dark brown and grayish brown mottles, and the lower 6 inches is dark reddish brown and has reddish yellow and black mottles. The next layer is 18 inches of dark brown fine sand that has reddish yellow and dark brown mottles. Below this is dark grayish brown fine sand which extends to a depth of 80 inches or more. This layer contains black and very dark grayish brown mottles.

The water table is within 10 inches of the surface for 2 months of the year and recedes to a depth of 10 to 40 inches for 8 months in most years, and can drop below 40 inches during extended dry periods. The natural vegetation is slash pine and longleaf pine. The understory is saw palmetto, running oak, inkberry, fetterbush, creeping bluestem, lopsided indiangrass, pineland threeawn, switch grass, and several panicum species.

Myakka fine sand (22) – Myakka fine sand is a poorly drained, nearly level sandy soil found in broad areas in the flatwoods. Typically, the surface layer of this soil is very dark gray fine sand about 7 inches thick. The subsurface layer is light gray fine sand about 20 inches thick. It has very dark grayish brown and brown streaks along root channels. The subsoil is fine sand that is weakly cemented with organic matter. It is black in the upper 6 inches and dark reddish brown and very dark gray in the lower 4 inches. Next is a 6 inch layer of dark yellowish brown fine sand that has dark reddish brown stains along root channels. The next 27 inches is light yellowish brown fine sand. It is underlain by a layer of weakly cemented, dark reddish brown fine sand that extends to a depth of 80 inches or more.

The water table is at a depth of less than 10 inches for 1 to 4 months in most years and a depth of more than 40 inches during extended dry periods. The natural vegetation consists of longleaf pine and slash pine. The understory includes saw palmetto, inkberry, fetterbush, running oak, creeping bluestem, chalky bluestem, lopsided indiangrass, pineland threeawn, switch grass, and several species of panicums.

Ona fine sand (27) – Ona fine sand is a poorly drained, nearly level soil found in broad, flat area in the flatwoods between swamps and marshes or in long, narrow bands bordering depressions and drainage ways. Typically, the surface layer is black fine sand about 6 inches thick. The subsoil is dark reddish brown, weakly cemented fine sand about 9 inches thick. Next is about 3 inches of dark brown fine sand with brown and pale brown mottles. The substratum is fine sand to a depth 80 inches or more. The upper 9 inches is pale brown and has brown, dark brown, light gray, and brownish yellow mottles; the next 15 inches is gray and has yellowish brown, brownish yellow, gray and light gray mottles; and the lower 38 inches is grayish brown and has brownish yellow and light gray mottles.

The water table is within 10 inches of the surface for 1 to 2 months a year and at a depth of between 10 and 40 inches for periods of 4 to 6 months during most years. The natural vegetation consists of longleaf pine and slash pine. The understory includes saw palmetto, inkberry, fetterbush, running oak, creeping bluestem, chalky bluestem, lopsided indiangrass, pineland threeawn, switch grass, and several species of panicum.

Pits (31) – Pits are areas that have been excavated, primarily for use in road, levee, or foundation construction. Pits (also called borrow-pits) can be shallow or fairly deep and may be seasonally ponded at the bottom or hold water year round.

Placid fine sand (32) – Placid fine sand is a very poorly drained, nearly level soil found in low, wet depressions and swamps in the flatwoods. Typically, the surface layer is fine sand about 24 inches thick. The upper 14 inches is black and contains pockets of light gray, and the lower 10 inches is very dark gray and also contains pockets of light gray. The underlying layer is fine sand to a depth of 80 inches or more. Between depth of 24 and 36 inches, it is light brownish gray and has mottles and stains of dark grayish brown. Between depths of 36 and 80 inches, it is light gray and has mottles of gray and brown in the upper 14 inches.

The water table is at or above the surface for 6 to 9 months or more during most years. The natural vegetation consists mainly of maidencane, cordgrass, pickerelweed, giant cutgrass, wax myrtle, sedges, and rushes. Some areas contain scattered cypress, bay, tupelo, and cabbage palm.

Pomello fine sand, 0 to 5 percent slopes (34) – Pomello fine sand, 0 to 5 percent slopes is a moderately well drained, nearly level to gently sloping soil found in transitional areas between high sand ridges and the flatwoods and on slight knolls and low ridges throughout the flatwoods. Typically, the surface layer is gray fine sand about 4 inches thick. The subsurface layer is fine sand about 43 inches thick. The upper 11 inches is gray, and the lower 32 inches is white and has gray and dark gray mottles. The subsoil is fine sand that is weakly cemented with organic matter; it extends between depths of 47 and 58 inches. The upper 5 inches is black, the lower 6 inches is dark reddish brown and has black, reddish brown, very dark gray, and dark reddish gray mottles. The next layer is brown fine sand about 7 inches thick. It is underlain by grayish brown fine sand that extends to a depth of 80 inches or more.

The water table is at a depth of between 24 and 40 inches for periods of about 1 to 4 months a year during normal wet seasons. During dry seasons, the water table is at a depth of about 40 to 60 inches below the surface. The natural vegetation consists of scattered sand pine, longleaf pine, and slash pine. In many places, sand live oaks can form dense thickets. The understory includes saw palmetto, running oak, pineland threeawn, creeping bluestem, lopsided indiangrass, and low panicum.

Pompano fine sand, depressional (37) – Pompano fine sand, depressional is a poorly drained, nearly level soil found in depressions and drainage ways. Typically, the surface layer is fine sand about 11 inches thick. It is black in the upper 5 inches and dark gray in the lower 6 inches. Below this layer to a depth of 30 inches is light gray fine sand, and to a depth of 80 inches or more is grayish brown fine sand.

The water table is at or above the surface level for 6 to 12 months during most years. Vegetation in this soil type is typically dominated by water-tolerant grasses and small woody shrubs, but can also be dominated by trees in swamp systems. The natural vegetation consists of cypress, blackgum, tupelo gum, red bay, loblolly bay, red maple, sawgrass, maidencane, cutgrass, pickerelweed, St. John's wort, sand cordgrass, low panicum, stiff paspalum, and species of nut rushes.

Riviera fine sand (38) – Riviera fine sand is a poorly drained, nearly level soil found on broad, low flats. Typically, the surface layer is about 6 inches thick consisting of black fine sand. The subsurface layer is 18 inches of white fine sand and has grayish brown and strong brown mottles. The subsoil extends between depths of 24 and 49 inches. The upper 14 inches is very dark grayish brown sandy clay loam that has dark brown and strong brown mottles and tongues of white fine sand extending into it from the layer above, and the lower 11 inches is very dark grayish brown sandy loam that has very dark gray mottles. The substratum, which extends to a depth of 80 inches or more, is dark gray loamy sand that contains pockets of sandy loam and sandy clay loam.

The water table is within 10 inches of the surface for 2 to 4 months a year and at a depth of between 10 and 30 inches the rest of the year. The natural vegetation consists mostly of a dense stand of cabbage palms. In some areas there are scattered pine trees. The understory is relatively open with sparse ground cover including saw palmetto, American beautyberry, inkberry, creeping bluestem, pineland threeawn, low panicum, and maidencane in more open areas.

Samsula muck (40) – Samsula muck is a very poorly drained, nearly level, organic soil found in freshwater marshes and swamps. Typically, the surface layer is muck about 22 inches thick. The upper 8 inches is dark reddish brown, and the lower 14 inches is black. Beneath the muck is 17 inches of black fine sand that contains light gray lenses of fine sand. Below this layer is grayish brown fine sand that is mottled with dark grayish brown and that extends to a depth of 65 inches or more.

The water table is at or above the surface level except during extended dry periods. The natural vegetation consists mainly of sawgrass, maidencane, cattails, giant cutgrass, arrowheads, and a variety of sedges. In some places there are thick stands of willow, elderberry, and buttonbush. In other places there may be mixed stands of cypress, red maple, loblolly bay, black tupelo, and sweetgum with a ground cover of greenbriers and ferns.

Smyrna fine sand (42) – Smyrna fine sand is a poorly drained, nearly level soil found in broad flat areas in the flatwoods. Typically, the surface layer is 7 inches of fine sand. The upper 4 inches is black, and the lower 3 inches is dark gray. The subsurface layer is 7 inches of light gray fine sand. The upper subsoil is about 6 inches of fine sand that is weakly cemented with organic matter. The upper 3 inches is black, and the lower 3 inches is dark reddish brown and has reddish brown and dark reddish mottles. Next is 5 inches of brown fine sand that contains black and dark reddish brown, weakly cemented fragments. Next is 18 inches of light gray fine sand and 13 inches of grayish brown fine sand. At a depth of 56 inches is a lower subsoil of fine sand which extends to a depth of 80 inches or more. The upper 13 inches is dark reddish brown, and the lower 11 inches is dark reddish brown and black.

The water table is at a depth of less than 10 inches for between 1 and 4 months and between 10 and 40 inches for more than 6 months in most years. The water table can briefly rise above the surface during very wet periods. Natural vegetation consists of longleaf pine and slash pine. The understory includes saw palmetto, inkberry, fetterbush, running oak, creeping bluestem, chalky bluestem, lopsided indiangrass, pineland threeawn, switch grass, and several panicum species.

Tavares fine sand, 0 to 5 percent slopes (44) – Tavares fine sand, 0 to 5 percent slopes is a moderately well drained, nearly level to gently sloping soil found on low ridges in the flatwoods. Typically, the surface layer is dark grayish brown fine sand about 6 inches thick. Below is 12 inches of grayish brown fine sand that has dark gray and pale brown mottles; 11 inches of pale brown fine sand that has splotches of light gray, uncoated sand grains; 19 inches of very pale brown fine sand that has pale brown mottles; and 32 inches of white fine sand that has very pale brown, pale brown, light grayish brown, and reddish yellow mottles.

The water table is typically at a depth of between 40 and 60 inches below the surface for 6 or more months a year and recedes to a depth greater than 60 inches during dry periods. The natural vegetation is dominated by longleaf pine and turkey oak. The understory includes creeping bluestem, indiangrass, grassleaf goldaster, pineland threeawn, gopher apple, prickly pear, and a variety of legumes.

Vero fine sand (45) – Vero fine sand is a poorly drained, nearly level soil that formed in sandy marine sediments over loamy materials. It is found in broad areas in the flatwoods. Typically, the surface layer is fine sand about 10 inches thick. The upper 7 inches is black, and the lower 3 inches is dark gray. The subsurface layer is light gray fine sand about 11 inches thick. The subsoil extends to a depth of 62 inches. It is 3 inches of dark brown fine sand, 4 inches of black fine sand, 4 inches of brown fine sandy loam, 16 inches of gray light brownish gray sandy clay loam, and 14 inches of gray sandy clay loam. The upper part of the substratum, to a depth of 80 inches, is greenish gray fine sandy loam. The lower part, to a depth of 99 inches or more, is greenish gray loamy fine sand.

The water table is at a depth of less than 10 inches for between 1 and 4 months in most years. It is at a depth of between 10 and 40 inches for 6 or more months a year and below 40 inches during prolonged dry periods. The natural vegetation consists of longleaf pine and slash pine. The understory includes saw palmetto, inkberry, fetterbush, running oak, creeping bluestem, chalky bluestem, lopsided indiangrass, pineland threeawn, switch grass, and several panicum species.

Orange County:

Archbold fine sand, 0 to 5 percent slopes (2) – Archbold fine sand soils are moderately well drained, nearly level to gently sloping soils found on low ridges and knolls on the flatwoods. Typically, the surface layer is dark gray fine sand about 2 inches thick. The underlying material is usually a white fine sand to a depth of about 80 inches.

The water table is seasonally at its highest at 42 to 60 inches for about 6 months and can reach a depth of 24 inches during wet periods. The water table recedes to a depth of between 60 to 80 inches for the rest of the year and can go deeper than 80 inches during extended dry periods. Natural vegetation is scattered slash pine, sand pine, and sand live oak. The understory includes pineland threeawn, prickly pear cactus, saw palmetto, and various weeds and grasses.

Basinger fine sand, depressional (3) – Basinger fine sand soils, depressional are poorly drained, nearly level sandy soils found mainly in depressions, sloughs, and along the edges of freshwater marches and streams. Typically, the surface layer is black fine sand at about 7 inches thick. The underlying layers are sand to a depth of 80 inches. The upper subsurface layer is gray fine sand to a depth of 32 inches, the next 15 inches is dark brown and light brownish gray fine sand, and the substratum is pale brown fine sand.

The water table is above the surface for 6 to 9 months or more each year and is within 12 inches of the surface for the rest of the year under natural conditions. The natural vegetation is mixed stands of pond cypress, sweetgum, and scattered pond pine. The understory includes chalky bluestem, blue maidencane, sedges, and other water tolerant grasses.

Candler fine sand, 0 to 5 percent slopes (4) – Candler fine sand, 0 to 5 percent slopes is an excessively drained, nearly level soil found on the uplands. Typically, the surface layer is very dark grayish brown fine sand about 5 inches thick. The upper part of the subsurface layer is yellowish brown fine sand to a depth of 30 inches, and the lower part is brownish yellow fine sand to a depth of about 74 inches. The subsoil to a depth of about 80 inches is yellow fine sand that has strong brown loamy sand lamellae about 1/16 to 1/4 of an inch thick and 2 to 4 inches long.

The seasonal high water table does not exceed 80 inches below the surface. The natural vegetation consists of scattered slash pine, sand pine, longleaf pine, bluejack oak, Chapman oak, scrub live oak, and turkey oak. The understory includes indiangrass, chalky bluestem, hairy panicum, pineland threeawn, and annual forbs.

Immokalee fine sand (20) – Immokalee fine sand soils are poorly drained, nearly level sandy soils found in broad flatwoods. Typically, the surface layer of this soil is black fine sand about 5 inches thick. The upper part of the subsurface layer is grayish brown fine sand to a depth of about 35 inches. The upper part of the subsoil is black fine sand to a depth of about 41 inches, the middle part is dark brown fine sand to a depth of about 48 inches, and the lower part is brown fine sand to a depth of about 67 inches. The substratum is light brownish gray fine sand to a depth of about 80 inches.

The water table is within 10 inches of the surface for 1 to 3 months of the year and recedes to a depth of 10 to 40 inches for more than 6 months. The natural vegetation is slash pine. The understory is saw palmetto, running oak, inkberry, fetterbush, creeping bluestem, lopsided indiangrass, pineland threeawn, chalky bluestem, and wax myrtle.

Ona fine sand (26) – Ona fine sand soils are poorly drained, nearly level sandy soils found in broad areas on the flatwoods. Typically, this soil has a surface layer of black fine sand about 6 inches thick. The subsoil is dark reddish brown fine sand to a depth of about 15 inches. The upper part of the substratum is grayish brown fine sand to a depth of about 42 inches, the middle part is light gray fine sand to a depth of about 60 inches, and the lower part is very pale brown fine sand to a depth of 80 inches or more.

The water table is seasonally at its highest for 1 to 2 months a year at within 10 inches of the surface. It recedes to a depth of between 10 and 40 inches for periods of 6 months or more. Natural vegetation is longleaf pine and slash pine. The understory includes inkberry, running oak, saw palmetto, wax myrtle, fetterbush, pineland threeawn, bluestem, panicum, and other grasses.

Pits (33) – Pits are areas that have been excavated, primarily for use in road, levee, or foundation construction. Pits (also called borrow-pits) can be shallow or fairly deep and may be seasonally ponded at the bottom or hold water year round.

Pomello fine sand, 0 to 5 percent slopes (34) – Pomello fine sand soils are moderately well drained, nearly level to gently sloping soils found mainly in low ridges and knolls on the flatwoods. Typically, the surface layer is gray fine sand about 3 inches thick. The subsurface layer is white fine sand to a depth of about 40 inches. The upper part of the subsoil is black fine sand to a depth of about 48 inches, and the lower part is dark reddish brown fine sand to a depth of about 55 inches. The substratum is a pale brown fine sand to a depth of about 80 inches.

The water table is at a depth of 24 to 40 inches for 1 to 4 months a year, and recedes to 40 to 60 inches deep during dry periods. The natural vegetation is longleaf pine, sand pine, and slash pine. The understory includes creeping bluestem, lopsided indiangrass, running oak, saw palmetto, and pineland threeawn.

St. Johns fine sand (37) – St. Johns fine sand soils are poorly drained, nearly level sandy soils found on broad flats on the flatwoods. Typically, the upper part of the surface layer is black fine sand to a depth of about 7 inches, and the lower part is very dark gray fine sand to a depth of about 12 inches. The subsurface layer is gray fine sand to a depth of about 24 inches. The upper part of the subsoil is fine black sand to a depth of about 30 inches, the middle part is dark reddish brown fine sand to a depth of 36 inches, and the lower part is pale brown fine sand to a depth of about 44 inches. The upper part of the substratum is light gray fine sand to a depth of 58 inches, and the lower part is pale brown sand to a depth of about 80 inches.

The water table is within 10 inches of the surface for 6 to 12 months a year and between 10 and 40 inches deep for the rest of the year. During wet periods, the water table may rise to the surface for brief amounts of time. The natural vegetation includes longleaf pine, slash pine, and laurel oak. The understory is wax myrtle, inkberry, saw palmetto, pineland threeawn, bluestem, and various weeds and grasses.

St. Lucie fine sand, 0 to 5 percent slopes (38) – St. Lucie fine sand soils are excessively drained, deep, nearly level to gently sloping sandy soils found in the uplands. Typically, the surface layer is gray fine sand about 2 inches thick. The upper part of the underlying material is light gray fine sand to a depth of about 6 inches, and the lower part is white fine sand to a depth of 80 inches or more.

The water table is at its highest at 72 inches or deeper below the surface. The natural vegetation includes sand pine, Chapman oak, scrub live oak, and sand live oak. The understory is scattered saw palmetto, prickly pear cactus, golf leaf goldaster, deer moss, bluestem, and pineland threeawn.

Sanibel muck (42) – Sanibel muck soil is a very poorly drained, nearly level soil found in depressions, freshwater swamps and marshes, and in poorly defined drainage ways. Typically, this soil has an organic surface layer of black muck about 11 inches thick with a layer of black fine sand below it to a depth of about 15 inches. The upper part of the underlying material is gray fine sand to a depth of about 28 inches, and the lower part is light gray fine sand to a depth of 80 inches or more and has brown mottles.

The water table is ponded at the surface for 6 to 9 months a year and no deeper than 10 inches below the surface for 2 to 6 months a year in undrained areas. The organic material will rapidly lose thickness when soils are drained or during extended dry periods. The natural vegetation is mixed stands of bald cypress, red maple, sweetgum, and black tupelo. The understory includes cattail, St. John's wort, pickerel weed, sawgrass, maidencane, ferns, sedges, and other water-tolerant grasses.

Seffner fine sand (43) – Seffner fine sand is a somewhat poorly drained, nearly level soil found on the rims of depressions and broad, low ridges in the flatwoods. Typically, the surface layer is composed of 6 inches of black fine sand underlain by 19 inches of very dark grayish brown fine sand. They upper part of the underlying material is grayish brown fine sand to a depth of about 36 inches, the middle part is light gray fine sand that has common dark brown mottles to a depth of about 52 inches, and the lower part is white fine sand to a depth of 80 inches or more.

The water table is within 18 to 40 inches of the surface for 2 to 4 months a year and between 10 and 20 inches below the surface during wet periods for up to 2 weeks. The water table can recede to a depth of below 60 inches during extended dry periods. The natural vegetation consists of longleaf pine, slash pine, live oak, and laurel oak. The understory includes wax myrtle, fetterbush, creeping bluestem, broomsedge bluestem, grassleaf goldaster, lopsided indiangrass, saw palmetto, panicum, and pineland threeawn.

Smyrna fine sand (44) – Smyrna fine sand is a poorly drained, nearly level sandy soil found on broad flatwoods. Typically, the surface layer is black fine sand about 4 inches thick. The subsurface layer is gray fine sand to a depth of about 17 inches. The upper part of the substratum is pale brown fine sand to a depth of about 53 inches, and the lower part is light gray fine sand to a depth of 80 inches or more.

The water table is within 10 inches of the surface for 1 to 4 months a year and recedes to a depth of 10 to 40 inches or the rest of the year. The natural vegetation is longleaf pine and slash pine. The understory includes lopsided indiangrass, inkberry, saw palmetto, pineland threeawn, wax myrtle, bluestem, panicum, and other grasses.

Tavares fine sand, 0 to 5 percent slopes (46) – Tavares fine sand, 0 to 5 percent slopes is a moderately well drained, nearly level to gently sloping soil found on low ridges and knolls on uplands. Typically, the surface layer is very dark gray fine sand about 6 inches thick. The upper part of the underlying material is brown fine sand to a depth of about 16 inches, the middle part is pale brown fine sand to a depth of about 41 inches, and the lower part is fine white sand to a depth of about 80 inches.

The water table is at a depth of between 40 and 80 inches during the seasonally high period of 6 months or more. It recedes to a depth of greater than 80 inches during extended dry periods. The natural vegetation is water oak, laurel oak, live oak, turkey oak, slash pine, and longleaf pine. The understory includes creeping bluestem, lopsided indiangrass, and pineland threeawn.

Tavares-Millhopper fine sands, 0 to 5 percent slopes (47) – Tavares-Millhopper fine sands, 0 to 5 percent slopes are moderately well drained, nearly level to gently sloping soils found on low ridges and knolls in the uplands and the flatwoods. In this area they occur in a regular repeating pattern. Typically, the surface layer of Tavares soil is dark grayish brown fine sand about 6 inches thick. The upper part of the underlying material is pale brown fine sand to a depth of about 21 inches, the middle part is very pale brown fine sand to a depth of about 60 inches, and the lower part is white fine sand with common very pale brown mottles to a depth of about 80 inches. Typically, the surface layer of Millhopper soil is dark grayish brown fine sand about 6 inches thick. The upper part of the subsurface layer is yellowish brown fine sand to a depth of about 40 inches and the lower part is very pale brown fine sand with a few yellowish brown mottles to a depth of about 64 inches. The upper part of the subsoil is brownish yellow sandy loam to a depth of about 76 inches and the lower part is light gray sandy clay loam that has common yellowish brown and yellowish red mottles to a depth of more than 80 inches.

The water table is at a depth of between 40 and 72 inches during the seasonally high period of 6 months or more. It recedes to a depth of greater than 80 inches during extended dry periods. The natural vegetation consists of water oak, laurel oak, turkey oak, live oak, slash pine, and longleaf pine. The understory includes creeping bluestem, lopsided indiangrass, panicum, and pineland threeawn.

Urban land (50) – Urban land is a miscellaneous area covered by urban facilities including shopping centers, parking lots, industrial buildings, houses, streets, sidewalks, and airports. The natural soil cannot be observed and the depth to seasonal high water table is dependent on the functionality of established drainage systems.

Zolfo fine sand (54) – Zolfo fine sand is a somewhat poorly drained, nearly level soil found on broad, slightly higher positions adjacent to the flatwoods. Typically, the surface layer is dark grayish brown fine sand about 5 inches thick. The upper part of the subsurface layer is grayish brown fine sand to a depth of about 23 inches, the middle part is light brownish gray fine sand that has common brownish yellow mottles to a depth of about 38 inches, and the lower part is very pale brown fine sand that has common brownish yellow mottles to a depth of about 55 inches. The upper part of the subsoil is brown fine sand to a depth of 71 inches and the lower part is dark brown fine sand to a depth of 80 inches or more.

The water table is at a depth of between 24 and 40 inches during the seasonally high period of 2 to 6 months, but can reach a depth of between 10 and 24 inches during periods of heavy rains. It recedes to a depth of about 60 inches below the surface during extended dry periods. The natural vegetation consists of water oak, laurel oak, turkey oak, live oak, slash pine, and longleaf pine. The understory includes broomsedge bluestem, chalky bluestem, lopsided indiangrass, saw palmetto, pineland threeawn, and other perennial grasses.

4.0 Methodology

FDOT PD&E guidelines (Chapter 22, January 17, 2008 revision) were followed to assess potential contamination. Per these guidelines, current land use and potential contaminants were identified, and all available regulatory agency records were consulted.

A detailed site inspection was conducted of the I-4 corridor and proposed pond sites in October 2013, May and June 2014, and June 2015. Prior to the site inspection, a review of the Florida Department of Environmental Protection (FDEP) OCULUS Database was conducted to determine locations of contaminated sites. Sanborn Fire Insurance maps were not reviewed since the project area was rural in nature during the time that they were printed. The corridor was inspected along the ROW via pedestrian and vehicular survey. The survey also included a limited visual inspection of the adjacent properties and properties within ½ a mile of the roadway. Pond sites were inspected via pedestrian transects. Any observed potential hazardous or petroleum sources were noted and can be found in the Results section (**Section 5.0**). A comprehensive list of potential contamination sites is provided in **Table 1**.

Known and potential contamination sites along the I-4 project corridor were recorded on aerial maps (see Contamination Site Maps, **Figure C**, in **Appendix A**). Photographs of properties within the 0.5 mile radius with reported contamination as well as properties with potential contamination were taken to document site conditions within the study area (see Contamination Site Photographs**, Appendix B**).

Aerial photos from 1944-2014 were reviewed to identify any potential activities that may indicate that contamination from hazardous or petroleum substance generation, storage, or transportation may have occurred within the project area. Historic aerial photographs were reviewed using the State University System of Florida, Publication of Archival Library & Museum Materials website. Examples of the aerial flights over the project corridor from 1944–1996 can be found in **Appendix C**.

This CSER incorporates the FDEP's OCULUS Database Information to identify available regulatory agency information pertaining to hazardous materials. The following files were searched for any sites with hazardous or petroleum material records and/or violations: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), Toxic Site Directory (TSD), Generators (GEN), Emergency Response Notification System (ERNS), National Priority List (NPL), Resource Conservation and Recovery Information System (RCRIS), Facility Index System (FINDS), RCRA Administrative Action Tracking System (RAATS), Registered Underground Storage Tanks (UST), Leaking Registered Underground Storage Tanks (LUST), Toxic Release Inventory (TRI), State Superfund Sites, Solid Waste Facilities, and Polk, Osceola, and Orange County records.

A contamination potential rating for each potential pond site is listed in **Table 2** and that of each property within the proposed project limits is listed in **Table 3** (**Section 8.0**). The contamination rating system is divided into four degrees of risk: No, Low, Medium, and High. This system expresses the degree of concern for potential contamination problems based upon the available information. Known problems may not necessarily present a high cause for concern if the regulatory agencies are aware of the situation and actions, where necessary, are either complete or are underway, and these actions will not have an adverse impact on the proposed project. Definitions of the risk ratings are as follows:

- **No risk**: This rating means that after review of available information, there was nothing to indicate that contamination would be a problem. It is possible that contaminants could have been handled on the property; however, all information indicates problems should not be expected.

- **Low risk**: This rating means that the former or current operation has a hazardous waste generator identification number, or deals with hazardous materials; however, based on all the available information, there is no reason to believe there would be any involvement with contamination in relation to the project.
- **Medium risk**: This rating means that after reviewing all available information, indications were found that identify known soil and/or water contamination and that the problem does not need remediation, is being remediated, or that continued monitoring is required.
- **High risk**: This rating means that after review of all available information, there is a potential for contamination problems. Further assessment would be required after alignment selection to determine the actual presence or absence and/or levels of contamination and the need for remedial action.

During the course of field investigations and research, interviews with available property owners, and site managers were conducted to ascertain any additional relevant information to assist with the evaluation of potential risk ratings.

5.0 Results

5.1 Corridor Land Uses

Residential (1100 - 1300) – This range of land use codes consists of areas containing medium, and high density residential housing. Low density housing was only observed along Lake Willis Drive and is comprised of single family homes. Medium density housing was observed within the Celebration and Reunion developments, but not directly adjacent to the right-of-way. High density housing was observed primarily in the southern and northern portions of the project corridor. The most densely populated areas include the Tuscana development along South Goodman Road, portions of the Reunion development just south of the SR 429 interchange, portions of the Celebration development along Celebration Boulevard, and multiple apartments or condominiums near the SR 535 interchange and the Central Florida Parkway interchange.

Commercial and Services (1400) – This land use was observed throughout the majority of the project corridor along Champions Gate Boulevard/Osceola Polk Line Road, Celebration Boulevard, US 192, Buena Vista Drive, SR 535, Vineland Avenue, Central Florida Parkway, and Westwood Boulevard. It includes numerous types of businesses in malls, strip malls and as stand-alone establishments along the corridor.

Retail Sales and Services (1410) – This land use was observed in several portions of the project corridor, primarily along Buena Vista Drive, SR 535, and Vineland Avenue. It consists of shopping centers, and other service/retail oriented businesses along the adjacent roadways. This land use includes the Orlando Premium Outlets along Vineland Avenue.

Professional Services (1430) – Several medical offices, dental offices, veterinary offices, and other professional offices are located along the corridor, primarily along Celebration Boulevard and Celebration Place.

Tourist Services (1450) – Numerous hotels and resorts were identified throughout the project corridor. Some of the larger complexes include the Gaylord Palms Resort along Osceola Parkway, the Waldorf Astoria Orlando Resort along Bonnet Creek Resort Lane, and the Orlando World Center Marriott along World Center Drive. The densest concentration of hotels was observed along Hotel Plaza Boulevard.

Industrial (1500) – The only area where this land use was observed was at the SR 429 interchange, where the Florida Gas Transmission Company has a small facility along Old Lake Wilson Road.

Institutional (1700) – This land use consists of schools and institutions such as Oak Hill Baptist Church on Osceola Polk Line Road, Celebration High School, Celebration Fire Station, Celebration Community Church, and Mary Queen of the Universe Church.

Medical and Health Care (1740) – This land use consists of medical and healthcare related institutions such as the Florida Hospital Celebration Health and the Central Florida Behavioral Hospital.

Golf Courses (1820) – This land use was observed at the Reunion Resort, Celebration Golf Club, Waldorf Astoria Resort, and the Hawks Landing Golf Club at the Orlando World Drive Marriott.

Parks and Zoos (1850) – This land use consists of recreational facilities that are either parks or zoos. Disney's Wide World of Sports complex and Disney's Typhoon Lagoon were identified along the project corridor.

Community Recreational Facilities (1860) – This land use is represented by Dr. P. Phillips Community Park along Big Sand Lake.

Open Land (1900) – This land use consists of undeveloped land within urban areas and inactive land with street patterns but without structures. Several large patches of this land use was observed in areas along Celebration Boulevard, to the southwest of the Osceola Parkway interchange, to the east of I-4, north of the Epcot Center Drive/World Center Drive interchange, in the vicinity of Lake Willis, and an area to the southeast of the Central Florida Parkway interchange.

Improved Pasture (2110) – This category of land use consists of land which has been cleared, tilled, reseeded with specific grass types and periodically improved with brush control and fertilizer application. Large swaths of land along the eastern side of I-4 just north of Osceola Polk Line Road and on both sides of I-4 just north of the SR 429 interchange has been converted to improved pasture.

Unimproved Pasture (2120) – This category of land use consists of cleared land with major stands of trees and brush where native grasses have been allowed to grow and is typically not managed with brush control or fertilizer application. A large swath of land along Old Lake Wilson Road to the north of I-4 and an area just north of the Osceola Parkway to the east of I-4 have been converted into unimproved pasture.

Woodland Pastures (2130) – This category of land use consists of forest lands which are used as pastures. An area of land to the north of the SR 429 interchange was identified as woodland pasture.

Abandoned Groves (2240) – This category of land use consists of citrus groves which are no longer being actively used. This land use was observed to the northeast of the Champions Gate Boulevard/Osceola Polk Line Road interchange, along Old Lake Wilson Road, and along Palm Parkway to the west of I-4.

Herbaceous- Dry Prairie (3100) – This land use consists of open, dry treeless areas containing grasses, forbs, sedges, rushes and other herbaceous vegetation. This habitat was observed along the northwest corner ramps of the US 192 interchange and several other small isolated patches throughout the project corridor. This land use may also be used to describe some areas surrounding reservoirs in this project corridor.

Shrub and Brushland (3200) – This land use consists of primarily shrubs and brush species. A few small patches of this land use were observed along the project corridor, primarily around the World Drive interchange and along Palm Parkway.

Mixed Upland Non-forested (3300) – This land use is described as not being dominated by any species and may be comprised of multiple species. It was observed in small patches to the west of I-4 south of Central Florida Parkway and just west of Palm Parkway.

Upland Coniferous Forests (4100) – This land use consists of any natural forest stand whose canopy is at least 66 percent dominated by coniferous species. including natural pine flatwoods. It was observed along portions of the World Drive interchange and several small isolated patches along the project corridor.

Sand Pine (4130) – This land use consists of upland forest communities dominated by sand pine. It was observed in one small strip between Palm Parkway and I-4.

Hardwood-Conifer Mixed (4340) – Vegetation within this land use consists of oaks, pine, and other species with no clear canopy dominance between hardwoods and conifers. This land use was observed along the eastern side of I-4 north of the SR 429 interchange, southwest of the Osceola Parkway interchange, and several small isolated patches along the project corridor.

Streams and Waterways (5100) – This land use designates rivers, creeks, canals, and other linear water bodies. Reedy Creek passes under I-4 between the interchanges at SR 429 and World Drive. Bonnet Creek, which is highly channelized in this portion of its course, passes under I-4 at the Osceola Parkway interchange.

Lakes (5200) – This land use designates inland water bodies which are not classified as reservoirs. Lake Willis is a moderate sized lake that borders the right-of-way to the east of I-4 between the interchanges at SR 535 and the Central Florida Parkway. Several other named lakes, including Little Lake Bryan, Lake Ruby and Big Sand Lake are located along the project corridor.

Reservoirs (5300) – This land use designates all retention ponds and other artificial impoundments used for irrigation and flood control. Numerous reservoirs were observed along the project corridor, primarily in urban areas and within interchanges. Several reservoirs are located within the median, just south of the SR 417 interchange.

Mixed Wetland Hardwoods (6170) – This land use is reserved for those wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill-defined mixture of species. This habitat type was primarily observed within the Reedy Creek basin between the interchanges at SR 429 and World Drive and surrounding Little Lake Bryan. Other small isolated patches of this land use were observed primarily in the southern portion of the project corridor.

Wetland Coniferous Forests (6200) – This land use is defined as wetlands which meet the crown closure requirements for coniferous forests that are a result of natural generation. Several areas along the floodplain of Bonnet Creek were identified as meeting the definition of this land use.

Cypress (6210) – Dominant vegetation consists of cypress and was observed in low areas bordering Reedy Creek and other small isolated patches near the interchange with World Drive.

Wetland Forested Mixed (6300) – This land use is defined as mixed wetlands forest communities in which neither hardwoods or conifers achieve a 66 percent dominance of the crown canopy composition. This habitat type was observed to the northeast of the Old Lake Wilson Road overpass and several small areas along Celebration Boulevard.

Freshwater Marsh (6410) – This land use is defined as vegetated non-forested wetlands which are usually found in low-lying areas or depressions in the landscape. Small isolated patches of this habitat type occur in several areas near the lakes along the project corridor.

Emergent Aquatic Vegetation (6440) – This land use is defined as being wetland areas where floating vegetation and vegetation which is found either partially or completely above the surface. Several patches of this habitat type were observed along the project corridor, usually near or adjacent to waterways.

Roads and Highways (8140) – This land use designates all major and minor roads throughout the project corridor.

Communications (8200) – This land use designates all communications structures. A Cell Phone Tower is located along International Drive near the Epcot Center Drive/World Center Drive interchange.

Electrical Power Facilities (8310) – This land use designates power plants and substations, including the TECO - Disney substation along the right-of-way at the World Drive interchange.

Electrical Power Transmission Lines (8320) – There are electrical power transmission lines that cross the right-of-way several times and run along I-4 from the vicinity of the SR 429 interchange to the US 192 interchange.

5.2 Site Observations

Detailed field reviews were conducted within the I-4 right-of-way and the proposed pond sites to determine if illicit dumping had occurred. The existing and proposed pond sites were reviewed to determine if any adjacent properties had caused contamination impacts to those sites. Site reconnaissance of properties within and adjacent to the corridor up to 0.5 miles away were inspected and photographed.

The existing unpaved right-of-way within the project corridor consists primarily of areas of maintained grass. The right-of-way is lined with intermittent patches of landscaped vegetation, as well as other smaller areas of natural vegetation. Some forested areas occur within the interchanges at Epcot Center Drive/World Center Drive, SR 535, and SR 528, but these are not connected to systems outside of the right-of-way.

The project is developing alternatives for the proposed expansion, all of which will be assumed to impact the existing right-of-way in its entirety. In order to achieve the goals of the project (expansion to 6 general use lanes plus 4 express lanes), the designers must utilize as much of the existing right-of-way as possible, though the potential for the need to acquire minimal amounts of additional right-of-way for the improvements remains. New right-of-way for pond sites will be required as the existing right-of-way does not contain sufficient areas to provide the necessary treatment and retention, along with the capacity expansions. The project right-of-way is depicted on the Land Use and Habitat Coverage maps (see **Figure A**, in **Appendix A**).

Eighty nine (89) potential stormwater management facilities were evaluated for this segment with all but two (FPC 103B and Pond 136A) being recommended for use. The proposed and existing pond sites are depicted on the Land Use and Habitat Coverage maps (see **Figure A**, in **Appendix A**). A contamination potential rating for each pond site within the proposed project limits is given in the description below and listed in **Table 2** (**Section 8.0**) using the same system for ranking other contamination sites as described in the preceding methodology.

Pond Site FPC 100

Pond Site FPC 100 is located to the west of I-4, south of the Champions Gate interchange, north of Ronald Reagan Parkway. This is a proposed new floodplain compensation pond. The existing site is an active cattle pasture with fallow citrus trees, some scrub live oak and some cabbage palm, with prickly pear, beauty berry, Bahia grass, and various weedy herbaceous species. A sealed well casing, small piles of used tires and concrete and small pieces of sheet metal were observed at the site, but no evidence of contamination from these items was observed. The presence of fallow citrus indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from the agricultural pesticide ethylene dibromide (EDB), but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on the presence of fallow citrus trees and the potential for EDB use in past citrus production.

Pond Site 100

Pond Site 100 is located to the east of I-4, just north of the Ronald Reagan Parkway overpass. The existing pond is about half open water and half cattails and is surrounded by primrose, maidencane, torpedo grass, salt bush, and wax myrtle. The banks are primarily composed of mowed Bahia grass and some cogon grass. The area just north of the pond is forested with red maple, cabbage palm, wax myrtle, salt bush. Some discarded concrete and metal were observed in the parcel directly south of the pond site, but no debris was observed in the proposed boundary of the pond. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 101A

Pond Site FPC 101A is located to the east of I-4, southeast of the Osceola Polk Line Road/Champions Gate Boulevard. This is a proposed new floodplain compensation pond. The existing site is an active cattle pasture comprised primarily of a few scattered fallow citrus trees, some scrub live oak and some cabbage palm, with prickly pear, lantana, blue lupine, Bahia grass, and various weedy herbaceous species. The southern portion of the proposed site is a wetland comprised primarily of laurel oak, slash pine, sweet bay, and cypress. Several scattered piles of debris were observed along the boundary of the wetland, consisting of various pieces of plastic, glass, lumber, or metal. Other similar piles of debris which included electrical components and paint cans were observed slightly to the east of the proposed site. The presence of fallow citrus indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from the agricultural pesticide EDB, but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on the presence of fallow citrus trees and the potential for EDB use in past citrus production.

Pond Site 101A

Pond Site 101A is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the southwest quadrant. This is an existing pond that is proposed to be reconfigured. The pond site is primarily maintained open water with a fountain in the middle and St. Augustine grass around the banks. Some cabbage palm, red maple, salt bush, wax myrtle, and elderberry are present along the east side of the proposed pond site. An FDOT diesel powered emergency generator is located to the northeast of the pond (Site #3), but no obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 101B

Pond Site 101B is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the southwest quadrant. This is a proposed new pond site. The pond site is primarily mowed St. Augustine grass with a few planted cabbage palms. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 101C

Pond Site 101C is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the northwest quadrant. This is a proposed new pond site. The pond site is primarily mowed St. Augustine grass with a few planted cabbage palms. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 101D

Pond Site 101D is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the northwest quadrant. This is an existing pond that is proposed to be reconfigured. The pond site is primarily maintained open water with a fountain and St. Augustine grass with some planted cabbage palms on the banks. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 101E

Pond Site 101E is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the southeast quadrant. This is a proposed new pond site. The pond site is primarily mowed Bahia grass with portions of compacted milled asphalt. The existing ramp from I-4 eastbound to Osceola Polk Line Road/Champions Gate Boulevard is located within the footprint of this proposed pond site. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 101F

Pond Site 101F is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the southeast quadrant. This is a proposed new pond site. The pond site is primarily mowed Bahia grass. A portion of the existing ramp from I-4 eastbound to eastbound Osceola Polk Line Road/Champions Gate Boulevard is located within the footprint of this proposed pond site. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 101G

Pond Site 101G is located within the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange in the northeast quadrant. This is a proposed new pond site. The pond site is primarily mowed Bahia grass with portions of compacted milled asphalt. The existing ramp from Osceola Polk Line Road/Champions Gate Boulevard to eastbound I-4 is located within the footprint of this proposed pond site. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 102

Pond Site 102 is located to the east of the roadway, just north of the Osceola Polk Line Road/Champions Gate Boulevard and I-4 interchange. This is an existing pond and no modifications or expansions are proposed. The pond site is primarily open water with mixed submerged aquatic vegetation. A mix of cattails, Carolina willow, arrowhead, pickerel weed, and wax myrtle are present along the edges, and the banks are composed of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site, but the pond is located just to the northwest of the Austin Outdoor maintenance facility (Site #4). There are no records of any discharges or violations for the maintenance facility, but a site visit noted a potential for contamination to be present, especially around the maintenance pavilion. This pond site was given a **LOW RISK** rating due to there being no signs of contamination at the pond site and there being no recorded spills or violations at the Austin Outdoor maintenance facility.

Pond Site FPC 102

Pond Site FPC 102 is located east of I-4, along Kemp Road. This is a proposed new floodplain compensation pond. The site is entirely wooded with a mix of slash pine, red maple, sweet gum, laurel oak, and cabbage palm. This site is located next to the Austin Outdoor, Reunion Development Parcel (Site #4), which has several identified contamination issues. Although the identified contamination was not located in the vicinity of this proposed floodplain compensation pond, Site #4 was ranked as high risk, and the exact extent of the contamination is not known at this time. Therefore, this pond site was given a **MEDIUM RISK** rating.

Pond Site 103

Pond Site 103 is located to the west of I-4, between Osceola Polk Line Road/Champions Gate Boulevard and SR 429. This is an existing pond and no modifications or expansions are proposed. The pond site is primarily open water with cattails and torpedo grass almost completely lining the pond out about twenty feet. Primrose, elderberry, wax myrtle, salt bush, Carolina willow, and red maple are present along the edges, and the banks are composed of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 103A (Recommended)

Pond Site FPC 103A is located east of I-4, just south of the Tradition Boulevard overpass in Reunion Resort (Site #8) and Davenport Creek within the Austin Outdoor, Reunion Development Parcel (Site #4), which has several identified contamination issues. This is a proposed new floodplain compensation pond. The site is split by an unnamed dirt road running south to north. Both proposed basins are entirely open field with a mix of grasses and weedy herbaceous species. Reunion Resort was identified as a potential contamination site based on the historic land use of the property for citrus production. Some wood, plastic, and other household debris was observed at the site, but no known contamination was identified at the proposed FPC 103A site and the site is not within the delineated boundary of Groundwater Contamination Plume #49263268 (Site #9). Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 103B (Alternate to FPC 103A, Not Recommended)

Pond Site FPC 103B is located east of I-4, within Reunion Resort (Site #8) to the southwest of the intersection of Spine Road and Whisper Way. This is a proposed new floodplain compensation pond. The pond site is primarily mowed Bahia grass with portions of compacted milled asphalt. Reunion Resort was identified as a potential contamination site based on the historic land use of the property for citrus production but the proposed pond site FPC 103B is not within the delineated boundary of Groundwater Contamination Plume #49263268 (Site #9). Some small piles of metal and concrete were observed at the southern end of the site, and numerous piles of landscaping debris were observed along the western edge of the site. No obvious signs of contamination were observed in relation to the observed debris piles. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 104

Pond Site 104 is located along southbound SR 429, just north of the interchange with I-4. This is an existing pond and no modifications or expansions are proposed. The pond is about half open water and half covered with cattails. It is surrounded by primrose, Carolina willow, wax myrtle, red maple, and salt bush, with mowed Bahia grass and planted sweet gum on the banks. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 105A

Pond Site FPC 105A is located south of the interchange of SR 429 with Sinclair Road. This is a proposed new floodplain compensation pond. The majority of the site has a moderately open canopy which consists of thinned planted pine with a few clusters of oaks. This part of the site has an understory and ground cover which consist primarily of lupine and prickly pear cactus with large patches of Cogon grass and some gopher apple, grape vine, passion flower, wiregrass, and Bahia grass. The southeastern portion of the site is densely wooded with scrub live oak with saw palmetto, pawpaw, lyonia, and grape vine. Areas of open sand free of canopy with minimal ground vegetation are present along an abandoned vehicular trail between the planted pine and scrub oak areas, as well as along the southern edge of the site. A thick layer of duff and/or heavy growth of roots are present in the northern portion of the site, isolated clusters of young oaks within the pines, and within the dense scrub live oak area. Some discarded metal, plastic, and lumber was observed at the site, but none of the debris appeared to be a source of contamination. The presence of fallow citrus nearby and historic aerial photography showing the site as a grove indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from the agricultural pesticide EDB, but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on its history as a citrus grove and the potential for EDB use in past citrus production.

Pond Site 105A

Pond Site 105A is located within the SR 429 and I-4 interchange in the southwest quadrant. This is an existing pond that is proposed to be regraded. The pond site is almost completely covered with cattails and has Carolina willow and saltbush with planted cypress and red maple around its edges. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 105B

Pond Site 105B is located within the SR 429 and I-4 interchange in the northwest quadrant. This is an existing pond that is proposed to be reduced and regraded. The pond site is completely dominated by cattails and has very little open water. Carolina willow, saltbush, planted cypress and red maple with cordgrass and mowed Bahia grass around its edges. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 106A

Pond Site 106A is located within the SR 429 and I-4 interchange in the southeast quadrant. This is an existing pond that is proposed to be reduced and regraded. The pond site is almost completely covered with cattails and has Carolina willow, saltbush, and planted cypress and red maple around its edges. No obvious signs of contamination were observed in the field for this site, but this pond site is within the delineated area of Groundwater Contamination Plume #49263268 (Site #9), which is a known contamination plume from the agricultural pesticide EDB. Therefore, this pond site was given a **MEDIUM RISK** rating.

Pond Site 106B

Pond Site 106B is located to the east of the I-4 eastbound onramp to SR 429. This is an existing pond that is proposed to be reduced and regraded. The pond site has some open water with mixed submerged aquatic vegetation. The perimeter of the pond is primarily composed of cattails, Carolina willow, and torpedo grass with mowed Bahia grass and planted cypress and red maple around the banks. No obvious signs of contamination were observed in the field for this site, but this pond site is within the delineated area of Groundwater Contamination Plume #49263268 (Site #9), which is a known contamination plume from the agricultural pesticide EDB. Therefore, this pond site was given a **MEDIUM RISK** rating.

Pond Site 107

Pond Site 107 is located to the east of the SR 429 ramp to eastbound I-4. This is an existing pond and no modifications or expansions are proposed. The pond site is dominated by cattails with very little open water. The perimeter of the pond is primarily composed of cattails, Carolina willow, saltbush and dog fennel with mowed Bahia grass and planted cypress and red maple around the banks. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 108A

Pond Site 108A is located within the SR 429 and I-4 interchange in the northeast quadrant. This is an existing pond that is proposed to be expanded and regraded. The pond site is primarily composed of cattails, with Carolina willow, wax myrtle, saltbush, planted cypress and red maple around its edges. The banks are primarily comprised of mowed Bahia grass. The gas pipeline for the Florida Gas Transmission Company (Site #10) is located near this pond, but no obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 108B

Pond Site 108B is located to the east of the ramp from southbound SR 429 to eastbound I-4. This is a proposed new pond site. The existing site is primarily composed of live oak, slash pine, red maple, cabbage palm, and saw palmetto with some persimmon, sand pine, beauty berry, salt bush, and Carolina willow. The Florida Gas Transmission Company (Site #10) and a cell tower with diesel powered emergency generators (Site #11) are located to the south of this pond, but no obvious signs of contamination were observed in the field for these sites or the proposed pond. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 109

Pond Site 109 is located to the west of the roadway, just north of the Old Lake Wilson Road overpass. This is an existing pond that is proposed to be expanded and regraded. The pond is mostly open water with mixed submerged aquatic vegetation. The pond is surrounded by cattails and torpedo grass with some salt bush, wax myrtle, primrose, cogon grass and broomsedge with mowed Bahia grass on the banks and berms. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 109

Pond Site FPC 109 is located to the east of I-4, between the SR 429 and World Drive interchanges. This is an existing borrow pit that is proposed to be a floodplain compensation pond. The pond is mostly open water surrounded by some cattails, torpedo grass, and sawgrass. The wooded area around the pond is primarily composed of slash pine, sweet bay, laurel oak, red maple, and saw palmetto. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 110

Pond Site 110 is located to the west of I-4, southwest of the I-4 and World Drive interchange. This is an existing pond that is proposed to be expanded. The pond is mostly open water surrounded by cattails and torpedo grass with some patches of arrowhead and maidencane. The banks are overgrown with a mix of slash pine, salt bush, wax myrtle, laurel oak, and red maple with patches of cogon grass and Carolina willow. Two empty plastic drums were observed along a service trail just north of the existing pond, but no signs of a release of contamination from the drums were observed. This site is located directly west of TECO Substation #2360 (Site #17), but no reports of any contamination discharges associated with this site

were found. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 111

Pond Site 111 is located to the east of I-4, just south of the southern terminus of Celebration Boulevard. This is an existing pond with no proposed alterations or modifications. The pond site consists of open water surrounded by a mix of torpedo grass, cattails, and sedges, with some patches of Carolina willow, primrose, and wax myrtle. The banks are overgrown with a mix of salt bush, wax myrtle, red maple, cogon grass, and caesar weed. Bahia grass dominates the upper banks surrounding the pond. This site is directly south of the Preserve at Celebration (Site #15), where two small temporary ASTs were observed at the construction site in close proximity to the pond site. No reports of any contamination discharges are associated with this site and no obvious signs of contamination were observed in the field. This pond site is also located to the east of the approximate location of the Patco Montgomery Spill Site (Site #16). The petroleum product that was discharged at the spill site was cleaned up, but the site is still listed as active because source removal documentation was never properly submitted. No visible signs of contamination were observed at the approximate site of the spill or at the pond site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 112A

Pond Site 112A is located within the I-4 and World Drive interchange, in the southwest quadrant, just south of Pond Site 112B. This is an existing pond that is proposed to be regraded. The pond site consists of open water that is surrounded by torpedo grass and arrowhead with some patches of cattails, wax myrtle, primrose, and thalia. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 112B

Pond Site 112B is located within the I-4 and World Drive interchange, in the southwest quadrant, within the ramp from westbound I-4 to southbound World Drive. This is an existing pond that is proposed to be regraded. The pond site consists of open water that is surrounded by torpedo grass and arrowhead with some patches of salt bush, wax myrtle, and Carolina willow. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 112C

Pond Site 112C is located within the I-4 and World Drive interchange, in the World Drive median to the west of I-4. This is an existing pond that is proposed to be regraded. The pond site consists of open water that is surrounded by torpedo grass and arrowhead, with some patches of cattails and primrose. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 112D

Pond Site 112D is located within the I-4 and World Drive interchange, in the northwest quadrant. This is an existing pond that is proposed to be regraded. The pond site consists of open water with a mix of submerged aquatic vegetation. The pond is surrounded by a mix of cattails, Carolina willow, primrose and arrowhead, with some torpedo grass, cogon grass, wax myrtle, and salt bush. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 112E

Pond Site 112E is located within the I-4 and World Drive interchange, in the southwest quadrant, just west of Pond Site 112B. This is an existing pond that is proposed to be regraded. The pond site consists of open water that is mostly surrounded by torpedo grass and arrowhead with some Carolina willow, primrose, wax myrtle, and salt bush. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113A

Pond Site 113A is located within the I-4 and World Drive interchange, in the southeast quadrant. This is an existing pond that is proposed to be regraded. The pond site consists of open water with a mix of submerged aquatic vegetation. The pond is surrounded by a mix of torpedo grass, primrose, and arrowhead. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113B

Pond Site 113B is located within the I-4 and World Drive interchange, in the World Drive median east of I-4. This is an existing pond that is proposed to be regraded. The pond site consists of open water with a mix of submerged aquatic vegetation. The pond is surrounded by a mix of torpedo grass, cattails, and arrowhead, with some patches of Carolina willow. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113C

Pond Site 113C is located within the I-4 and World Drive interchange, within the ramp from eastbound I-4 to northbound World Drive. This is an existing pond that is proposed to be regraded. The pond site consists of open water with heavy growth of hydrilla. The pond is surrounded by a mix of torpedo grass and arrowhead, with some patches of primrose and wax myrtle. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113D

Pond Site 113D is located within the I-4 and World Drive interchange, in the northeast quadrant, just north of Pond Site 113C. This is an existing pond that is proposed to be regraded. The pond site consists of open water with a mix of submerged aquatic vegetation. The pond is surrounded by a mix of torpedo grass, cattails, and arrowhead, with some patches of Carolina willow and wax myrtle. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113E

Pond Site 113E is located within the I-4 and World Drive interchange, in the northeast quadrant between Pond Sites 113C and 113G. This is a proposed new pond. The current site consists entirely of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113F

Pond Site 113F is located within the I-4 and World Drive interchange, in the World Drive median to the east of I-4 and east of the eastbound on-ramp to I-4 from southbound World Drive. This is a proposed new pond. The current site consists entirely of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 113G

Pond Site 113G is located within the I-4 and World Drive interchange, between the eastbound on-ramps to I-4 from World Drive. This is an existing pond that is proposed to be regraded. The pond site consists of open water surrounded by torpedo grass with some arrowhead, primrose, cattails, and Carolina willow. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 114A

Pond Site 114A is located to the west of I-4 between the interchanges at World Drive and SR 417. This is an existing pond with no proposed modifications or alterations. The pond is dominated by white water lily with very little open water. Cattails and torpedo grass completely surround the pond with some arrowhead, slash pine, and wax myrtle present along the edges. The banks mostly consist of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 114B

Pond Site 114B is located to the west of I-4 between the interchanges at World Drive and SR 417. This is an existing pond and no modifications or expansions are proposed. The pond site consists of open water with some patches of white water lily and is completely surrounded by cattails. Some torpedo grass, arrowhead, and sedge are present along the edges and the banks consist of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 114A

Pond Site FPC 114A is located to the west of I-4 between the interchanges at World Drive and SR 417. This is an existing floodplain compensation pond and no modifications or expansions are proposed. The existing floodplain compensation pond is almost completely covered by white water lily. The edges of the pond primarily consist of small patches of sedge, cattail, torpedo grass, wax myrtle and slash pine. The banks of the pond are comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 114B

Pond Site FPC 114B is located to the west of I-4 between the interchanges at World Drive and SR 417. This is an existing floodplain compensation pond and no modifications or expansions are proposed. The pond consists of open water with dense patches of white water lily. The edges of the pond primarily consist of torpedo grass with some patches of pickerel weed. The banks are comprised of mowed Bahia grass with some wax myrtle and slash pine. This pond site is partially located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 114C

Pond Site FPC 114C is located to the west of I-4 between the interchanges at World Drive and SR 417. This is a proposed new floodplain compensation pond. The majority of the proposed site is open pasture, but also includes a small area of cypress wetland in the southwest corner. The open pasture is primarily composed of mixed grasses and weedy herbaceous species with slash pine, longleaf pine and saw palmetto, with some red maple, Dahoon holly, sweet gum, jessamine, and wild grape vine. The cypress area of the proposed expansion area is primarily comprised of bald cypress, red maple, sweet bay, and wax myrtle. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 115

Pond Site 115 is located east of I-4, east of Celebration Boulevard. This is an existing pond and no modifications or expansions are proposed. The pond site consists of open water that is completely covered with duckweed and water fern with large floating patches of cattail, primrose, and sedges. The banks consist of a mix of Carolina willow, red maple, sweet gum, slash pine, wax myrtle, and mixed herbaceous species. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 116

Pond Site 116 is located west of I-4, between the interchanges at World Drive and SR 417. This is a fenced existing pond and no modifications or expansions are proposed. The pond consists of open water with mixed submerged aquatic vegetation and is surrounded by dense growths of cattails. The edges of the pond are overgrown and are comprised of a mix of wax myrtle, red maple, salt bush, and elderberry with heavy growth of cogon grass along the banks. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 117

Pond Site 117 is located within the interchange of I-4 and SR 417, just east of I-4. This is an existing pond and no modifications or expansions are proposed. The pond consists of open water with mixed submerged aquatic vegetation. The edges of the pond primarily consist of mowed Bahia grass, with small patches of torpedo grass, arrowhead, southern water grass, wax myrtle, and elderberry. No obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 118

Pond Site 118 is located within the interchange of I-4 and SR 417, just west of I-4. This is a fenced existing pond that is proposed to be reduced and regraded. The pond consists of open water with mixed submerged aquatic vegetation. The edges of the pond primarily consist of torpedo grass and arrowhead with a mix of cogon grass, Bahia grass and broomsedge along the banks. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 119A

Pond Site 119A is located to the west of I-4 and SR 417 interchange. This is an existing pond and no modifications or expansions are proposed. The pond consists of open water with mixed submerged aquatic vegetation. The edges of the pond primarily consist of cattails, with patches of torpedo grass, southern water grass, arrowhead, and rattlebox. The banks are comprised of mowed Bahia grass with some wax myrtle. This pond site is located within a designated brownfield (West 192

Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 119B

Pond Site 119B is located to the northwest of I-4 and SR 417 interchange. This is an existing pond and no modifications or expansions are proposed. The pond consists of floating mats of sedge and cattail with very little open water. The edges of the pond consist of heavy growth of cattails with some pickerel weed, arrowhead, and bacopa. The banks are primarily comprised of mowed Bahia grass with some rattlebox and rush. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 120

Pond Site 120 is located within the interchange of I-4 and SR 417, just east of I-4. This is a fenced existing pond that is proposed to be reconfigured. The pond is dominated by bulrush with very little open water and is surrounded by arrowhead with some patches of Carolina willow, cattails, pickerel weed, cordgrass, and bacopa. The banks of the pond primarily consist of Bahia grass and cogon grass, with some salt bush and wax myrtle. No obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 121A

Pond Site 121A is located within the interchange of I-4 and US 192, in the southwest quadrant to the west of Pond 121B. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails and torpedo grass with some patches of primrose, arrowhead, and Carolina willow. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 121B

Pond Site 121B is located within the interchange of I-4 and US 192, within the westbound ramp from I-4 to eastbound US 192. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails with some torpedo grass and primrose. The banks are primarily comprised of mowed Bahia grass. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 122A

Pond Site 122A is located within the interchange of I-4 and US 192, within the eastbound ramps from I-4 to US 192. This is a proposed new pond. The pond site consists entirely of mowed Bahia grass. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 122B

Pond Site 122B is located within the interchange of I-4 and US 192, just east of I-4 and south of US 192. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails with some patches of sedge, white water lily and salt bush. The banks are primarily comprised of mowed Bahia grass. This pond site is located within a

designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 122C

Pond Site 122C is located within the interchange of I-4 and US 192, along the eastbound ramp from I-4 to eastbound US 192, just south of US 192. This is a proposed new pond. The current site consists of mowed Bahia grass with several swales that have a mix of arrowhead, torpedo grass, cattails, and primrose. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 123

Pond Site 123 is located within the interchange of I-4 and US 192, west of I-4 and just north of US 192. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails and torpedo grass with some patches of primrose, arrowhead, and cogon grass, and mowed Bahia grass on the banks. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 124

Pond Site 124 is located within the interchange of I-4 and US 192, between the westbound ramps from I-4 to US 192. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails and torpedo grass with some patches of primrose, arrowhead and cogon grass, with mowed Bahia grass on the banks. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 125

Pond Site 125 is located within the interchange of I-4 and US 192, within the eastbound ramp from I-4 to westbound US 192. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails with patches of phragmites, torpedo grass, Carolina willow, cogon grass, primrose, wax myrtle, and salt bush. The banks are primarily comprised of mowed Bahia grass. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 126

Pond Site 126 is located within the interchange of I-4 and US 192, just to the north of the eastbound ramp from I-4 to westbound US 192, east of I-4. This is an existing pond that is proposed to be regraded. The pond consists of open water surrounded by cattails with patches of torpedo grass, Carolina willow, wax myrtle, and salt bush. The banks are primarily comprised of mowed Bahia grass. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 127

Pond Site 127 is located southwest of the westbound on-ramp from Osceola Parkway to I-4. This is an existing pond and no modifications or expansions are proposed. The pond consists of open water with heavy growth of hydrilla. The edges of the pond are surrounded by torpedo grass with sparse patches of cattails, arrowhead, and rattlebox, with mowed Bahia grass on the banks. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 128A

Pond Site 128A is located within the Osceola Parkway and I-4 interchange between Pond Sites 127 and 128B. This is an existing pond that is proposed to be regraded. The pond consists of open water with a heavy growth of hydrilla that is surrounded by torpedo grass and alligator weed and sparse patches of cattails and spatterdock. The banks primarily consist of mowed Bahia grass. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 128B

Pond Site 128B is located within the Osceola Parkway and I-4 interchange along the westbound ramp from I-4 to eastbound Osceola Parkway. This is an existing pond and no modifications or expansions are proposed. The pond consists of open water with patches of white water lily and is surrounded by torpedo grass and patches of pickerel weed. The banks primarily consist of mowed Bahia grass with some patches of planted cypress. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 129

Pond Site 129 is located northwest of the westbound ramp from I-4 to Osceola Parkway. This is an existing pond and no modifications or expansions are proposed. The pond consists of open water with dense patches of white water lily. The edges of the pond are comprised of a mix of cattails, primrose, and salt bush with some patches of wax myrtle, and mowed Bahia grass on the banks. This pond site is located to the south of the Waldorf Astoria Golf Club (Site #35), but no known contamination issues were found for the facility. This pond site is located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 130

Pond Site 130 is located within the Osceola Parkway and I-4 interchange in the northeast quadrant. This is an existing pond which is proposed to be reduced in size and partially regraded. The pond is mostly open water with heavy growth of hydrilla and patches of white water lily. The edges of the pond are comprised of cattails, Carolina willow and primrose, with planted cabbage palm and cypress. The banks are primarily comprised of mowed Bahia grass. This pond site is partially located within a designated brownfield (West 192 Development Authority Area, Site #22), but no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 130A

Pond Site 130A is located west of I-4, just north of the Osceola Parkway interchange. This is a proposed new pond site, which is currently a channelized portion of Bonnet Creek. The creek is mostly open water with some primrose and torpedo grass along the edges. The banks are primarily comprised of mowed Bahia grass. No obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 131A

Pond Site 131A is located within the braided ramps of westbound I-4, to the south of the SR 536 and I-4 interchange. This is an existing pond that is proposed to be reconfigured. The pond is mostly open water with heavy growth of hydrilla and is surrounded by thick growth of torpedo grass and cattails with some pickerel weed, arrowhead, and planted cypress. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 131B

Pond Site 131B is located to the east of the right-of-way, just south of the SR 536 and I-4 interchange. This is an existing pond that is proposed to be reconfigured. The borrow pit is mostly open water surrounded by cattails, torpedo grass, slash pine, longleaf pine, saw palmetto, beauty berry, wax myrtle, and red maple. The portions that are proposed for expansion are primarily slash pine and longleaf pine with saw palmetto and some red bay and cypress. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 132

Pond Site FPC 132 is located within the braided ramps of westbound I-4, just south of the SR 536 and I-4 interchange. This is a proposed new floodplain compensation pond. The existing site is mostly wetland with a mix of slash pine, pond pine, red maple, cypress, wax myrtle, primrose, and Carolina willow. Mowed Bahia grass is located along the ramp to the southwest of the forested area. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 132

Pond Site 132 is located within the SR 536 and I-4 interchange in the southwest quadrant. This is a proposed new pond site. The existing site is forested with a mix of slash pine, long leaf pine, pond pine, red maple, and red bay with an understory dominated by saw palmetto and some elderberry, wax myrtle, and various species of vines and ferns. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 133

Pond Site FPC 133 is located within the braided ramps of eastbound I-4, just south of the SR 536 and I-4 interchange. This is a proposed new floodplain compensation pond. The existing site is mostly wetland with heavy growth of Brazilian pepper and some red maple, cabbage palm, slash pine, pond pine, saw palmetto, red bay, and salt bush with patches of wild taro, blackberry, and various species of ferns. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 133

Pond Site 133 is located within the SR 536 and I-4 interchange in the southeast quadrant. This is a proposed new pond. The existing site is forested with a mix of slash pine, long leaf pine, and red maple with an understory dominated by saw palmetto

with some gallberry, St. John's wort, red root, salt bush, wax myrtle, and wild grape. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 134

Pond Site 134 is located within the SR 536 and I-4 interchange in the northwest quadrant. This is a proposed new pond site. The existing site is forested with a mix of pond pine and slash pine, with some red maple, red bay, sweet bay, and wax myrtle. The understory is dominated by saw palmetto with some Brazilian pepper, Chinese tallow, cogon grass, Carolina willow, and elderberry. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 135

Pond Site 135 is located within the SR 536 and I-4 interchange in the northeast quadrant. This is a proposed new pond site. The existing site is forested with a mix of slash pine, pond pine, red maple, and red bay with an understory dominated by saw palmetto and some gallberry, St. John's wort, red root, Brazilian pepper, salt bush, wax myrtle, and blackberry. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 136A (Alternative to Pond 136B, Not Recommended)

Pond Site 136A is located to the east of the right-of-way, just north of the SR 536 and I-4 interchange. This is a proposed new pond site. The existing site consists of a small pond with some open and forested areas. The pond site is completely covered with duckweed and is surrounded by cattails, primrose, wax myrtle, elderberry, Carolina willow, blackberry, and Brazilian pepper. The upland portion of the site is composed of a mix of cabbage palm, laurel oak, water oak, golden rain tree, and longleaf pine with unmaintained Bahia grass, prickly pear cactus, cogon grass, and various other weedy herbaceous species. This pond site is located on the partially developed Residence Inn by Marriott Parcel (Site #42), which had a registered AST during past construction activities. Although the former location of the AST is unknown, there are no records of any discharges at this site and no obvious signs of contamination were observed in the field. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 136B (Recommended)

Pond Site 136B is located to the east of the right-of-way, to the north of the SR 536 and I-4 interchange. This is a proposed new pond site. The site is mostly forested with some openings which are dominated by cogon grass. The site is composed of a mix of cabbage palm, laurel oak, water oak, golden raintree, and longleaf pine with unmaintained weedy herbaceous species. This pond site is located on the partially developed Residence Inn by Marriott Parcel (Site #42), which had a registered AST during past construction activities. Although the former location of the AST is unknown, there are no records of any discharges at this site. A small structure was discovered at the north end of the proposed pond site. Old paint cans, fire extinguishers, and discarded household debris were observed near this structure, and several drums containing small amounts of an unknown liquid were found nearby. No staining or stressed vegetation was noted in the vicinity of the potential sources of contamination, but due to the potential for contamination to be present at this site, it was given a **MEDIUM RISK** rating.

Pond Site 137

Pond Site 137 is located within the SR 535 and I-4 interchange, east along the ramp from eastbound I-4 to SR 535. This is a proposed new pond site. The existing site is mostly planted pine with Bahia grass and mixed weedy herbaceous species. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 137A

Pond Site 137A is located within the SR 535 and I-4 interchange, at the off-ramp from eastbound I-4 to SR 535. This pond site is proposed to be reconfigured. The existing pond has some open water with a mix of various submerged aquatic vegetation and patches of cattails and white water lily in the middle. The edges of the pond are dominated by cattails and Carolina willow with some primrose, salt bush, and wax myrtle. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 137B

Pond Site 137B is located within the SR 535 and I-4 interchange, at the northwest corner. This is a proposed new pond site. The site is primarily comprised of a mix of was myrtle, Carolina willow, elderberry, cabbage palm, cattail, and primrose. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 138

Pond Site 138 is located west of I-4 in the Crossroads Shopping Plaza, just north of the SR 535 and I-4 interchange. This is one of three proposed new pond sites in the Crossroads Shopping Plaza. The existing area for this pond site includes Red Lobster, Taco Bell, and Johnnie's Hideaway restaurants, as well as an existing pond for the Crossroads Shopping Plaza. The existing pond is mostly open water surrounded by mowed St. Augustine grass with an area of arrowhead, torpedo grass, and button bush. The remaining portion of the site is primarily composed of an asphalt parking lot with landscaped vegetation. No obvious signs of contamination were observed in the field for this site, but there is a potential for contamination to be present at this site. The existing structures have the potential to have asbestos or lead-based paint, and grease traps and sewer systems are located within the proposed area of the pond. Although no records or signs of any discharges or spills were found for this pond site, it was given a **MEDIUM RISK** rating due to the potential for contamination to be present during the demolition and excavation of the current structures and infrastructure.

Pond Site 138A

Pond Site 138A is located west of I-4 in the Crossroads Shopping Plaza, just north of the SR 535 and I-4 interchange. This is one of three proposed new pond sites in the Crossroads Shopping Plaza. The existing area includes McDonalds, Chevys, Buffalo Wild Wings, and The Knife restaurants. The site is primarily composed of an asphalt parking lot with landscaped vegetation. No obvious signs of contamination were observed in the field for this site, but there is a potential for contamination to be present at this site. The existing structures have the potential to have asbestos or lead-based paint and grease traps and sewer systems are located within the proposed area of the pond. Although no records or signs of any discharges or spills were found for this pond site, it was given a **MEDIUM RISK** rating due to the potential for contamination to be present during the demolition and excavation of the current structures and infrastructure.

Pond Site 138B

Pond Site 138B is located west of I-4 in the Crossroads Shopping Plaza, just north of the SR 535 and I-4 interchange. This is one of three proposed new pond sites in the Crossroads Shopping Plaza. The existing area includes the Sweet Tomatoes restaurant, Pirate's Cove Mini Golf, and Gooding's Supermarket (Site #63). The site is primarily composed of an asphalt

parking lot with landscaped vegetation. No obvious signs of contamination were observed in the field for this site, but there is a potential for contamination to be present at this site. The existing structures have the potential to have asbestos or lead-based paint, pool chemicals may be stored at the mini golf course, and grease traps and sewer systems are located within the proposed area of the pond. Although no records or signs of any discharges or spills were found for this pond site, it was given a **MEDIUM RISK** rating due to the potential for contamination to be present during the demolition and excavation of the current structures and infrastructure.

Pond Site FPC 138

Pond Site FPC 138 is located west of I-4, west of South Apopka Vineland Road, behind a row of restaurants. This new pond site is densely vegetated and is mostly comprised of Carolina willow, elderberry, primrose, red maple, and laurel oak. Numerous common household items have been discarded along the eastern edge of this floodplain compensation pond site by the parking lot of the restaurants. However, no debris was observed that would be considered hazardous and no records or signs of any discharges or spills were found for this pond site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 139A

Pond Site 139A is located along the east side of I-4, just south of the Fenton Street overpass. This pond site is proposed to be reconfigured. The pond is mostly open water with some patches of hydrilla and spatterdock. Some cattails, torpedo grass and primrose are present around the edges. The banks of the existing pond are primarily comprised of mowed Bahia grass. An active cattle pasture composed primarily of Bahia grass and prickly pear is located to the east of the existing pond, where expansion is proposed. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 139B

Pond Site 139B is located along the east side of I-4, just north of the Fenton Street overpass. This pond site is proposed to be reconfigured. The pond is mostly open water with some cattails, torpedo grass, Carolina willow and primrose around the edges. The banks of the existing pond are primarily comprised of mowed Bahia grass with some areas of castor bean. An active cattle pasture composed primarily of Bahia grass and prickly pear with some scrub lupine is located to the east of the existing pond, where expansion is proposed. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 140

Pond Site 140 is located along the west side of I-4, just north of the Fenton Street overpass. This pond site is proposed to be reconfigured. The existing pond is mostly open water with some cattails, torpedo grass, Carolina willow and primrose around the edges. The banks are primarily comprised of mowed Bahia grass. The area to the west of the existing pond is mostly scrub live oak with some sand pine, longleaf pine, and saw palmetto. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 141

Pond Site FPC 141 is located east of the right-of-way, north of the Fenton Street overpass at the end of Lake Willis Drive. This is a proposed new floodplain compensation pond. The site is mostly forested and is primarily composed of live oak and saw palmetto which have been densely overgrown by wild grape vines. A residential septic tank appears to be located along the

east end of the proposed pond, but no obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 142B

Pond Site 142B is located west of I-4, to the southwest of the intersection of Palm Parkway and Central Florida Parkway. This is a proposed new pond site. This pond site is comprised of a forested area to the north, a furrowed planted pine area in the middle, and an area of planted citrus to the south. The forested part of the pond site is mostly sand pine that has been densely overgrown with Brazilian pepper and weedy herbaceous species. The middle area has rows of young planted pines in furrows with heavy growth of weedy herbaceous species. The southern area is mostly planted rows of young citrus. No obvious signs of contamination were observed in the field for this site. This site is not located within a delineated area of groundwater contamination from the agricultural pesticide EDB, but the use of the land in the southern portion of the proposed pond site for citrus production may indicate that EDB contamination is present. Therefore, this pond site was given a **MEDIUM RISK** rating.

5.3 Adjacent Properties

A total of eighty six (86) sites or properties within 0.50 miles of the current I-4 right-of-way and proposed pond sites were identified by searches in the FDEP contamination database or by field inspections. **Table 1** lists a site number corresponding with the facility name and location. The sites are numbered on the Contamination Sites maps (see **Figure C**, in **Appendix A**) and pictured in their present condition (**Appendix B**) in order of south to north, west to east.

TABLE 1 – POTENTIAL CONTAMINATION SITES LISTING

Site #	Facility Name	Location
1	Groundwater Contamination Plume #53263274/49263271	Osceola/Polk County Line, Southeast of I-4
2	Circle K #2708968	8200 Champions Gate Blvd.
3	FDOT Diesel Powered Emergency Generator A	Osceola Polk Line Rd. at I-4
4	Austin Outdoor, Reunion Development Parcel	8011 Osceola Polk Line Rd.
5	Publix Super Market Plaza	8300 Champions Gate Blvd.
6	Walgreens #7219	8265 Champions Gate Blvd.
7	7-Eleven Food Store #33249	8201 Champions Gate Blvd.
8	Reunion Resort, formerly Herman J Heidrich & Sons Inc.	7593 Gathering Dr.
9	Groundwater Contamination Plume #49263268	SR 429 and S. Old Lake Wilson Rd.
10	Florida Gas Transmission Company	727 S. Old Lake Wilson Rd. & 710 N. Old Lake Wilson Rd.
11	Cell Tower with Diesel Powered Emergency Generator A	727 S. Old Lake Wilson Rd.
12	Heller Brothers Packing Corporation and Historic Groves	2 Miles South of US 192 on N. Old Lake Wilson Rd.
13	P&D Landfill	945 Old Lake Wilson Rd.
14	Celebration High School	1809 Celebration Blvd.
15	The Preserve at Celebration	Celebration Blvd.

Site #	Facility Name	Location
16	Patco Montgomery Spill Site	I-4 EB @ MM62
17	TECO Substation #2360	I-4 and World Dr.
18	Celebration Boulevard Lift Station #1	1700 Celebration Blvd.
19	Progress Energy Celebration Substation	1400 Celebration Blvd.
20	Disney Vacation Club	1390 Celebration Blvd.
21	Kissimmee City Lift Station #111	Celebration Blvd.
22	West 192 Development Authority Area	US 192
23	Celebration Golf Club	1110 Celebration Blvd.
24	FDOT Diesel Powered Emergency Generator B	I-4 at SR 417
25	Florida Hospital Celebration Health	400 Celebration Pl.
26	Celebration Health Center	410 Celebration Pl.
27	Comcast Cable Communications	575 Celebration Pl.
28	DCL Celebration	210 Celebration Pl.
29	Walt Disney Sports Complex	700 South Victory Way
30	Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center	6376 & 6375 W. Irlo Bronson Hwy.
31	Shops at the Parkway Plaza	2901 Parkway Blvd.
32	Radisson Resort Orlando Celebration	2900 Parkway Blvd.
33	Arabian Nights	3081 Arabian Nights Blvd.
34	Gaylord Palms Resort, including Five Star Laundry Orlando LLC	6000 Osceola Pkwy.
35	Waldorf Astoria Orlando and Hilton Bonnet Creek Resort	14100 & 14200 Bonnet Creek Resort Ln.
36	Cell Tower with Diesel Powered Emergency Generator B	18048 International Dr.
37	Lift Station with Diesel Powered Emergency Generator	14355 Chelonia Pkwy.
38	Marriott Orlando World Center including Marriott Resorts Hospitality Inc. and Hawk's Landing Golf Course	8701 and 8805 World Center Dr.
39	Walt Disney World Office Complex	1375 N. Buena Vista Dr.
40	Walt Disney World Typhoon Lagoon	1800 Buena Vista Dr.
41	Hess #09574, former Exxon RAS #40433	1475 E. Buena Vista Dr.
42	Residence Inn by Marriott Parcel	8800 Meadow Creek Dr.
43	Orange County Utilities Vistana Water Supply Facility	8943 Meadow Creek Dr.
44	Sheraton Vistana Resort	13800 Vistana Dr.
45	Transtar Transportation Group Inc. at Vista Way	8772 Meadow Creek Dr.
46	Walgreens #3460	13502 S. Apopka Vineland Rd.
47	SunTrust Bank	1675 E. Buena Vista Dr.

Site #	Facility Name	Location
48	Hilton in the Walt Disney World Village	1751 Hotel Plaza Blvd.
49	Sunshine Food Mart #185, 535 Auto Care	13480 Apopka Vineland Rd.
50	Limited Transportation LLC	13650 Lake Vining Dr.
51	7-Eleven Food Store #24607	13407 SR 535
52	Buena Vista Palace	1900 Buena Vista Dr.
53	Holiday Inn Lake Buena Vista	1805 Hotel Plaza Blvd.
54	Plantation Park Condominiums listed Businesses	13003 Plantation Park Cir., 13013 Mulberry Park Dr.
55	Wyndham Lake Buena Vista Resort, formerly Sunspree Resort	1850 Hotel Plaza Blvd.
56	Hotel Royal Plaza	1905 Hotel Plaza Blvd.
57	Double Tree Suites by Hilton	2305 Hotel Plaza Blvd.
58	Shell Vineland	8788 Vineland Rd.
59	Sunshine Food Mart #222, 2nd City Chevron, now Mobil	12748 Apopka Vineland Rd.
60	Hyatt Regency Grand Cypress	1 Grand Cypress Blvd.
61	Walt Disney World Little Lake Bryan	Little Lake Bryan Rd.
62	Florida Hospital Centra Care	12500 Apopka Vineland Rd.
63	Gooding's Supermarkets Inc.	12521 Apopka Vineland Rd.
64	Orlando Vista Hotel	12490 Apopka Vineland Rd.
65	E-Cigs, formerly New Vision Enterprises USA	8558 Palm Pkwy.
66	Nice Nails	12367 Apopka Vineland Rd.
67	Circle K # 2709745, formerly Texaco #240250151	12360 Apopka Vineland Rd.
68	7-Eleven Food Store #23429	12298 Apopka Vineland Rd.
69	Publix Super Market #812	8145 Vineland Rd.
70	Bargain World, formerly Johnny's Country Store	12250 Apopka Vineland Rd.
71	Shoppes at Buena Vista Plaza	12131 &12177 Apopka Vineland Rd.
72	Quality Suites	8200 Palm Pkwy.
73	Embassy Suites	8100 Lake St.
74	Blue Seas Associations Citizen Site	Palm Pkwy.
75	Ruby Lake Ranch, Marbella Property	8501 Foxfire Cir.
76	Marriott Grande Pines Golf Course Maintenance Facility	11206 Westwood Blvd.
77	Dr. Phillips Community Park, formerly Orange County Trap and Skeet Club	10625 Smith Bennett Rd.
78	7-Eleven Store #35277	6700 Central Florida Pkwy.
79	CVS Pharmacy #5400	6790 Central Florida Pkwy.
80	Hilton Garden Inn	6850 Westwood Blvd.
81	Renaissance Resort SeaWorld	6677 Sea Harbor Dr.

Site #	Facility Name	Location
82	Places of Learning SeaWorld Orlando Marketing	6825 Academic Dr.
83	SeaWorld Parks and Entertainment Admin Office	6675 Westwood Blvd.
84	SeaWorld of Florida Inc., Florida Festival	6295 Sea Harbor Dr.
85	FDOT Diesel Powered Emergency Generator C	I-4 AT SR 528
86	Groundwater Contamination Plume #48263254	0.35 miles west of I-4 at SR 528

*NOTE: Information regarding these facilities was obtained from the FDEP files and available databases. This information and limited visual inspection of these facilities was used to determine the contamination ratings in **Table 3 (Section 8.0).**

5.4 Regulatory Agency Review

A records review was conducted for any known contamination sites via the FDEP OCULUS electronic database site. Using the FDEP Map Direct database and field verified business names and addresses, available information for each site was reviewed to determine the nature of hazardous material(s) involvement. Records were reviewed for materials manufactured, stored, generated, or transported on the site. Each identified site will be discussed in terms of whether contamination or violations have occurred on the site, the extent of contamination present in the soil and/or groundwater, groundwater direction, and clean-up status of any known contamination issues. Photographs of all potential contamination sites are provided in **Appendix B.** Site diagrams including direction of groundwater flow for sites with known contamination are provided in **Appendix D**, where available. Two sites that were identified on FDEP's Map DIRECT database to be within the 0.50 mile area of interest were found to have been misplaced and should not be included with this review. One of these sites is the Keene Hauling Spill, which is shown to be located approximately 0.50 miles west of the right-of-way along the Polk and Osceola County line. There are no records or documents available for the site, but it is listed as being located at mile 35 of the Beeline Highway (now called the Beachline Expressway), far from the Project area. The other misplaced site is the Walt Disney World Resort Tunnel Site, which is shown to be located along Buena Vista Drive near the SunTrust Bank building, approximately 0.06 miles west of the right-of-way. However, available documents indicate that this site is actually located at the north end of Disney's Magic Kingdom complex, approximately 5.5 miles from the right-of-way.

Site 1 – Groundwater Contamination Plume #53263274/49263271 – The contaminant associated with this plume is the agricultural pesticide ethylene dibromide (EDB), which is typically associated with agricultural citrus production. The separate numbers for this plume are a result of the plume being located in two counties, Polk and Osceola. According to FDEP Map Direct, the contamination plume is not under the current right-of-way (see **Appendix A, Figure C** for location). No other contamination sites besides a portion of Reunion Resort (Site #8) are located in this plume, which is approximately 0.53 miles southeast of the right-of-way at its closest delineated position. This plume is rated **LOW RISK** due to its estimated distance from the right-of-way and there are no proposed portions of the Project within its area. However, caution should be taken if the limits of construction operations include the area of the plume.

Site 2 – Circle K #2708968 (49/9805326) – This UST site is located at 8200 Champions Gate Boulevard. Three 10,000 gallon capacity USTs for unleaded gasoline and one 10,000 gallon capacity UST for diesel fuel was installed at the site in September 2002. A discharge was reported in December 2009, when a spill containment bucket in a fill port was found to have leaked an unknown amount of product to the surrounding soil. The site was given a priority ranking score of 10. Approximately 2 tons of contaminated soil and pea gravel were excavated from the area around the fill port in 2010 and was monitored for natural attenuation. Contamination levels dropped below the target limits, leading to the acceptance of a Site Rehabilitation

Completion Report and No Further Action status in October 2012. Despite its moderate proximity (0.09 miles west) to the right-of-way, this site is rated **LOW RISK** as the discharge that was reported in 2009 has had source removal and was given No Further Action status, and no other discharges have been reported at the site.

Site 3 – FDOT Diesel Powered Emergency Generator A (no FDEP #s found) – No records were found for this site. A diesel powered generator with a small AST is located along Osceola Polk Line Road, to the southwest of I-4, within the interchange. The generator appears to be in good condition with no noticeable signs of contamination. This site is rated as **LOW RISK** due to there being no records of violations or discharges of contamination.

Site 4 – Austin Outdoor, Reunion Development Parcel (no FDEP #s found) – This site is a long and narrow parcel that is situated east of I-4, from south to north adjacent to the right-of-way (see **Appendix B** for Osceola County Property Appraiser site overview). The site includes an abandoned citrus grove, an abandoned house, a landscaping maintenance facility, areas of overgrown pasture, and a large deteriorating concrete and gravel parking area. No records were found for the parcel, which is located at 8011 Osceola Polk Line Road. However, several areas of concern were identified at this parcel.

The Austin Outdoor landscape maintenance facility occupies a portion of the southeast part of the parcel. It is used to service and fuel maintenance equipment and store herbicides and fertilizers. Three ASTs that appeared to be used for fueling small vehicles and equipment were observed to the west of the maintenance pavilion, on a concrete pad. The tanks were labeled as unleaded, diesel, and mixed fuel, and appeared to be placed in large plastic bins for containment. Noticeable staining was observed near the mixed fuel AST, which appeared to have escaped the concrete pad and entered the adjacent soil. However, the discharge does not appear to be very extensive. Used oil filter drums were observed being stored in rusting containers, but a discharge from them was not evident. A chlorine storage tank was also observed west of the maintenance pavilion, which appeared to be in good condition, but had multiple used or open containers scattered near it. Herbicides were being kept inside of a metal locker shed, but no obvious signs of contamination were observed in relation to it. A fertilizer tote was observed next to this shed, which appeared to have staining around its base, but it is unknown if this was a result of rust or a product discharge. Multiple other containers and drums were observed at the site, but appeared to be labeled and in good condition.

An abandoned citrus grove is located along the northeast quadrant of the I-4 and Osceola Polk Line Road interchange and west of the Austin Outdoor maintenance facility. An abandoned house that is being reclaimed by vegetation was observed at the northeast corner of this grove, close to the Austin Outdoor maintenance facility. There is no identified contamination plume of ethylene dibromide (EDB) located here, but historical citrus production at the site could be a potential source of EDB contamination. The age of the abandoned house is unknown, but various pipes and discarded materials were observed in its vicinity. These and other building materials at the house could be a potential source for contamination from asbestos containing materials.

No obvious signs of contamination were observed in the portion of this parcel that is primarily overgrown pasture. However, potential sources of contamination were observed in the concrete and gravel parking area. Based on available information obtained from Austin Outdoor employees, this area was formerly used to park vehicles during golf tournaments at the Reunion Resort Golf Course (Site #8). Two large ASTs and one smaller AST that was labeled “diesel” were discovered, apparently abandoned at this location. It is unknown whether these tanks have any product remaining in them, but one of the tanks had a dispenser handle on the ground. Petroleum odors were noticed in the vicinity of the tanks, but there were no visible stains from a petroleum release. Other discarded materials including chemical spray tanks, tires, concrete rubble, a dumpster with plastic wrap over the cover, and various other discarded plastic waste. A piping system for an unknown use

was observed at the western side of the concrete area. The system does not appear to be in use and is severely rusted, but no obvious signs of contamination were observed in association with this piping system.

This site is comprised of several different potential sources of contamination, spread over a relatively large area that is approximately 0.01 miles east of the right-of-way. Even though there have been no reported discharges or reports of hazardous waste, this site is rated **HIGH RISK** based on the combination of potential petroleum discharges at the Austin Outdoor maintenance facility and at the abandoned ASTs in the concrete parking area, the abandoned citrus grove that could potentially have EDB contamination, and the abandoned house that could potentially be a source of asbestos containing materials.

Site 5 – Publix Super Market Plaza (49/9809952) – This plaza is located at 8300 Champions Gate Boulevard and includes Publix Super Market #770, Diamond Professional Cleaners, and Nails-Tan, which were identified as potential sources of contamination. Publix Super Market #770 uses a 1,000 gallon capacity AST for diesel fuel for an emergency generator. The AST was installed at this site in December 2007 and has not had any reported discharges and is in compliance as of November 2012 without ever being out of compliance. No records were found for the dry cleaning facility Diamond Professional Cleaners, which is listed as a small quantity generator by Osceola County but is not a generator of hazardous waste. No records were found for the retail nail salon Nails-Tan. This site is rated **LOW RISK** due to there being no reports of contamination at the site and its distance (0.29 miles west) from the right-of-way.

Site 6 – Walgreens #7219 (no FDEP #s found) – No records were found for this site, which is located at 8265 Champions Gate Boulevard. Many pharmacies are listed as small quantity generators because of the type of pharmaceuticals they store. This site is rated **LOW RISK** due to there being no records of contamination associated with this site and its distance (0.15 miles west) from the right-of-way.

Site 7 – 7-Eleven Food Store #33249 (49/9807646) – This UST site is located at 8201 Champions Gate Boulevard, approximately 0.09 miles west of the right-of-way. Two USTs totaling 25,000 gallons capacity for unleaded gasoline were installed at the site in September 2005. There have been no reported discharges, incidents, or violations recorded at this site and it was in compliance as of March 2013 without ever being out of compliance. Therefore, this site is rated **LOW RISK**.

Site 8 – Reunion Resort, formerly Herman J Heidrich & Sons Inc. (49/9805464, 49/9100367, 49/9802294) – This large resort and residential complex that also includes the Reunion Resort Golf Course is located at 7593 Gathering Drive. It is the former site of a 2,100 acre citrus property owned and operated by Herman J Heidrich & Sons Inc.. I-4 runs diagonally through this property from the southwest to the northeast. Reunion Resort has two registered 1,000 gallon ASTs that were installed in January 2003 for unleaded gasoline and diesel fuel. No discharges of contamination have been reported from these tanks, and their physical location on the property is approximately 1.44 miles southeast from the right-of-way. The Reunion Resort Golf Course is located on both sides of the right-of-way, but no records of contamination were found in association with it. Several lift stations were observed at the property, but they did not have any associated emergency generators. Illegally discarded household waste and landscaping debris was observed along Whitemarsh Way, but the contents did not appear to include hazardous wastes.

The Herman J Heidrich & Sons Inc. property was a 2,100 acre citrus grove that was listed as being located at 1261 South Old Lake Wilson Road. It included an area that had a single family home for the caretaker and two storage sheds. This area was used for fueling and maintaining farm equipment, and was located approximately where the Reunion Resort Golf Course driving range is located today, approximately 0.50 miles southeast of the right-of-way (see **Appendix D**). The installation

dates are unknown, but in 1990, four 30,000 gallons ASTs and five USTs of various sizes were removed from the site. The tanks had been installed at different times, but it was estimated that they were mostly between 20 and 30 years old. During their removal, several holes in a 1,000 gallon capacity UST for storing diesel fuel was noted and the area around the ASTs was found to contain contaminated soil. The other USTs that were removed appeared to be in satisfactory condition without any signs of leaks. A total of approximately 220 tons of excessively contaminated soil was removed from the area around the location of the leaking UST and the ASTs. Monitoring wells were installed in 1991 and monitored for natural attenuation. Contamination levels dropped significantly, leading to a Site Rehabilitation Completion Order and No Further Action status being accepted in 1995. A storage tank listing of Magnolia Creek East (49/9802294) is also listed at the address for the citrus grove, but no records were available for the entry.

There are no direct records regarding the ethylene dibromide (EDB) plumes #53263274/49263271 and #49263268 (Sites #1 and #9), but it is possible that historical citrus production from this grove was the origin of these plumes that are located partially over where the Reunion Resort is located today. Despite historical land use, a discharge of petroleum contamination from two sources, and portions of the site being directly adjacent to the right-of-way, this site is rated **LOW RISK** due to the current storage tanks being in compliance and are located approximately 1.44 miles southeast of the right-of-way, the discharges from the UST and AST at the farm maintenance area were cleaned and were located approximately 0.50 miles southeast of the right-of-way, and there are no other records of contamination associated with the facility or golf course.

Site 9 – Groundwater Contamination Plume #49263268 – The contaminant associated with this plume is the agricultural pesticide ethylene dibromide (EDB), which is typically associated with agricultural citrus production. According to FDEP Map Direct, the contamination plume is under approximately 0.20 miles of the current right-of-way and most of the eastbound I-4 exit ramp at the I-4 and SR 429 interchange (see **Appendix A, Figure C** for location). The plume also extends south of the right-of-way, encompassing a portion of Reunion Resort (Site #8). No other identified contamination sites are located within the delineation of the plume, but the Florida Gas Transmission Company station (Site #10) is located directly to the north of the plume. This plume is rated **MEDIUM RISK** due to the potential for contamination to be present within and adjacent to the right-of-way and the proposed pond sites.

Site 10 – Florida Gas Transmission Company (no FDEP #s found) – No records were found for this natural gas compressor plant and measurement station located at 727 South Old Lake Wilson Road and 710 North Old Lake Wilson Road. The main facility to the east of I-4 includes several buildings and equipment, as well as an AST at its northern end, approximately 0.03 miles west of the right-of-way. A small concrete foundation, the remnant of an agricultural windmill, and piles of concrete rubble were observed at the main facility site along the west side of the service road. Another smaller facility is located to the west of I-4 along the westbound ramp to SR 429. This facility is part of a gas pipeline within a power line utility corridor, which crosses I-4 at this location. No reports of any contamination discharges were found for this facility or the pipeline. This site is rated **LOW RISK** due to having no records of any contamination discharges.

Site 11 – Cell Tower with Diesel Powered Generator A (no FDEP #s found) – No records were found for this AST site located at 727 South Old Lake Wilson Road, approximately 0.03 miles east of the right-of-way. Two ASTs for use with diesel powered emergency generators were observed at the site and appeared to be in good condition without any evidence of discharges. This site is rated **LOW RISK** due to there being no records of any discharges of contamination.

Site 12 – Heller Brothers Packing Corporation and Historic Groves (49/9203007) – This former AST site is listed as being located approximately 2 miles south of US 192 on North Old Lake Wilson Road. The exact location of the site could not be determined, but an area of historic groves along North Old Lake Wilson Road where it is placed on Map Direct is likely where

it was located. It was originally a 123 acre parcel orange grove that had two large diesel AST tanks located on the site. The tanks were removed sometime prior to 1990, when Walt Disney Company bought the parcel. No evidence of petroleum contamination was visible at the time of the sale. An environmental audit was performed for a third party that purchased a large portion of the parcel nine months later and discovered excessively contaminated soil originating from underground pipes associated with the ASTs. Walt Disney Company performed all actions necessary to fully remediate the contamination by removing 5,379 tons of contaminated soil and monitoring the site. Based on the extensive source removal and subsequent testing at the site, a No Further Action status was accepted in December 1992. Groves in this area and on this parcel have the potential to have the agricultural pesticide ethylene dibromide (EDB) present due to historical use of the product, but this site was not identified as being within a known EDB contamination plume. Although this site could not be located and has the potential for EDB to be present at the site, this site is rated **LOW RISK** due to its distance (0.45 miles northwest) from the right-of-way at its placement on Map Direct, the source removal activities that were conducted, and a No Further Action status being accepted.

Site 13 – P&D Landfill (26040, 49/9700134) – This former solid waste facility and AST site is located at 945 Old Lake Wilson Road. The landfill was operated under a general permit for a solid waste management facility beginning in 1991, but some records indicate that the site may have been in operation to some capacity for another 20 years before that. The site is comprised of 40 acres and includes two small stormwater retention ponds at the southeast side of the facility. The site received regular complaints and negative media publicity during the mid-1990s due to overwhelming odors being emitted from the facility and irritating the nearby residents of the Indian Ridge development. A 1,000 gallon AST was installed at the site in August 1994, but was not registered until February 1997, following a site inspection. Some illegal dumping of unapproved materials was reported, leading to legal enforcement against the landfill and requiring it to conduct groundwater sampling. The only groundwater sample taken from the facility while it was in operation, deemed reliable by the Florida Department of Environmental Protection, was taken in 1996. The sample indicated that concentrations of chloromethane, sulfate, total dissolved solids, total iron, and total manganese exceeded standard levels. The facility ceased operations in the 1997, but the AST was not closed at that time and the landfill was not officially considered closed. The facility was gated and locked, restricting access for tank inspections between 1997 and February 2000 despite numerous attempts to contact the persons responsible for the facility. Finally the AST was closed in February 2000, but there are no records of the tank removal. The site was visited in 2007 for the purpose of commencing the official closure of the landfill. This inspection noted an extensive growth of vegetation at the site, even at a portion of it that had been left uncovered. Groundwater and surface water monitoring at the site was conducted between 2008 and 2013. Acidic pH, Aluminum, Ammonia N, Arsenic, chloromethane, total iron, sulfate, and total dissolved solids were identified as contaminants as of the last groundwater sampling event in June 2013. However, technical reports interpreted the data regarding the concentration of the contaminants to indicate that the landfill is very stable and had minimal impact to the groundwater or surface water. Based on information presented in the monitoring reports, the site was officially closed September 2013. Technical reports conducted at the site report that groundwater flow is generally to the southeast towards the stormwater retention ponds and the right-of-way. Although the site is considered closed based on groundwater sampling and no discharges were reported from its AST, this site is rated **MEDIUM RISK** due to identified groundwater contaminants that are present at the site, the reported direction of groundwater flow is toward the right-of-way, and the proximity of the site (0.13 miles northwest) to the right-of-way.

Site 14 – Celebration High School (FLR000137737) – This site is located at 1809 Celebration Boulevard. It was registered as a conditionally exempt small quantity generator in May 2007. There are no records of any violations or discharges of

hazardous wastes associated with this site. This site is rated **LOW RISK** due to its distance (0.32 miles southeast) from the right-of-way, and lack of any reported violations or discharges of hazardous waste.

Site 15 – The Preserve at Celebration (no FDEP #s found) – No records were found for this site, which is currently under construction along Celebration Boulevard, just north of Celebration High School. It is scheduled to be completed in May 2015. Two temporary small ASTs containing diesel fuel were observed at the construction site. These ASTs had been placed in secondary containment structures and there were no visible signs of any spills or discharges. Although this site is close to the right-of-way (0.01 miles east), it is rated **LOW RISK** due to the ASTs not having any visible leaks or spills and being stored in secondary containment structures.

Site 16 – Patco Montgomery Spill Site (49/9809509, 29446024) – This was the site of an emergency response spill cleanup as the result of a trucking accident located within the I-4 right-of-way, eastbound, in the vicinity of mile marker 62. In June 2006, the truck accident resulted in a discharge of about 30 gallons of diesel fuel. According to available documents, a source removal was performed at the site but the Source Removal Report was never submitted due to a financial dispute between Patco Montgomery and their contractor. The site is not considered clean and is listed as Verified Contamination Cleanup Required (VCCR) as of December 2008. However, the site received a very low (5) priority ranking score. The location of this site on Map Direct does not seem to correspond with the description of the incident. It is placed to the east of the I-4/World Drive intersection on Map Direct, but the description of the incident places it to the west of the I-4/World Drive intersection overpass. No obvious signs of contamination associated with a spill incident were observed at either the approximate site of the incident as it is described or its placement on Map Direct. Although records indicate that source removal had taken place at the site and the discharge was a relatively low volume, this site is rated **MEDIUM RISK** due to its location being within the current right-of-way, it is listed as a VCCR site, and a lack of detailed records regarding the extent of the source removal of contamination.

Site 17 – TECO Substation #2360 (no FDEP #s found) – No records were found for this site that is located along the ramp from World Drive to westbound I-4. No obvious signs of contamination were visible during a site visit. Substations may contain hazardous materials, including lead as part of their operation. Although this site is close (0.02 miles west) to the right-of-way, it is rated **LOW RISK** due to it not having any records or observed signs of contamination.

Site 18 – Celebration Boulevard Lift Station #1 (49/9813072) – This AST site is located at 1700 Celebration Boulevard. The 1,000 gallon diesel AST that is used for an emergency generator was installed in June 2007. Multiple violations involving out of date insurance, release detection devices not being tested annually, improper record keeping, and the tank not being installed according to specifications were recorded during an inspection in May 2012. No other records are available to indicate whether the site took the necessary measures to be in compliance. No records of a discharge have been reported for this site and no obvious signs of contamination were observed. Despite its moderate proximity (0.09 miles east) to the right-of-way and potentially unaddressed violations, this site is rated **LOW RISK** due to there being no records or observed signs of a contamination discharge.

Site 19 – Progress Energy Celebration Substation (no FDEP #s found) – No records were found for this site that is located at 1400 Celebration Boulevard. Substations may contain hazardous materials, including lead, as part of their operation. No obvious signs of contamination were visible during a site visit. Although this site is close (0.02 miles east) to the right-of-way, it is rated **LOW RISK** due to it not having any records or observed signs of contamination.

Site 20 – Disney Vacation Club (49/9813051) – This AST site is located at 1390 Celebration Boulevard. A 3140 gallon AST for use with a diesel powered emergency generator was installed at the site in November 2008. This site is in compliance as of May 2012 without a reported discharge and no violations or incidents. Despite its proximity (0.04 miles east) to the right-of-way, this site is rated **LOW RISK** due to it being in compliance without any reported discharges of contamination.

Site 21 – Kissimmee City Lift Station #111 (49/9803090) – This AST site is listed as being located at Celebration Boulevard, but does not give a street address. A 780 gallon AST was registered and installed at the site in 1996 for use with a diesel powered emergency generator. The AST was later found to have a 538 gallon capacity. The location of the site on the FDEP's Map Direct places the site at an office building located at 1176 Celebration Boulevard, but a lift station or emergency generator were not found at this address. A lift station is located in the vacant field south of the office building, which is likely the location of this site (approximately 0.02 miles east of the right-of-way). However, an emergency generator or AST was not at the lift station at the time of the field visit, but a concrete slab where one could have been placed was present. No obvious signs of contamination were visible at the site or the office building. Despite its proximity to the right-of-way, this site is rated **LOW RISK** due to there being no visible signs of contamination around the lift station and there is not an AST currently located there.

Site 22 – West 192 Development Authority Area (BF491301000) – This designated brownfield area was established in June 2012 to address known and perceived contamination sites and enhance local economic potential. The project corridor passes through the designated brownfield area from the vicinity of mile marker 63 to the Osceola/Orange County line (see **Appendix A, Figure C**). Eleven sites (Sites #24-34) were identified within this designated brownfield, but there are no records of any additional contamination sites or sources that have occupied this area. This site is rated **LOW RISK** due to the lack of additional contamination issues that were not identified in separate site descriptions.

Site 23 – Celebration Golf Club (49/9600936) – This golf course maintenance facility is located at 1110 Celebration Boulevard. A 1,000 gallon capacity combination unleaded gasoline and diesel fuel AST was installed at the site in May 1996. The site has had several violations for paperwork related issues, but no discharges of contamination have been recorded and the site is in compliance as of March 2012. Golf courses have the potential to be sources of contamination because of the historical use of various pesticides, herbicides, and fertilizers that may now be considered hazardous. However, this course has only been open since 1996. Despite its proximity (0.03 miles southeast for the maintenance facility and closest part of the course), this site is rated **LOW RISK** due to it currently being in compliance and there being no records of any discharges associated with the AST or the maintenance facility.

Site 24 – FDOT Diesel Powered Emergency Generator B (no FDEP #s found) – No records were found for this site. A diesel powered generator with a small AST is located within the right-of-way along the westbound side of the I-4 pavement and underneath the SR 417 overpass ramp. The generator appears to be in good condition with no noticeable signs of contamination. This site is rated as **LOW RISK** due to there being no record of contamination, but is located within the current right-of-way.

Site 25 – Florida Hospital Celebration Health (FLR000161703, FLR000198309, 49/9601292) – This site is located at 400 Celebration Place and includes the separately listed medical facility FHMG McCarus Surgical Specialist for Women. The FHMG McCarus Surgical Specialist for Women is listed as a conditionally exempt small quantity generator because of the pharmaceuticals and batteries it stores, but no records of any discharges of contamination or violations were found. The Florida Hospital Celebration was registered as a small quantity generator in November 2009 because of the pharmaceuticals and mercury containing lamps it stores. A 15,000 gallon AST for use with a diesel powered emergency generator was installed

at the site in 1996. Two other 600 gallon ASTs for use with diesel powered emergency generators were installed at the site in 1998. In May 2008, maintenance personnel conducted a routine startup of the generators and left them running for several hours. When they returned, diesel fuel was found to be actively spilling from the 15,000 gallon AST into the surrounding soil. An estimated 800 gallons of diesel fuel was discharged into the surrounding soil, which was discovered to be the result of the failure of a valve to shut off the fuel supply to the generator. The response to the discharge was prompt, with excavation of the contaminated soil beginning the same afternoon, continuing for three days afterward. A total of 345 tons of impacted soil was excavated and removed from the site. Subsequent soil and groundwater samples at the site revealed that contamination levels were below the acceptable limits. Based on the results, a No Further Action status was accepted for the discharge in October 2008. The site was in violation during the most recent site inspection for having piping what was not installed with secondary containment, but no other discharges have been reported for the site. Although the site was recently out of compliance, this site is rated **LOW RISK** due to its distance (0.15 miles southeast) from the right-of-way and the only reported discharge was promptly addressed, leading to a No Further Action status acceptance.

Site 26 – Celebration Health Center (FLR000198788, FLR000199133, FLR000197764) – This medical facility located at 410 Celebration Place includes Celebration Family Care, FHMG Center for Specialized Gynecology, and the Center for Urologic Cancer. All of these listings are separately registered as conditionally exempt small quantity generators because pf the pharmaceuticals and batteries they store. No records of any discharges of contamination or violations were found for this site. This site is rated **LOW RISK** due to there being no records of contamination associated with this site and its distance (0.33 miles southeast) from the right right-of-way.

Site 27 – Comcast Cable Communications (49/9801818) – This AST site is located at 575 Celebration Place, approximately 0.08 miles east of the right-of-way. A 700 gallon capacity AST for use with a diesel powered emergency generator was installed at the site in June 1996. The site has had several violations regarding improper record keeping, overdue insurance, not testing release detection devices annually, and was out of compliance during the most recent inspection for not displaying registration properly. However, there have been no reported discharges at this site. Despite its moderate proximity to the right-of-way and history of minor violations, this site is rated **LOW RISK** due to there being no reported discharges at the site.

Site 28 – DCL Celebration (49/9807797) – This AST site which is an office building for Disney Cruise Lines (DCL) is located at 210 Celebration Place. No records were found relating to an AST used with a diesel powered emergency generator located at the site. The AST appeared to be in good condition without any signs of contamination. This site is rated **LOW RISK** due to the lack of any recorded discharges and its distance (0.50 miles southeast) from the right-of-way.

Site 29 – Walt Disney Sports Complex (49/9502827) – This large sports complex is located at 700 South Victory Way. A 10,000 gallon capacity UST for unleaded gasoline is used for fueling vehicles and a 600 gallon capacity AST for diesel fuel for use with an emergency generator were installed at the site in November 1995. The site is in compliance as of August, 2011 without ever being out of compliance or having violations. This site is rated **LOW RISK** due to its distance (0.29 miles northwest) from the right-of-way, and having no reports of contamination associated with the site.

Site 30 – Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center (FLD9842457, 49/8622739) – This former LUST site and current AST site is located at 6376 and 6375 West Irlo Bronson Highway (US 192). This large site has been vacant for several years, but is currently undergoing renovations. The site was developed in 1971 and included an engineering facility, laundry service, wastewater treatment plant, water supply system, maintenance facility and a landscaping/nursery area. It was registered as a small quantity generator in 1992, but there are

no reports of any discharges or violations at the site relating to hazardous waste. Busses, shuttles, and ground vehicles have historically been fueled and serviced at this location. Three 2,000 gallon capacity USTs for storing diesel fuel, leaded and unleaded gasoline, as well as a 10,000 gallon capacity UST for diesel fuel were installed at the site in 1983. When the USTs were closed and removed in 1992, leaded/unleaded/diesel fuel was discovered in the soil and groundwater surrounding the tanks. Approximately 313 tons of contaminated soil was excavated after the UST removal. Free product was later encountered in the monitoring wells that had been installed at the site, which was bailed out when encountered. In 1993, waste oil spillage was reported along the western fence line behind the maintenance facility, but it was estimated that impacted soils only occurred to a depth of about a foot below surface level. Records indicate that a series of test pits were dug in this area in 1994, which found 19 used oil filters in the ground. Approximately 87 tons of additional contaminated soil was removed from the site and was followed by continued groundwater monitoring. By 1995, contamination levels in all but one monitoring well had decreased to be below acceptable contamination levels. By 1997, groundwater contamination levels were all below acceptable levels, releasing the site from further obligation, but not granting it a No Further Action status. A 3,000 gallon capacity AST for diesel fuel had been installed at the site when the USTs were removed in 1992. There have been no discharges associated with this tank, but it received numerous violations regarding improper records and lack of financial responsibility; it has been out of service since 2006. The site was undergoing renovations during a site visit, which found several unlabeled drums and cans being stored on pavement, at least two other ASTs that were smaller than the 3,000 gallon AST, and what appeared to be solvent tanks at the laundry facility. The laundry facility appears to still be in operation, being used by Quality Commercial Laundry LLC. However, no noticeable discharges were observed at the site during the visit. A Contamination Assessment Report (1993) indicated that groundwater flow was from the north to the south, parallel to the right-of-way where the contamination was located; a site layout is available in **Appendix D**. Although this site has had source removal activities and contamination levels have dropped below the acceptable levels, it is rated **MEDIUM RISK** due to its history with contamination including buried waste oil filters, drums of unlabeled products currently being stored outside, and its proximity (0.02 miles east) to the right-of-way.

Site 31 – Shops at the Parkway Plaza (no FDEP #s found) – This site is located at 2901 Parkway Boulevard. Three businesses were identified as potential sources of contamination at this site, including Charley's Restaurant, Digital Plus (formerly International Camera), and Diamond Nails. Charley's Restaurant and Digital Plus are listed as small quantity generators by Osceola County but are not registered generators of hazardous waste. Diamond Nails is a retail nail salon, but no records were found for it. The plaza was reviewed for signs of contamination but none were found. This site is rated **LOW RISK** due to the lack of any documented or observed signs of contamination and its distance (0.42 miles east) from the right-of-way.

Site 32 – Radisson Resort Orlando Celebration (49/9101991) – This AST and former UST site is located at 2900 Parkway Boulevard and used to be occupied by the Ramada Resort Maingate at the Parkway. A 2,000 gallon capacity diesel UST for use in facility operations was installed at the site in April 1987. A 200 gallon AST for use with an emergency generator was later added in 1991. In March 1999, a 1,000 gallon capacity diesel AST for use with an emergency generator was installed at the site, and was registered as the only tank on the site. There are no records regarding the closure, removal, or abandonment of the other two tanks. Violations involving improper record keeping were documented at the site in 2007, but no discharges of contamination have been reported at this site and it is in compliance as of September 2011. This site is rated **LOW RISK** due to its distance (0.32 miles east) from the right-of-way and having no records of contamination, even though records regarding the removal or closure of the old tanks are not available.

Site 33 – Arabian Nights (FLR000049288, 49/8841352) – This site is located at 3081 Arabian Nights Boulevard and is listed as a conditionally exempt small quantity generator. In September 1998, an anonymous complaint reported that an old semi-

truck on the property had rotted out, leading to garbage and paint being spilled all over the ground. An inspection of the site revealed that the paint was mostly water-based, but some oil paints and thinner was also released. The inspection also noted that some small oil drums had leaked a relatively small but unknown amount. The site was cleaned and organized as of January 1999, but the details or the extent of the cleaning is not documented. A 200 gallon AST used to store vehicular diesel fuel was registered at the site in 1988, but no other records involving this tank were found. This site is rated **LOW RISK** due to there being no other complaints or records regarding contamination associated with this facility and its distance (0.36 miles southeast) from the right-of-way.

Site 34 – Gaylord Palms Resort, including Five Star Laundry Orlando LLC (FLR000086538, 49/9804276) – This AST site is a large resort facility located at 6000 Osceola Parkway. It includes Five Star Laundry Orlando, which was registered as a small quantity generator in 2002. Three 1,250 gallon capacity ASTs for use with diesel powered emergency generators were installed at the site in February 2001. In August 2003, a discharge from one of the ASTs was reported during a site inspection. The cause of the discharge was unknown, but it appeared that only a small amount had been released to the soil and gravel surrounding the location of the AST. Records indicate that a source removal of impacted soil and gravel was removed from the site (approximately enough to fill five 55 gallon drums). The site was sampled after the source removal and found that contamination levels did not exceed acceptable limits, leading to a No Further Action status being accepted for the site in March 2004. The most recent inspection of the facility in September 2013 found the facility to be in violation for having overdue insurance, but no other discharges have been reported. This site is rated **LOW RISK** due to its distance (0.34 miles southeast) from the right-of-way, the discharge from 2003 was accepted for No Further Action status and included source removal, and no other discharges of contamination have been reported for the ASTs or the laundry service.

Site 35 – Waldorf Astoria Orlando and Hilton Bonnet Creek Resort (no FDEP #s found) – No records were found for these hotels that are part of the same complex and include a golf course. These large resort hotels are located at 14100 and 14200 Bonnet Creek Resort Lane. The site was completed in 2009 and is located approximately 0.12 miles northwest of the right-of-way at its closest point. Two ASTs for use with diesel powered emergency generators were observed at the site, but appeared to be in good condition without any evidence of discharges. Golf courses have the potential to be sources of contamination due to the pesticides, herbicides, and fertilizers they use, but there are no records of any contamination associated with this golf course. This site is rated **LOW RISK** due to there being no records of any contamination associated with the site.

Site 36 – Cell Tower with Diesel Powered Emergency Generator B (no FDEP #s found) – No records were found for this AST site located at 18048 International Drive, approximately 0.05 miles southeast of the right-of-way. An AST for use with a diesel powered emergency generator was observed at the site and appeared to be in good condition without any evidence of discharges. This site is rated **LOW RISK** due to there being no records of any discharges of contamination.

Site 37 – Lift Station with Diesel Powered Emergency Generator (no FDEP #s found) – No records were found for this AST site located at 14355 Chelonia Parkway, approximately 0.02 miles west of the right-of-way. An AST for use with a diesel powered emergency generator was observed at the site and appeared to be in good condition without any evidence of discharges. This site is rated **LOW RISK** due to there being no records of any discharges of contamination.

Site 38 – Marriott Orlando World Center including Marriott Resorts Hospitality Inc. and Hawk's Landing Golf Course (FLD131953986, FLD982137291, 48/9502201, 48/8627488) – This large resort facility is located at 8701 and 8805 World Center Drive. The resort was registered as a small quantity generator in 1986 and the hospitality center was registered as a small quantity generator in 1989. A FDEP number (48/9502201) is listed for the dry cleaning facility, but no records were

found in association with the number. Records indicate that four USTs were installed at the site during its construction between 1984 and 1985. An 8,000 gallon capacity UST and a 20,000 gallon capacity UST were installed for use with diesel powered emergency generators, and two 2,000 gallon capacity USTs for unleaded gasoline and diesel fuel were used for fueling vehicles. A 550 gallon AST was also installed for containing used oil. In 1998 and 1999 a 10,000 gallon AST was installed for use with a diesel powered emergency generator and two 2,000 gallon ASTs for unleaded and diesel fuel were installed for fueling vehicles. An additional 1,500 gallon AST was installed in 2007 for use with a diesel powered emergency generator. There are no available records regarding the closure or replacement of any of the USTs, but records indicate there are only four currently registered ASTs and no USTs. There have been no reported discharges of contamination for this site and it was in compliance as of September 2009. The site also includes the Hawk's Landing Golf Course, which has several holes directly adjacent to the right-of-way. The course was built in 1986 and has been in operation ever since. Golf courses have the potential to be sources of contamination due to the various pesticides, herbicides, and fertilizers they use. No records or observed signs of contamination were found for this golf course. Despite the proximity (0.01 miles east) of the golf course to the right-of-way and a lack of detailed records regarding the closure of USTs, this site is rated **LOW RISK** because there are no records of contamination at the site and the main facilities are at least 0.18 miles east northeast of the right-of-way.

Site 39 – Walt Disney World Office Complex (48/9047115) – This UST site is located at 1375 North Buena Vista Avenue. There are two USTs at the site, but the installation date and size are not available. The USTs appear to be in association with a diesel powered emergency generator located at the south end of the office building. The site was in compliance as of July 2012 without any records of it being out of compliance or having any discharges of contamination. Despite its proximity (0.06 miles northwest) to the right-of-way, this site is rated **LOW RISK** due to it being in compliance and has not had any reported discharges.

Site 40 – Walt Disney World Typhoon Lagoon (48/9301047, 29431619) – This water park attraction site that was built in 1988 is located at 1800 Buena Vista Drive. A 3,000 gallon capacity AST for storing caustic sodium and a 2,300 gallon capacity AST for storing calcium chloride are located at the site. In 2004, a plumbing leak was detected, which discharged an unknown amount of product into an area just west of the facility, next to the Bonnet Creek Canal. The discharge was not considered a threat to the environment and a monitoring only plan has been accepted for the discharge. The site is located approximately 0.15 miles northwest from the right-of-way, but the area of concern is approximately 0.25 miles northwest. Therefore, this site is rated **LOW RISK** due to its distance from the right-of-way and no other reported discharges of contamination.

Site 41 – Hess #09574, former Exxon RAS #40433 (FLR000011569, 48/9600046) – This LUST site is located at 1475 East Buena Vista Drive. It was registered as a conditionally exempt small quantity generator in 1996 when it was an Exxon station. Three 12,000 gallon capacity USTs for unleaded fuel storage were installed at the site in 1995. A discharge was reported from an unknown source in March 2004 when contamination was detected in soil and groundwater samples. Monitoring wells were installed at the site and the site was monitored for natural attenuation. Contamination levels dropped below the target levels, leading to a Site Rehabilitation Completion Order and No Further Action status being accepted in March 2011. The most recent inspection of the site in October 2013 found that one of the sumps at the site is severely corroded, but no other discharges have been reported. Although this site is moderately close (0.12 miles northwest) to the right-of-way and it has had a recorded discharge, this site is rated **LOW RISK** due to contamination levels at the site being below the acceptable limits and the discharge received a No Further Action status.

Site 42 – Residence Inn by Marriott Parcel (48/9200232) – This site is currently an undeveloped parcel that is located at 8800 Meadow Creek Drive. Based on registration documents, a 1,000 gallon capacity AST for unleaded gasoline was installed

at the site in 1991 and was closed in 2000. There are no records of any discharges or violations associated with this site. The site was reviewed for signs of contamination, but none were found. Despite being directly adjacent (0.01 miles east) to the right-of-way, this site is rated **LOW RISK** due to there being no records of any discharges.

Site 43 – Orange County Utilities Vistana Water Supply Facility (48/9300387, FLR000075655) – This AST site is located at 8943 Meadow Creek Drive. A discharge was reported for an unregistered small AST that was used for a diesel powered emergency generator in 1989. Available records indicate that the spill occurred due to overfill of the tank, releasing approximately a half-gallon of fuel to the soil. Contaminated soils were removed, but the quantity of soil is unknown. Even though this was reportedly a minor discharge, it received a priority ranking score of 70 due to its proximity to potable wells. It is unclear whether the small tank that had leaked was closed or remained in service, but a 2,000 gallon capacity AST was installed at the site in 1992 for use with the diesel powered emergency generator. Soil at the site was sampled in 2004 showing that contamination levels were below the acceptable limits. This led to the site receiving a Site Rehabilitation Completion Order and No Further Action status in 2005. The site is in compliance as of January 2013 without any other reported petroleum discharges. The site was registered as a conditionally exempt small quantity generator in April 2004 because the facility produces used sodium hydroxide cleaned from chlorine scrubbers and/or pH control units. There are no records of any violations or discharges of hazardous wastes at this facility. This site is rated **LOW RISK** due to its distance (0.28 miles southeast) from the right-of-way, there are no records of violations or discharges of hazardous waste at the facility, a No Further Action status was accepted for its one reported discharge, and the site was in compliance as of its most recent inspection.

Site 44 – Sheraton Vistana Resort (48/8736929) – This former LUST and current AST site is located at 13800 Vistana Drive. A 10,000 gallon capacity UST for unleaded gasoline was installed at the site in 1985. Two discharges, one in 1988 and the other in 1991, were reported when contamination was encountered in compliance wells. Both discharges were attributed to historic releases of contamination and the site was given a priority ranking score of 76. There are no records of any source removal, but the site was monitored for contamination levels following the discharge. The levels of contamination in the groundwater at the site dropped below the target levels relatively quickly, leading to the site receiving a No Further Action status for the earlier discharges in 1993. When the UST was removed in 1997, another discharge was reported when groundwater contamination levels were found to be slightly higher than the acceptable levels and a very small amount of soil around the fill port was found to be contaminated as well. There are no records of soil removal at the site, but approximately 7,200 gallons of groundwater was treated at the site post UST removal. Groundwater contamination levels remained below the acceptable limits and the site was granted No Further Action status for the 1997 discharge in 2003. The site currently uses an AST for a diesel powered emergency generator, but the date of its installation is unclear. The site was in compliance as of April 2012. This is a large facility which is located along the eastern side of the right-of-way, but the area where the contamination was reported is approximately 0.38 miles southeast of the right-of-way. This site is rated **LOW RISK** due to its distance from the right-of-way, removal of the LUST, the installation of a groundwater treatment system, a No Further Action status was accepted, and the current AST was in compliance without any reported discharges as of its most recent inspection.

Site 45 – Transtar Transportation Group Inc. at Vista Way (FLR000197137) – This site is located at 8772 Meadow Creek Drive; it is listed as a non-handler of hazardous waste. This transportation company uses this hub within the Vista Way Apartments complex to refuel its vehicles. The area where this refueling occurs is along the northern side of the complex, approximately 0.05 miles southeast of the right-of-way. In January 2013, an anonymous complaint alleged that diesel fuel had been allowed to spill on the ground and into a small pond on the property. An inspection of the site revealed that no

visible signs of fuel releases were evident and that there was no pond on the site, leading to the complaint being deemed invalid. The site was reviewed for signs of contamination but none were found. This site is rated **LOW RISK** due to there being no other complaints or records regarding contamination associated with this site.

Site 46 – Walgreens #3460 (FLR000061903) – This site is located at 13502 South Apopka Vineland Road. It is listed as a small quantity generator because of the pharmaceuticals and batteries it stores. This site is rated **LOW RISK** due to there being no records of contamination associated with this site, its distance (0.30 miles southeast) from the right right-of-way, and the industry in which it is involved.

Site 47 – SunTrust Bank (no FDEP #s found) – No Records were found for this AST site located at 1675 East Buena Vista Drive. A small AST for use with a diesel powered emergency generator is located at the northern side of the office building. No obvious signs of contamination were observed. Despite its proximity (0.03 miles east) to the right-of-way, this site is rated **LOW RISK** due to there being no reported or observed contamination associated with the tank.

Site 48 – Hilton in the Walt Disney World Village (FLD982162224, 48/8942925, 48/9501765) – This large hotel resort facility is located at 1751 Hotel Plaza Boulevard. The facility was registered as a small quantity generator in 1988. A 2,000 gallon capacity UST that was used with a diesel powered emergency generator had a reported discharge in November 1989. However, only low levels of contamination were observed in monitoring wells following the discharge, giving it a No Cleanup Requited status. The UST was removed and replaced with one the same size and for the same purpose in February 2009. At the time of replacement, soil samples did not indicate contamination levels higher than the acceptable limits, but groundwater samples indicated slightly elevated contamination concentrations. A discharge was reported based on the groundwater samples, which led to the site being monitored following the replacement. Groundwater contamination levels dropped below the acceptable levels, leading to the site receiving a Site Rehabilitation Completion Order and a No Further Action status for the 2009 discharge in June 2010. A small AST was observed at the southwestern side of the facility that was in connection to a diesel powered emergency generator, but no signs of contamination were observed for this tank. The site is in compliance as of June 2012. Despite the UST's location in relation to the right-of-way (0.03 miles northwest, see **Appendix D** for site diagram) and recorded discharge(s), this site is rated **LOW RISK** due to the site currently being in compliance and it receiving a No Further Action status for its only reported discharge.

Site 49 – Sunshine Food Mart #185, 535 Auto Care (48/9602619) – This UST site is located at 13480 Apopka Vineland Road. A 20,000 gallon capacity UST for unleaded gasoline and a 23,000 gallon capacity unleaded gasoline/diesel fuel compartmentalized UST were installed at the facility in 1996. The site has been out of compliance multiple times for having petroleum contacted water in the sumps and fuel hoses needing repair. An inspection in November 2011 discovered that the diesel fuel dispenser was leaking and a discharge was reported. An estimated 15 gallons had leaked to the pan of the dispenser, but apparently the product was not released to the soil or environment. The incident was not formally recorded as a discharge due to there being no release of contamination to the environment. No other discharges have been reported for this site. No records were available regarding the vehicle oil change and service shop located at the facility, but no obvious signs of contamination were observed. Despite ongoing violations regarding fluid in the sumps and unrepaired fuel hoses, this site is rated **LOW RISK** due to the only reported discharge was contained and its moderate distance (0.10 miles south) from the right-of-way.

Site 50 – Limited Transportation LLC (no FDEP #s found) – This site is listed as a small quantity generator by Orange County but is not a generator of hazardous waste. It is located within the Sabal Palms Apartments at 13650 Lake Vining Drive. The

site was reviewed for signs of contamination but none were found. Due to its distance (0.28 miles southeast) from the right-of-way and the lack of any documented or observed signs of contamination, this site is rated **NO RISK**.

Site 51 – 7-Eleven Food Store #24607 (48/8512585) – This UST site and former LUST site is located at 13407 South Apopka Vineland Road. Three 10,000 gallon USTs were installed at the site in 1985; one UST was for leaded gasoline and two were for unleaded gasoline. Contamination from an unknown source was discovered in a compliance well in 1988, which resulted in a reported discharge with a priority ranking score of 37 that qualified the site for the Early Detection Incentive Program. In May 2005, elevated levels of contamination were observed in the soil surrounding an overspill bucket. This was followed by the closure and replacement of the USTs in August 2005, which included the removal of approximately 563 tons of impacted soil. Following source removal, the site was monitored for natural attenuation. Contamination levels dropped, but not as quickly as expected, leading to the use of air sparging in wells to encourage quicker aerobic decomposition of the remaining contamination in 2012. The site is currently being monitored, but one well still has concentrations of naphthalene that are higher than the acceptable limits. As of June 2013 the site will continue to be monitored for natural attenuation, but another air sparging event was recommended if contamination levels in the one well remain higher than the acceptable concentration limits. Based on a Natural Attenuation Monitoring Report (2010), groundwater flow at the site is generally to the south, away from the right-of-way. Despite contamination still being present at this site, it is rated **LOW RISK** due to the contamination currently being confined to only one well, past source removal activities, and its distance (0.19 miles southeast) from the right-of-way.

Site 52 – Buena Vista Palace (FLD984239483) – This AST site and former LUST resort site is located at 1900 Buena Vista Drive. It was registered as a small quantity generator in May 1992, but there are no records of any violations or discharges related to hazardous waste at the site. A 3,000 gallon capacity UST for use with a diesel powered emergency generator was installed at the site in November 1982, along with two other USTs used for waste cooking grease. The diesel UST was removed in 1995, which is when petroleum impacted soil was encountered in the vicinity of the tank, based on soil samples taken from the excavation pit. The site was given a priority ranking score of 55 for the discharge. There are no records available that indicate source removal activities took place, but the site was monitored for contamination levels, which eventually dropped below the target levels. This led to a Site Rehabilitation Completion Order and No Further Action status being accepted for the site in March 2005. The site currently has an AST, but registration records regarding this tank could not be located. The site and its AST are in compliance as of August 2012. Although there are no available records regarding the current AST, this site is rated **LOW RISK** due to it having a No Further Action status accepted for the 1995 discharge, it was in compliance as of its most recent inspection, and its distance (0.39 miles northwest) from the right-of-way.

Site 53 – Holiday Inn Lake Buena Vista (FLR000032722) – This AST site is located at 1805 Hotel Plaza Boulevard and is registered as a non-handler of hazardous waste. No records were found for this site regarding a relatively large AST that is used with a diesel powered emergency generator. The generator and AST appear to be in good condition without any visible signs of contamination. Despite its proximity (0.03 miles northwest) to the right-of-way, this site is rated **LOW RISK** due to there being no records of any violations or discharges of contamination and the AST at the site appears to be in good condition without showing any signs of contamination.

Site 54 – Plantation Park Condominiums listed Businesses (no FDEP #s found) – This site includes two businesses that are listed as small quantity generators by Orange County but are not registered generators of hazardous waste. The two businesses are A Touch of Class Limousine located at 13003 Plantation Park Circle, and Steven Brokian MD PA located at 13013 Mulberry Park Drive. The site was reviewed for signs of contamination but none were found. This site is rated **NO**

RISK due to the lack of any documented or observed signs of contamination and its distance (0.18 miles east) from the right-of-way.

Site 55 – Wyndham Lake Buena Vista Resort, formerly Sunspree Resort (no FDEP #s found) – This hotel site is listed as a small quantity generator by Orange County but is not a registered generator of hazardous waste. It is listed as being located at 1850 Hotel Plaza Boulevard Road. The site was reviewed for signs of contamination but none were found. This site is rated **NO RISK** due to the lack of any documented or observed signs of contamination and its distance (0.18 miles northwest) from the right-of-way.

Site 56 – Hotel Royal Plaza (FLR000128736, 48/8732306) – This former UST and current AST site is located at 1905 Hotel Plaza Boulevard. The site is listed as a small quantity generator, but no records for its registration were found. Registration records indicate that a 1,000 gallon UST that was used for a diesel powered emergency generator was installed at the site sometime around 1974 and was removed in 1994. No evidence of contamination was observed or found in sampling around the location of the UST. An AST for use with a diesel powered emergency generator is now used at the site, but there are no registration or inspection records available for this tank. Despite its proximity (0.05 miles northwest) to the right-of-way, this site is rated **LOW RISK** due to there being no records of any discharges of petroleum or hazardous waste.

Site 57 – Double Tree Suites by Hilton (no FDEP #s found) – No records were found for this hotel site that is located at 2305 Hotel Plaza Boulevard. A small AST that is used with a diesel powered emergency generator is located at the north side of the facility. The site was reviewed for signs of contamination but none were found. Despite its proximity (0.02 miles west) to the right-of-way, this site is rated **LOW RISK** due to there being no observed or reported discharges of contamination.

Site 58 – Shell Vineland (48/9809810) – This UST site is located at 8788 Vineland Road. Two 20,000 gallon capacity USTs were installed at the site in October 2007; one UST is for unleaded fuel and the other is a compartmentalized UST used for storing unleaded gasoline and diesel fuel. The facility was out of compliance in September 2010 for release detection devices not being tested annually, and during its most recent inspection in November 2012, but records do not indicate what the violation was for. No discharges have been reported for this site. Although this site is moderately close (0.11 miles east) to the right-of-way, it is rated **LOW RISK** due to there being no record of any spills, discharges, or releases of contamination at the site.

Site 59 – Sunshine Food Mart #222, 2nd City Chevron, now Mobil (FLD984201087, 48/8512743) – This LUST site is located at 12748 Apopka Vineland Road. Four 10,000 gallon capacity USTs were installed at the site in 1982, two for unleaded gasoline, one for alcohol enriched gasoline, and one for diesel fuel. Another 1,000 gallon UST that was used for waste oil was located at the site when it had a service station, but it was removed in 1987. A discharge from an unknown source was reported in 1989 when petroleum odors were detected in compliance wells. The site was initially given a priority ranking score of 36 for the discharge. In 1992, the source removal of 12 cubic yards of impacted soil was conducted, and the site was given a new priority ranking score of 55. The facility was torn down and rebuilt in October 1997 and the product lines were replaced, but the USTs were left in place. The site was monitored for natural attenuation, which showed that contamination levels eventually dropped below the cleanup target levels, leading to a Site Rehabilitation Completion Order and No further Action status being accepted for the 1989 discharge in November 2005. In 2006, a bus caught fire and burned at the property, releasing less than 25 gallons of diesel fuel. The discharge was addressed as an emergency response and was cleaned, making the discharge a No Cleanup Required status. The site was in violation for a small leak in the diesel hose line swivel in 2006, but no significant discharge was reported with the incident. Another violation in December 2012 was reported when gasoline was observed in a sump and was actively leaking. The issue was fixed and the site was in compliance as of January 2013.

Despite a No Further Action status being accepted for its only registered discharge and it currently being in compliance, this site is rated **MEDIUM RISK** due to the history of various small discharges and violations, the USTs never having been replaced, the priority ranking score increased after source removal was conducted, and its proximity (0.09 miles northwest) to the right-of-way.

Site 60 – Hyatt Regency Grand Cypress (FLD107987331, 48/9500949, 48/8627128) – This AST site is located at 1 Grand Cypress Boulevard. It was registered as a small quantity generator in August 1985. The site has two FDEP Storage Tank Contamination Monitoring numbers, but only one of them (48/8627128) had records available for review. A 1,000 gallon capacity AST for use with a diesel powered emergency generator was installed at the site in April 1985. This AST was out of compliance in 2006 for its concrete containment not meeting standards and the coating of the tanks showed peeling. A 2,150 gallon capacity AST for unleaded gasoline was installed at the site in February 1994, but this tank is no longer there and there are no records of its closure or removal. Records indicate that a 3,000 gallon diesel AST for use with an emergency generator was installed in February 2013. There have been no reported discharges of petroleum or hazardous waste at this site. This site is rated **LOW RISK** due to there being no records of any discharges of contamination at the site and its distance (0.40 miles northwest) from the right-of-way.

Site 61 – Walt Disney World Little Lake Bryan (48/9101797) – This former LAST Site is located at Little Lake Bryan Road. The tank was located approximately 600 feet east of Little Lake Bryan on the south side of the basketball court, 0.40 miles east of the right-of-way. This site is misplaced on Map Direct, which shows it being to the west of the Walt Disney World Office Complex. In March 1991, an AST that had been taken out of service sometime around 1988 was tested and removed, resulting in the discovery of several pinhole sized openings in the tank. A Phase 2 assessment indicated that the groundwater had been contaminated by mixed gasoline and diesel fuel. In January 1992, a Contamination Assessment Report determined that the soil was not contaminated at the site but dissolved petroleum contamination was present in the surficial aquifer near the source area with some migration through the groundwater, west, towards Little Lake Bryan. A Remedial Action Plan was accepted to address the contamination issue, which consisted of monitoring and sampling groundwater in June 1992. Initially, the contamination levels appeared to be dropping, but it was soon discovered that contamination levels were greater than expected and site cleanup was required. A granular activated carbon treatment system was installed at the site in July 1992 to treat groundwater from three recovery wells. This system worked well in reducing groundwater contamination levels at the site in the short-term, but contamination levels would rise higher than expected each time the systems was turned off. Between August 1992 and January 1995 the system was in operation three separate times and treated a total of 2,367,398 gallons of groundwater. The site was granted Cleanup Completion status in February 1996, but it is not completely clean; it has a score of 47 based on the site priority ranking rule and is currently awaiting cleanup. Despite this site currently having contamination, the site is rated **LOW RISK** due to its distance (0.40 miles east) from the right-of-way and the significant source removal activities conducted at the site.

Site 62 – Florida Hospital Centra Care (no FDEP #s found) – This small medical facility is listed as a small quantity generator by Orange County but is not a registered generator of hazardous waste. It is listed as being located at 12500 Apopka Vineland Road. The site was reviewed for signs of contamination but none were found. This site is rated **NO RISK** due to the lack of any documented or observed signs of contamination and its distance (0.32 miles northwest) from the right-of-way.

Site 63 – Gooding's Supermarkets Inc. (no FDEP #s found) – No records were found for this supermarket located at 12521 Apopka Vineland Road. This supermarket includes a one hour photo lab, which could potentially store chemicals. This site is located in the proposed footprint for pond site 138B. No evidence of any contamination was observed at the site. Because

this site is located at a proposed pond site, where a number of structures will need to be demolished, it is rated **MEDIUM RISK**.

Site 64 – Orlando Vista Hotel (no FDEP #s found) – This site is listed as a small quantity generator by Orange County but is not a registered generator of hazardous waste. It is located at 12490 Apopka Vineland Road. The site is currently under renovation. The site was reviewed for signs of contamination but none were found. This site is rated **NO RISK** due to the lack of any documented or observed signs of contamination and its distance (0.37 miles northwest) from the right-of-way.

Site 65 – E-Cigs, formerly New Vision Enterprises USA (no FDEP #s found) – This site is listed as a small quantity generator by Orange County but is not a registered generator of hazardous waste. It is listed as being located at 8558 Palm Parkway. The site was reviewed for signs of contamination but none were found. Despite its proximity (0.07 miles northwest) to the right-of-way, this site is rated **NO RISK** due to the lack of any documented or observed signs of contamination.

Site 66 – Nice Nails (no FDEP #s found) – No records were found for this retail nail salon located at 12367 Apopka Vineland Road. The site was reviewed for signs of contamination but none were found. This site is rated **LOW RISK** due to there being no records of any discharges of contamination and its distance (0.41 miles northwest) from the right-of-way.

Site 67 – Circle K #2709745, formerly Texaco #240250151 (FLD984191007, 48/8626312, 29442600) – This LUST site that was registered as a small quantity generator in 1991 is located at 12360 Apopka Vineland Road. The site was historically a combination residence and convenience store with one pump island for dispensing fuel. The property was bought by Texaco in 1970, but very little else is known about the former occupant or location of the storage tank that was used. The site was not redeveloped by Texaco until 1985, which is when three USTs totaling 32,000 gallons capacity and a 10,000 gallon capacity diesel UST were installed. A discharge was reported at the site in 1987 and 1989, when groundwater contamination was detected in a monitoring well. Both discharges were deemed to be from the same source and the site was given a priority ranking score of 60. Approximately 1,650 gallons of free product and water was removed from the site through extraction wells in 1994, of which approximately 70% was recovered free product. Several documents are missing or unavailable with the listing for this site, but at some point the 1987 and 1989 discharges were granted a Site Rehabilitation Completion Order. However, a discharge that was reported in March 2008 as a result of dewatering activities that flushed out remaining contamination was later attributed to the original discharge. The Site Rehabilitation Completion Order was rescinded, and Remedial Action and cleanup activities resumed and are still being performed. Despite the site still not being cleaned up and a lack of some records, it is rated **LOW RISK** due to some source removal having been conducted and its distance (0.41 miles northwest) from the right-of-way.

Site 68 – 7-Eleven Food Store #23429 (48/8732707, 29438980) – This LUST site is located at 12298 Apopka Vineland Road. Three 10,000 gallon capacity unleaded gasoline and a 10,000 gallon capacity diesel UST was installed at the site in 1983. A leak in the UST piping system was reported in 1987, releasing an unknown amount of contamination. However, contamination levels were found to have concentrations below the acceptable limits, which initially did not qualify the site for the Early Detection Incentive program. Another discharge was reported in 1988 when visible signs of petroleum and odors were observed in compliance wells, making the discharge eligible for the Early Detection Incentive program. Another discharge in 1990 was attributed to a transport truck releasing diesel fuel to the pavement area of the facility. Records indicate that approximately 30 gallons of product was cleaned up by a crew, but it is unknown whether the product entered the soil. The USTs were moved because of the widening of the Apopka Vineland Road and County Road 535 intersection. One of the tanks had been closed, but it is unclear whether it had been removed; a total of three 10,000 gallon USTs were moved in this event. During the move, approximately 192 cubic yards of excessively contaminated soil was removed from

the site. Another discharge was reported in 2007, when contaminated pea gravel was found during overfill bucket replacements. Approximately 12.74 tons of pea gravel was removed from the site following this discovery. The USTs were replaced in 2008 with another three 10,000 gallon capacity USTs for unleaded gasoline. During the replacement, an additional 820 tons of contaminated pea gravel was removed from the site. This source removal and subsequent monitoring was enough to give the site a No Further Action status for the 2007 discharge, but contamination site assessments are still ongoing for the former location of the USTs from the 1988 discharge. Despite still having a site assessment ongoing, the site is rated **LOW RISK** due to the 2007 discharge receiving a No Further Action status, some source removal activities have taken place, and its distance (0.47 miles northwest) from the right-of-way.

Site 69 – Publix Super Market #812 (48/9809906) – This AST Site is located at 8145 Vineland Road. The 1,000 gallon diesel AST that is used for an emergency generator was installed in December 2007. The site has not had any reported discharges, but it had several violations in 2008 for not performing annual testing. The site is in compliance as of July 2012. This site is rated **LOW RISK** due it being in compliance without any reported contamination and its distance (0.48 miles southeast) from the right-of-way.

Site 70 – Bargain World, formerly Johnny's Country Store (48/8838085, 29437652) – This former LUST site is located at 12250 Apopka-Vineland Road. Three 5,000 gallon capacity USTs were used to store leaded gasoline and unleaded gasoline but the date of installation of the tanks is unknown. Records indicate that the tanks were abandoned at the property as of September 1986. An inspection in March 1992 noted that at least one of the tanks still contained a small amount of fuel in the bottom of it and one of the fill ports appeared to be filled with a water and gas mix. The tanks were closed, removed, and disposed of in June 1992. At the time of removal soil samples indicated that the soil around the tanks was excessively contaminated, but there are no documents indicating whether the soil was removed or not. The site received a priority ranking score of 26 in March 1993 and 32 in April 2009. The site is still awaiting cleanup and is also adjacent to 7-Eleven Food Store #23429, which is also awaiting cleanup. Due to the distance (0.48 miles northwest) from the current right-of-way, this site is rated **LOW RISK** even though it is currently not considered cleaned.

Site 71 – Shoppes at Buena Vista Plaza (FLR000025254, 48/9811033) – This site includes two listed businesses which have the potential to be sources of contamination. Majestic Cleaners is located at 12177 Apopka Vineland Road and Advanced Dental Care is located at 12131 Apopka Vineland Road. Majestic Cleaners is a dry cleaning facility that was registered as a small quantity generator in December 1996 for their use of petroleum based solvents. There are no records of any discharges of hazardous waste at this dry cleaning facility. Advanced Dental Care is a dental facility that is listed as a small quantity generator by Orange County but is not a registered generator of hazardous waste. The plaza was reviewed for signs of contamination but none were found. A pharmacy appears to have been located at this plaza, but it is no longer in business. This site is rated **LOW RISK** due to the lack of any documented discharges or observed signs of contamination and its distance (0.48 miles northwest) from the right-of-way.

Site 72 – Quality Suites (no FDEP #s found) – No records were found for this hotel site that is located at 8200 Palm Parkway. A small AST that is used with a diesel powered emergency generator is located at the east side of the facility. The site was reviewed for signs of contamination but none were found. Despite its proximity (0.06 miles northwest) to the right-of-way, this site is rated **LOW RISK** due to there being no observed or reported discharges of contamination.

Site 73 – Embassy Suites (no FDEP #s found) – No records were found for this hotel site that is located at 8100 Lake Street. A small AST that is used with a diesel powered emergency generator is located at the facility. The site was reviewed for signs

of contamination but none were found. Despite its proximity (0.03 miles west) to the right-of-way, this site is rated **LOW RISK** due to there being no observed or reported discharges of contamination.

Site 74 – Blue Seas Associations Citizen Site (99955) – No records were found for this site that is listed as being located between Palm Parkway and I-4, just east of the Ruby Lake Ranch Marbella Property (Site #75). It is listed as a solid waste disaster debris site. Vegetation which is typically associated with past disturbances was observed at the site, indicating that the site had likely been cleared and disturbed in the past. Some small piles of concrete rubble and household garbage was observed at this site, but it is unknown whether any of the debris would be considered hazardous. Although there are no records of any known discharges or dumping at this site, it is rated **MEDIUM RISK** due to its proximity (0.01 miles west) to the right-of-way, and the potential for contamination to exist based on the vegetation present on the site being indicative of past disturbances.

Site 75 – Ruby Lake Ranch, Marbella Property (48/9806697) – This former citrus grove and cattle pasture is a 259 acre parcel located at 8501 Foxfire Circle, along Palm Parkway. This site had several sources of contamination identified in a 1997 Phase 2 Environmental Site Assessment. At the time of the assessment, stained soils around an empty and rusted 55 gallon drum was discovered at the southeast side of the property (approximately 0.15 miles northwest of the current right-of-way), stained soils around a 110 gallon fuel oil AST was discovered at the northern end of the property along with an excavated burn pit nearby which potentially contained petroleum contamination. Petroleum contamination was found in the groundwater at the abandoned drum and AST sites. According to records, 56 cubic yards of impacted soil was removed from the vicinity of the 110 gallon AST and former burn area in 1997.

In 2004, a Phase 1 Environmental Site Assessment was performed which discovered additional sources of contamination consisting of an abandoned 2,000 gallon AST and an abandoned 500 gallon drum, both at the northeast side of the property. Upon sampling of the impacted soil at the sites identified in the previous assessment and the additional sites, it was found that all sites had only a limited quantity of contamination and were below acceptable levels. Monitoring wells were installed at each contamination site and sampled in July 2004. The samples confirmed that minimal amounts of contamination were still present and the monitoring wells were closed in December 2004. The site was released from further remediation and a No Further Action status was accepted. The site is currently under development by Marbella, LLC and no signs of current or past contamination were observed during a site visit. Despite low levels of contaminated soils still being present at the site, the site has received a No Further Action order and groundwater flow at the site is generally towards Ruby Lake, away from the current right-of-way at its closest point. Therefore, this site is rated **LOW RISK**.

Site 76 – Marriott Grande Pines Golf Course Maintenance Facility (FLR000108118) – This site is located at 11206 Westwood Boulevard; it is listed as a non-handler of hazardous waste. In March 2004, an anonymous complaint from a guest at the hotel directly behind the facility reported that they had observed employees on several occasions rinsing tanks on trucks in the maintenance area resulting in blue water running down a hill and into a swale. An inspection of the site revealed that various pesticide and herbicide liquids had been being discharged into the storm drain, which appeared to drain to a small retention area, that outfalls to the other side of the fence north of the property. These chemicals were not considered hazardous waste so the site was referred to the waste cleanup program. There are no documents available that detail the cleanup or content of the discharges. This site is rated **LOW RISK** due to its distance (0.26 miles southeast) from the right-of-way and there being no other complaints or records regarding contamination associated with this facility.

Site 77 – Dr. Phillips Community Park, formerly Orange County Trap & Skeet Club (FLR000097584) – This park, listed as a non-handler, is located at 10625 Smith Bennett Road. It sits on the former site of a shooting range that was in operation

from 1977 to 1996. Heavy metal contamination was present at the site, primarily in the form of lead shot. Approximately 200,000 lbs. and 246,000 lbs. of shot were recovered in 1992 and 1997, respectively, but it is estimated that 200,000 to 300,000 lbs. of shot may remain on the site, primarily within Big Sand Lake. The site was listed for a short time as a large quantity generator in 2003 when a Remedial Action Plan was accepted by the FDEP. Orange County met the terms of an Agreed Authorization for Remediation that established acceptable alternative cleanup target levels, and filled the contaminated portion of soil at the site with clean soil to a depth of two feet. This area where contamination still exists under the fill is known as Grid 128 and is at the present site of the shade pavilion at the park. Due to the continued presence of contaminated soils, there should not be any dewatering or pond building activities at that site without additional measures being taken. However, the presence of that contamination should not impact excavation or construction activities outside the boundary of the contaminated soils, according to the reports consulted. While this site still has some heavy metal contamination in the soils around Grid 128, the extent to which Big Sand Lake has been impacted is unknown. The area of Big Sand Lake that contains the shot, known as the south lobe, is approximately 0.60 miles southwest of the right-of-way, and the shade pavilion area is approximately 0.47 miles northwest of the right-of-way. Despite the continued presence of heavy metal contamination, the distance from the right-of-way gives this site a **LOW RISK** rating.

Site 78 – 7-Eleven Store #35277 (48/9812949) – This UST site is located at 6700 Central Florida Parkway. Two 20,000 gallon tanks were installed in November 2011 and are currently in compliance as of December 2011. No obvious signs of contamination were observed at the site. This site is rated as **LOW RISK** due to it being in compliance as of its most recent inspection, its distance (0.29 miles east) from the right-of-way, and has no records of contamination.

Site 79 – CVS Pharmacy #5400 (FLR000191544) – This site is located at 6790 Central Florida Parkway. It is listed as a small quantity generator because of the type of pharmaceuticals it distributes. This site is rated **LOW RISK** due to there being no records of contamination associated with this site, its distance (0.31 miles east) from the right-of-way, and the industry in which it is involved.

Site 80 – Hilton Garden Inn (no FDEP #s found) – This site is listed as a small quantity generator by Orange County but is not a generator of hazardous waste. It is located at 6850 Westwood Boulevard. The site was visited for signs of contamination but none were found. Due to its distance (0.19 miles east) from the right-of-way and the lack of any documented or observed signs of contamination, this site is rated **NO RISK**.

Site 81 – Renaissance Resort SeaWorld (48/9100915) – This former LUST and current AST site is located at 6677 Sea Harbor Drive. The site has always had an AST for an emergency diesel generator, but the UST was eventually replaced with an additional AST. In June 2003, a containment vault was installed around the suction port to the 550 gallon UST and modifications were made to the fuel lines. During excavation, petroleum sheen was observed on rain water that had collected in the trench that was dug to make modifications to the tank. Soil and water samples were taken and analyzed. Contamination was present but below acceptable levels for both. Contamination levels were measured with a monitoring well at the UST, but contamination levels never reached a higher level. A Limited Groundwater Assessment Report was accepted in May 2004, releasing the site from further obligation to remediate the spill. The site was in compliance as of May 2006. In June 2008, the UST was closed in-place and replaced with an AST in the same area as the emergency generator. The site has been out of compliance several times for not having insurance for the tank but is in compliance as of August 2012. Despite a history of several noncompliance issues and a minimal spill, this site is rated **LOW RISK** due to it currently being in compliance and its distance (0.27 miles east) from the right-of-way.

Site 82 – Places of Learning SeaWorld Orlando Marketing (48/9046692) – This AST site is located at 6825 Academic Drive. The site currently has a very small AST located at the south side of the building, but there may still be an 850 gallon diesel UST located on the property. A UST was installed at the site by a previous owner in 1974. The tank was discovered and registered in December 1990, when SeaWorld bought the property. There are no available records of the tank ever being closed, removed, or monitored. During the site visit, the AST seemed to be in good condition with no obvious signs of contamination, but a UST port could not be found. It is unlikely that the current use of the facility (offices) would require a large fuel tank, and the adjacent property, an Orange County Sheriff's Department station, did not show any signs of a UST being present. Due to the age of the tank and there being no records of the tank being inspected, removed, or closed and the site's proximity (0.02 miles east) to the right-of-way, this site has the potential to be contaminated and is rated **MEDIUM RISK**.

Site 83 – SeaWorld Parks and Entertainment Administration Office (no FDEP #s found) – This site is listed as a small quantity generator by Orange County but is not a generator of hazardous waste. It is located at 6675 Westwood Boulevard. The site was visited for signs of contamination but none were found. Despite its proximity (0.03 miles east) of the right-of-way, this site is rated **NO RISK** due to the lack of any documented or observed signs of contamination.

Site 84 – SeaWorld of Florida Inc., Florida Festival (FLR000149609) – This site, listed as a small quantity generator, is located at 6295 Sea Harbor Drive. Despite minor noncompliance incidents in the past regarding failure to correctly label containers, no contamination incidents have been reported. This facility is rated as **LOW RISK** due to it being currently in full compliance and the distance (0.42 miles southeast) from the right-of-way.

Site 85 – FDOT Diesel Powered Emergency Generator C (no FDEP #s found) – No records were found for this site. The generator with a small AST is located within the SR 528/I-4 interchange median on the east side where SR-528 splits. The generator appears to be in good condition with no noticeable stains. This site is rated as **LOW RISK** due to there being no record of contamination but is located within the current right-of-way.

Site 86 – Groundwater Contamination Plume #48263254 – The contaminant associated with this plume is the agricultural pesticide ethylene dibromide (EDB), which is typically associated with citrus growing. According to FDEP Map Direct, the contamination plume is not under the current right-of-way in this segment (see **Appendix A, Figure C** for location). No other contamination sites are located in this plume, which is approximately 0.35 miles west of the right-of-way at its closest delineated position. This plume is rated **LOW RISK** due to its estimated distance from the right-of-way and there are no proposed portions of the Project within its area. However, caution should be taken if the limits of construction operations include the area of the plume.

5.5 Historic Aerial Photography Review

Available historical and current aerial photographs were reviewed by from the Polk, Osceola, Orange County Property Appraisers, the University of Florida Digital Collections (via internet), the National Resources Council Soil Conservation Service Soil Maps, and Google Images. Aerial photos from the years 1944, 1947, 1952, 1954, 1968, 1969, 1974, 1984, 1996 and 2014 were utilized to help determine the evidence of land use that could indicate a potential for adverse environmental impacts within or adjacent to the project corridor. Some years did not have flights that encompassed the entire project area; therefore, some flights from different years were combined by county. Examples of the aerial flights over the project corridor can be found in **Appendix C.**

<u>1944 (Polk / Osceola) & 1947 (Orange)</u>

The majority of the project corridor is undeveloped, consisting of wetland sloughs, isolated depressional wetlands, sand pine, and scrub oak. The only roads observed on the aerials were located where Apopka Vineland Road/Winter Garden Vineland Road (SR 535) exists today. What appeared to have been limited residential development was present in the vicinity of the current location Apopka Vineland Road at Winter Garden Vineland Road and Palm Parkway. Another roadway was located in the proximity of where SR 528 is located today. Three small groves were located near where the interchange of I-4 and SR 535 exist today. There were no obvious signs of potential contamination sites within the project corridor.

1952 (Polk / Osceola) & 1954 (Orange)

Conditions within the project corridor are basically the same as those observed on the 1944 &1947 historic aerials. Some areas of native vegetation had been converted to what appeared to have been pasture land. Few areas of citrus crops existed at that time. There were no obvious signs of potential contamination sites within the project corridor.

1968 (Polk / Osceola) & 1969 (Orange)

The majority of the project corridor along the recently completed I-4 in Osceola County was still undeveloped. The Osceola Polk Line Road (CR 532) interchange with I-4 was present, as were many unimproved roads throughout the project corridor. Large areas of land had been converted to pasture and citrus groves. A road existed where Old Lake Wilson Road exists today. The US 192/I-4 interchange was present. Citrus groves were present from Osceola Polk Line Road to just east of Old Lake Wilson Road on both sides of I-4. A great deal of development was occurring in the area near the location of present day Walt Disney World. Creeks were being channelized in Orange County. Very few citrus groves were present in Orange County. It is likely that gasoline service stations were present at the I-4/SR 535 interchange, as well as east of the US 192/I-4 interchange, but positive identification of these facilities could not be made. No other obvious potential contamination sites were observed adjacent to the I-4 right-of-way.

1974 (all Counties)

Conditions in Osceola County were generally the same as observed on the 1968 aerial photos. The groves were still present between Osceola Polk Line Road and Old Lake Wilson Road. An excavation, possibly an unregistered landfill, was located in an area between where Old Lake Wilson Road and World Drive exist today. The US 192/I-4 interchange had major changes with a hotel complex located in the northeast quadrant. Additional infrastructure was occurring in the Walt Disney World and SeaWorld areas of Orange County. It is likely that several gasoline service stations would have been located along several roadways in the study area, but positive identification of these facilities could not be made.

1984 (all Counties)

Conditions in Osceola County were unchanged from what was viewed on the 1974 aerials. Additional development was occurring east of the Walt Disney World attraction area along SR 535. Hotels and a golf course were located at the northeast quadrant of the SR 536/I-4 interchange. This area of Orange County was experiencing large scale hospitality, entertainment, and residential developments.

1996 to Present (all Counties)

The entire I-4 corridor from Osceola Polk Line Road to SR 528 has and is currently undergoing rapid development. Over the past few years, World Drive, SR 429, SR 417, and the Osceola Parkway have been connected to I-4. With these roads came additional residential developments such as Champions Gate and Reunion, the city of Celebration, as well as the infrastructure to support them. Many of the industries within the project area are likely to handle, dispose, or transport potential hazardous materials. They would include: gasoline service stations, automobile garages and body shops, sewage

treatment plants, water treatment facilities, photographic shops, pool supply stores, hospitals, golf courses, nail salons, and more.

Several aspects of the historical land use along the project corridor were observed that could impact the project which is no longer present today. Potential citrus groves were observed on both sides of the current right-of-way, primarily in Osceola County. These groves could be an additional source of ethylene dibromide (EDB) contamination in addition to the identified groundwater contamination plumes. Citrus production also includes the use of various pesticides, herbicides, and fertilizer as well as potential petroleum contamination from the use of farm equipment. It is difficult to identify the precise boundaries of pastures within the corridor, but it appears that some of the corridor has been used for pasture. Cattle dips were required by law in Florida up until the 1950's, but the exact locations of many of them are unknown. They were used to kill pests, especially ticks, and consisted of an arsenic solution that sometimes contained DDT. It is unknown whether these cattle dips pose a threat to the Project, but it may be possible that they were present based on the historic land use of the corridor.

5.6 Interviews

Interviews were conducted with any available property owners or site managers at the times of the site visits. In general, the majority of those interviewed knew very little site specific information. No additional information was gathered beyond that found on the FDEP's OCULUS Database. Several authorities were contacted to obtain any additional information or contamination issues along the project corridor.

Mr. Bret A. Smith, an Environmental Administrator of the Florida Department of Health in Osceola County was contacted in regards to potential contamination issues within the project corridor. To his knowledge, no reports or active sites were located within the project area.

Mr. Jeff Waters, an Emergency Responder Specialist for the FDEP Office of Emergency Response Orlando office was contacted in regards to potential contamination issues along I-4 from automotive accidents. Mr. Waters requested the information from Mrs. Amanda Hartsfield, a Government Operations Consultant for the FDEP Office of Emergency Response Tallahassee office. Mrs. Hartsfield provided a list of accidents along I-4 that the Office of Emergency Response responded to in Polk, Osceola, and Orange County from 1995 to present. The Patco Montgomery spill site (Site #16) was the only spill site that was also found in the FDEP's OCULUS database. All of the other accidents with spills were cleaned up by the Office of Emergency Response and are not considered persistent contamination issues.

6.0 Alternative Alignments

There are no alternative alignments included with this project as the project goal involves the expansion of the current roadway. The existing right-of-way and new pond sites will likely contain the full extent of the proposed project, with the potential for additional minimal right-of-way acquisitions adjacent to the current limits being the exception. The study area contains any likely additional right-of-way needed.

7.0 Project Impacts

Future construction activities within the existing and proposed right-of-way create the potential for contamination impacts within the project corridor. A total of eighty six (86) sites were identified within the project corridor that could be potential contamination sites, with potential impacts that may occur both within the proposed right-of-way and the proposed pond sites.

One documented truck accident occurred on I-4 in the proximity of mile marker 62 in the eastbound lanes where contamination was an issue. Records indicate that the free product that had spilled was removed and is likely not going to be a contamination issue. However, a Source Removal Report was never submitted following the spill and the degree of contamination remaining at the site is unknown (see Site #16).

Photographs of all potential contamination sites are provided in **Appendix B.**

8.0 Regulatory Status of Sites

Impacts to known and/or potential contamination sites may occur adjacent to the existing right-of-way. Additional right-of-way required for future improvements consists of stormwater retention ponds. The pond sites for this project were rated for their potential to have contamination and are listed in **Table 2**. Out of the eighty nine (89) pond sites, eleven (11) were given a medium risk rating and the remaining seventy eight (78) were given a low risk rating. Out of the eighty six (86) identified contamination sites, one (1) was given a high risk rating, and seven (7) were given a medium risk rating. The remaining seventy eight (78) sites were given a no risk or low risk rating. The facilities with potential contamination in the vicinity of the existing and proposed right-of-way are listed and rated in **Table 3**.

TABLE 2 – POTENTIAL CONTAMINATION RATINGS FOR POND SITES

Pond Site #	Contamination Source	Rating
FPC 100	EDB	Medium
100	NRC	Low
FPC 101A	EDB	Medium
101A	NRC	Low
101B	NRC	Low
101C	NRC	Low
101D	NRC	Low
101E	NRC	Low
101F	NRC	Low
101G	NRC	Low
102	NRC	Low
FPC 102	NRC	Medium
103	NRC	Low
FPC 103A (Recommended)	NRC	Low
FPC 103B	NRC	Low
104	NRC	Low
FPC 105A	EDB	Medium
105A	NRC	Low
105B	NRC	Low
106A	EDB	Medium
106B	EDB	Medium
107	NRC	Low
108A	NRC	Low
108B	NRC	Low

Pond Site #	Contamination Source	Rating
109	NRC	Low
FPC 109	NRC	Low
110	NRC	Low
111	NRC	Low
112A	NRC	Low
112B	NRC	Low
112C	NRC	Low
112D	NRC	Low
112E	NRC	Low
113A	NRC	Low
113B	NRC	Low
113C	NRC	Low
113D	NRC	Low
113E	NRC	Low
113F	NRC	Low
113G	NRC	Low
114A	NRC	Low
114B	NRC	Low
FPC 114A	NRC	Low
FPC 114B	NRC	Low
FPC 114C	NRC	Low
115	NRC	Low
116	NRC	Low
117	NRC	Low
118	NRC	Low
119A	NRC	Low
119B	NRC	Low
120	NRC	Low
121A	NRC	Low
121B	NRC	Low
122A	NRC	Low
122B	NRC	Low
122C	NRC	Low
123	NRC	Low
124	NRC	Low
125	NRC	Low
126	NRC	Low
127	NRC	Low
128A	NRC	Low
128B	NRC	Low

Pond Site #	Contamination Source	Rating
129	NRC	Low
130	NRC	Low
130A	NRC	Low
131A	NRC	Low
131B	NRC	Low
FPC 132	NRC	Low
132	NRC	Low
FPC 133	NRC	Low
133	NRC	Low
134	NRC	Low
135	NRC	Low
136A	NRC	Low
136B (Recommended)	Debris	Medium
137	NRC	Low
137A	NRC	Low
137B	NRC	Low
138	NRC	Medium
138A	NRC	Medium
138B	NRC	Medium
FPC 138	NRC	Low
139A	NRC	Low
139B	NRC	Low
140	NRC	Low
FPC 141	NRC	Low
142B	EDB	Medium
Table 2 Notes: No Reported Contamination (NRC), Ethylene Dibromide (EDB)		

TABLE 3 – REGULATORY STATUS & RATING OF POTENTIAL CONTAMINATION SITES

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location off ROW (miles)	Contamination Source	Regulatory Status	Rating
1	Groundwater Contamination Plume #53263274/49263271	NDB	.53 SE	EDB	CRD	Low
2	Circle K #2708968	49/9805326	.09 W	LUST	NFA	Low
3	FDOT Diesel Powered Emergency Generator A	NDB	0 W	AST	NRC	Low
4	Austin Outdoor, Reunion Development Parcel	NDB	.01 E	AST, EDB	NRC	High
5	Publix Super Market Plaza	49/9809952	.29 W	AST, NHR, No Listing	NRC, ICOM	Low
6	Walgreens #7219	NDB	.15 W	No Listing	NRC	Low

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location off ROW (miles)	Contamination Source	Regulatory Status	Rating
7	7-Eleven Food Store #33249	49/9807646	.09 W	UST	NRC, ICOM	Low
8	Reunion Resort, formerly Herman J Heidrich & Sons Inc.	49/9805464, 49/9100367, 49/9802294	.01 E/W	LUST, LAST, EDB	NFA	Low
9	Groundwater Contamination Plume #49263268	NDB	0 SE	EDB	CRD	Med.
10	Florida Gas Transmission Company	NDB	.03 E/W	AST	NRC	Low
11	Cell Tower with Diesel Powered Emergency Generator A	NDB	.03 E	AST	NRC	Low
12	Heller Brothers Packing Corporation and Historic Groves	49/9203007	.45 NW	LAST, EDB	NFA	Low
13	P&D Landfill	26040, 49/9700134	.13 NW	SWF, AST	NRC	Med.
14	Celebration High School	FLR000137737	.32 SE	CESQG	NRC	Low
15	The Preserve at Celebration	NDB	.01 E	AST	NRC	Low
16	Patco Montgomery Spill Site	49/9809509, 29446024	0 E	Spill	CRD	Med.
17	TECO Substation #2360	NDB	.02 W	No Listing	NRC	Low
18	Celebration Boulevard Lift Station #1	49/9813072	.09 E	AST	NRC	Low
19	Progress Energy Celebration Substation	NDB	.02 E	No Listing	NRC	Low
20	Disney Vacation Club	49/9813051	.04 E	AST	NRC, ICOM	Low
21	Kissimmee City Lift Station #111	49/9803090	.02 E	AST	NRC	Low
22	West 192 Development Authority Area	BF491301000	0	Brownfield	PCI	Low
23	Celebration Golf Club	49/9600936	.03 SE	AST	NRC, ICOM	Low
24	FDOT Diesel Powered Emergency Generator B	NDB	0 W	AST	NRC	Low
25	Florida Hospital Celebration Health	FLR000161703, FLR000198309, 49/9601292	.15 SE	SQG, CESQG LAST	NFA	Low
26	Celebration Health Center	FLR000198788, FLR000199133, FLR000197764	.33 SE	CESQG	NRC	Low
27	Comcast Cable Communications	49/9801818	.08 E	AST	NRC	Low
28	DCL Celebration	49/9807797	.5 SE	AST	NRC	Low
29	Walt Disney Sports Complex	49/9502827	.29 NW	UST, AST	NRC	Low
30	Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center	FLD9842457, 49/8622739	.02 E	SQG, UST, AST	PCI	Med.
31	Shops at the Parkway Plaza	NDB	.42 E	NHR	NRC	Low

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location off ROW (miles)	Contamination Source	Regulatory Status	Rating
32	Radisson Resort Orlando Celebration	49/9101991	.32 E	UST, AST	NRC	Low
33	Arabian Nights	FLR000049288, 49/8841352	.36 SE	CESQG, AST	NRC	Low
34	Gaylord Palms Resort, including Five Star Laundry Orlando LLC	FLR000086538, 49/9804276	.34 SE	LAST	NFA	Low
35	Waldorf Astoria Orlando and Hilton Orlando Bonnet Creek Resort	NDB	.12 NW	AST	NRC	Low
36	Cell Tower with Diesel Powered Emergency Generator B	NDB	.05 SE	AST	NRC	Low
37	Lift Station with Diesel Powered Emergency Generator	NDB	.02 W	AST	NRC	Low
38	Marriott Orlando World Center including Marriott Resorts Hospitality Inc. and Hawk's Landing Golf Course	FLD131953986, FLD982137291, 48/9502201, 48/8627488	.01 E	SQG, UST, AST	NRC, ICOM	Low
39	Walt Disney World Office Complex	48/9047115	.06 NW	UST	NRC, ICOM	Low
40	Walt Disney World Typhoon Lagoon	48/9301047, 29431619	.15/.25 NW	LAST	SAO	Low
41	Hess #09574, former Exxon RAS #40433	FLR000011569, 48/9600046	.12 NW	CESQG, LUST	NFA	Low
42	Residence Inn by Marriott Parcel	48/9200232	.01 E	AST	NRC	Low
43	Orange County Utilities Vistana Water Supply Facility	48/9300387, FLR000075655	.28 E	LAST, CESQG	NFA	Low
44	Sheraton Vistana Resort	48/8736929	.38 SE	LUST, AST	NFA, ICOM	Low
45	Transtar Transportation Group Inc. at Vista Way	FLR000197137	.05 SE	NHR	NRC	Low
46	Walgreens #3460	FLR000061903	.30 SE	SQG	NRC	Low
47	SunTrust Bank	NDB	.03 E	AST	NRC	Low
48	Hilton in the Walt Disney World Village	FLD982162224, 48/8942925, 48/9501765	.03 NW	SQG, LUST, AST	NFA	Low
49	Sunshine Food Mart #185, 535 Auto Care	48/9602619	.1 S	UST	NRC	Low
50	Limited Transportation LLC	NDB	.28 SE	NHR	NRC	Low
51	7-Eleven Food Store #24607	48/8512585	.19 SE	LUST	CPO	Low
52	Buena Vista Palace	FLD984239483	.39 NW	SQG, LUST, AST	NFA	Low
53	Holiday Inn Lake Buena Vista	FLR000032722	.03 NW	NHR, AST	NRC	Low
54	Plantation Park Condominiums listed Businesses	NDB	.18 E	NHR	NRC	Low
55	Wyndham Lake Buena Vista Resort, formerly Sunspree Resort	NDB	.18 NW	NHR	NRC	No

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location off ROW (miles)	Contamination Source	Regulatory Status	Rating
56	Hotel Royal Plaza	FLR000128736, 48/8732306	.05 NW	SQG, UST, AST	NRC	Low
57	Double Tree Suites by Hilton	NDB	.02 W	AST	NRC	Low
58	Shell Vineland	48/9809810	.11 E	UST	NRC	Low
59	Sunshine Food Mart #222, 2nd City Chevron, now Mobil	FLD984201087, 48/8512743	.09 NW	LUST, Spill	NFA, ICOM	Med.
60	Hyatt Regency Grand Cypress	FLD107987331, 48/9500949, 48/8627128	.4 NW	SQG, AST	NRC	Low
61	Walt Disney World Little Lake Bryan	48/9101797	.40 E	LAST	CRD	Low
62	Florida Hospital Centra Care	NDB	.32 NW	NHR	NRC	No
63	Gooding's Supermarkets Inc.	NDB	.29 NW	No Listing	NRC	Low
64	Orlando Vista Hotel	NDB	.37 NW	NHR	NRC	No
65	E-Cigs, formerly New Vision Enterprises USA	NDB	.07 NW	SQG	NRC	No
66	Nice Nails	NDB	.41 NW	No Listing	NRC	Low
67	Circle K # 2709745, formerly Texaco #240250151	FLD984191007, 48/8626312, 29442600	.41 NW	SQG, LUST	CPO	Low
68	7-Eleven Food Store #23429	48/8732707, 29438980	.47 NW	LUST, Spill	NFA, SAO	Low
69	Publix Super Market #812	48/9809906	.48 SE	AST	NRC, ICOM	Low
70	Bargain World, formerly Johnny's Country Store	48/8838085, 29437652	.48 NW	LUST	SAO	Low
71	Shoppes at Buena Vista Plaza	FLR000025254, 48/9811033	.48 NW	SQG	NRC	Low
72	Quality Suites	NDB	.06 NW	AST	NRC	Low
73	Embassy Suites	NDB	.03 W	AST	NRC	Low
74	Blue Seas Associations Citizen Site	99955	.01 W	No Listing	SWF, NRC	Med.
75	Ruby Lake Ranch, Marbella Property	48/9806697	.15 NW	LAST	NFA	Low
76	Marriott Grande Pines Golf Course Maintenance Facility	FLR000108118	.26 SE	NHR	NRC	Low
77	Dr. Phillips Community Park, formerly Orange County Trap and Skeet Club	FLR000097584	.47 NW	NHR	PHMC	Low
78	7-Eleven Store #35277	48/9812949	.29 E	UST	NRC, ICOM	Low
79	CVS Pharmacy #5400	FLR000191544	.31 E	SQG	NRC	Low
80	Hilton Garden Inn	NDB	.19 E	NHR	NRC	No
81	Renaissance Resort SeaWorld	48/9100915	.27 E	LUST, AST	ICOM	Low
82	Places of Learning SeaWorld Orlando Marketing	48/9046692	.02 E	UST, AST	PCI	Med.

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location off ROW (miles)	Contamination Source	Regulatory Status	Rating
83	SeaWorld Parks and Entertainment Admin Office	NDB	.03 E	NHR	NRC	No
84	SeaWorld of Florida Inc., Florida Festival	FLR000149609	.42 SE	SQG	NRC, ICOM	Low
85	FDOT Diesel Powered Emergency Generator C	NDB	0 E	AST	NRC	Low
86	Groundwater Contamination Plume #48263254	NDB	.35 W	EDB	CRD	Low

Table Abbreviations: Not in FDEP database (NDB), In Compliance (ICOM), Site Assessment Ongoing (SAO), No Reported Contamination (NRC), Contamination Reported (CRD), No Further Action (NFA), Possible Heavy Metal Contamination (PHMC), Possible Contamination Issue (PCI), Cleanup Ongoing (CPO), Above ground storage tank (AST) Leaking above ground storage tank (LAST), Underground storage tank (UST), Leaking underground storage tank (LUST), Non-handler (NHR), Conditionally exempt small quantity generator (CESQG), Small quantity generator (SQG), Solid Waste Facility (SWF).

9.0 Conclusions and Recommendations

A detailed site inspection was conducted of the I-4 corridor for this CSER from West of CR 532 (Osceola/Polk County Line) to West of SR 528 (Beachline Expressway) which includes the interchanges at Osceola Polk Line Road, SR 429, World Drive, SR 417, SR 530 /US 192 (Irlo Bronson Memorial Highway), the Osceola Parkway, SR 536 Epcot Center Drive/World Center Drive, SR 535, the proposed Daryl Carter Parkway, and the Central Florida Parkway, including eighty nine (89) pond sites along the corridor in Polk, Osceola, and Orange Counties, Florida. This study includes site reconnaissance, regulatory file reviews, historic aerial photograph review, construction plans review, interviews, and reporting.

A total of eighty six (86) sites within the study area were identified as being potential handlers of hazardous materials or having some type of involvement with potential contamination. Of these sites, one (1) had a high risk rating, Site 4, and seven (7) had a medium risk rating including Sites 9, 13, 16, 30, 59, 74, and 82. The remaining seventy eight (78) sites identified received a no risk or low risk rating. It is recommended that any excavation, demolition or dewatering activities within or adjacent to any of the identified medium risk sites should require soil and groundwater testing before construction.

Sites 1, 9 and 86 are groundwater contamination plumes of ethylene dibromide (EDB) and encompass a portion of one (1) listed contamination site and Pond Sites 106A and 106B. The contamination site was given a low risk rating based on its distance from the right-of-way, but both pond sites were given a medium risk rating. Medium risk ratings were also given to pond sites FPC 100, FPC 101A, FPC 102, FPC 105A, 138, 138A, 138B, and 142B based on indicators that the site was historically used for citrus growing. In addition to the contamination plumes, discarded debris such as paint cans and fire extinguishers were discovered at Pond Site 136B, which was also given a medium risk rating.

Based on historic aerials, land use in the area before the construction of I-4 consisted of natural vegetation, rural citrus groves, and some pasture land. Potential contamination impacts from these activities include additional EDB contamination from the citrus groves, pesticide/herbicide/fertilizer and potentially petroleum contamination from the citrus production or farm equipment, and arsenic contamination from potential cattle dips associated with the pastures. However, the existence, exact location, and severity of these potential sources of contamination are mostly unknown.

All bridges and other structures which will require possible demolition or retrofit should be tested for asbestos containing materials, lead-based paint, or any other hazardous materials prior to construction.

Should any parcels containing medical facilities, doctor offices, hospitals, or drug stores be acquired, they should be tested for asbestos, lead-based paint, x-ray equipment, lead-lined walls, chemicals, and pharmaceuticals prior to demolition.

FDOT commits to conducting Level II Contamination Screenings on all Medium and High Risk Rated sites before establishing a final determination. This will include investigating previous PD&E Studies and Design Projects covering the project area and its surroundings.

10.0 References

Contamination Assessment Report for Heidrich and Sons Citrus Property, Blasland, Bouck & Lee Inc., 8/1991

Contamination Assessment Report for Hyatt Orlando, Florida Groundwater Services Inc., 8/1993.

Florida Department of Transportation, Project Development & Environment guidelines (Chapter 22, January 17, 2008 revision)

Florida Department of Transportation, Florida Land Use, Cover, and Forms Classification System (FLUCFCS), Level III, third edition, 1999

FHWA Technical Advisory T 6640.8A, dated October 30, 1987

Limited Site Assessment Activities Report for Hilton Hotel Walt Disney World, Geological Solutions Inc., 6/2010

Natural Attenuation Monitoring Report for 7-Eleven Store No 24607, Shaw Environmental Inc., 1/2010

University of Florida George A. Smathers Library Digital Collections: Aerial Photography Florida (website), 2013

APPENDIX A
Project Maps and Figures

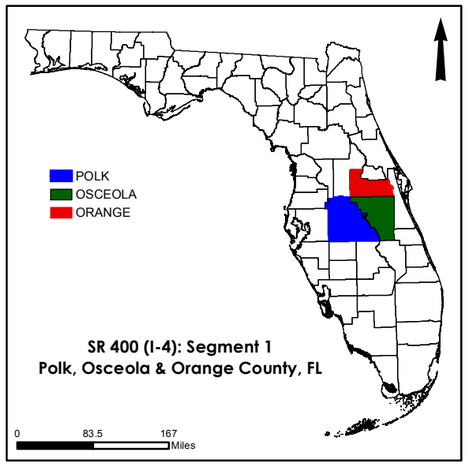
SR 400 (I-4) BEYOND THE ULTIMATE
PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY

SEGMENT 1

FDOT FM NO. 432100-1-22-01

CONTAMINATION SCREENING EVALUATION REPORT (CSER)

POLK, OSCEOLA AND ORANGE COUNTIES
FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT 5



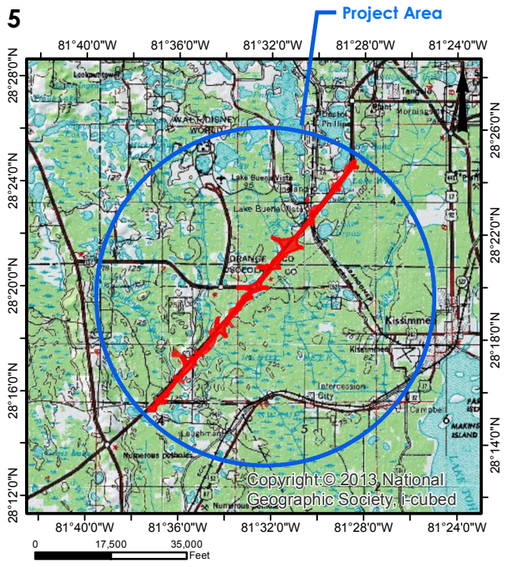


FIGURE NO.	SHEET NO.	TITLE
Figure A	Sheet 1-5	Land Use and Habitat Coverage Map
Figure B	Single Sheet	USGS Topographical Map
Figure C	Sheet 1-5	Contamination Sites Map

PROJECT DETAILS

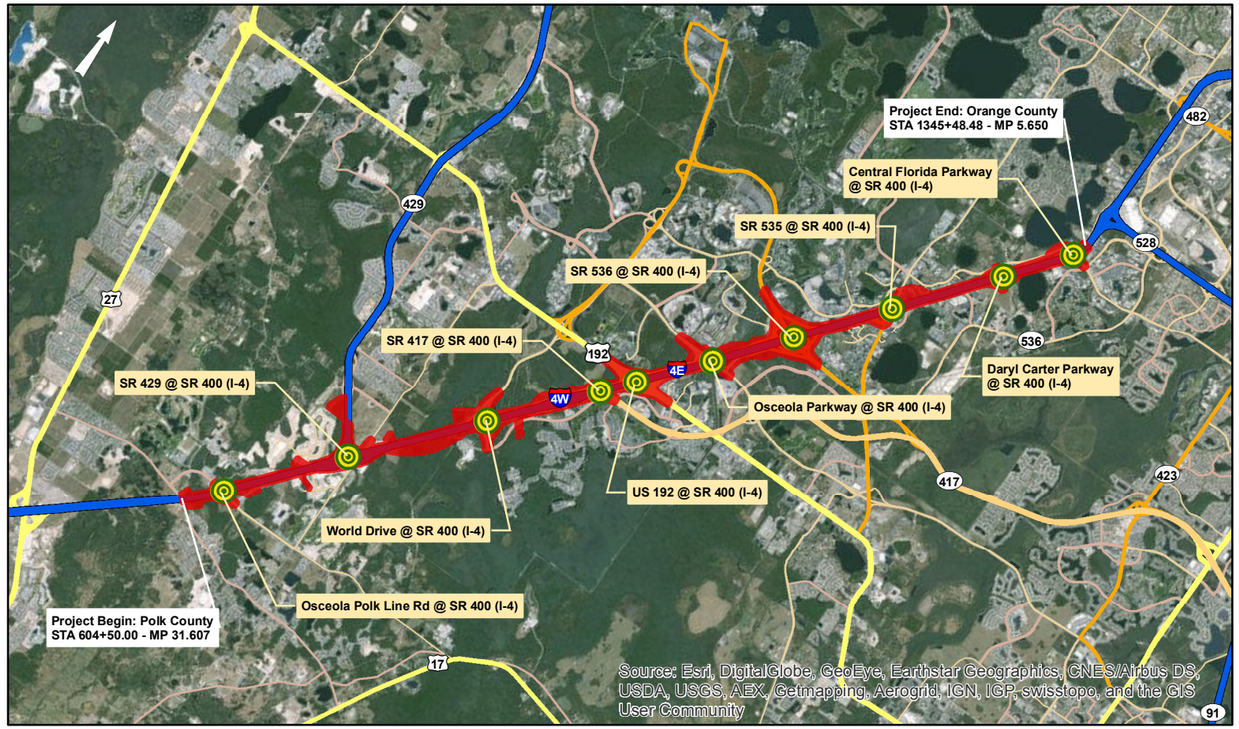
CONTAMINATION SCREENING EVALUATION REPORT:
Segment 1 - Report Maps

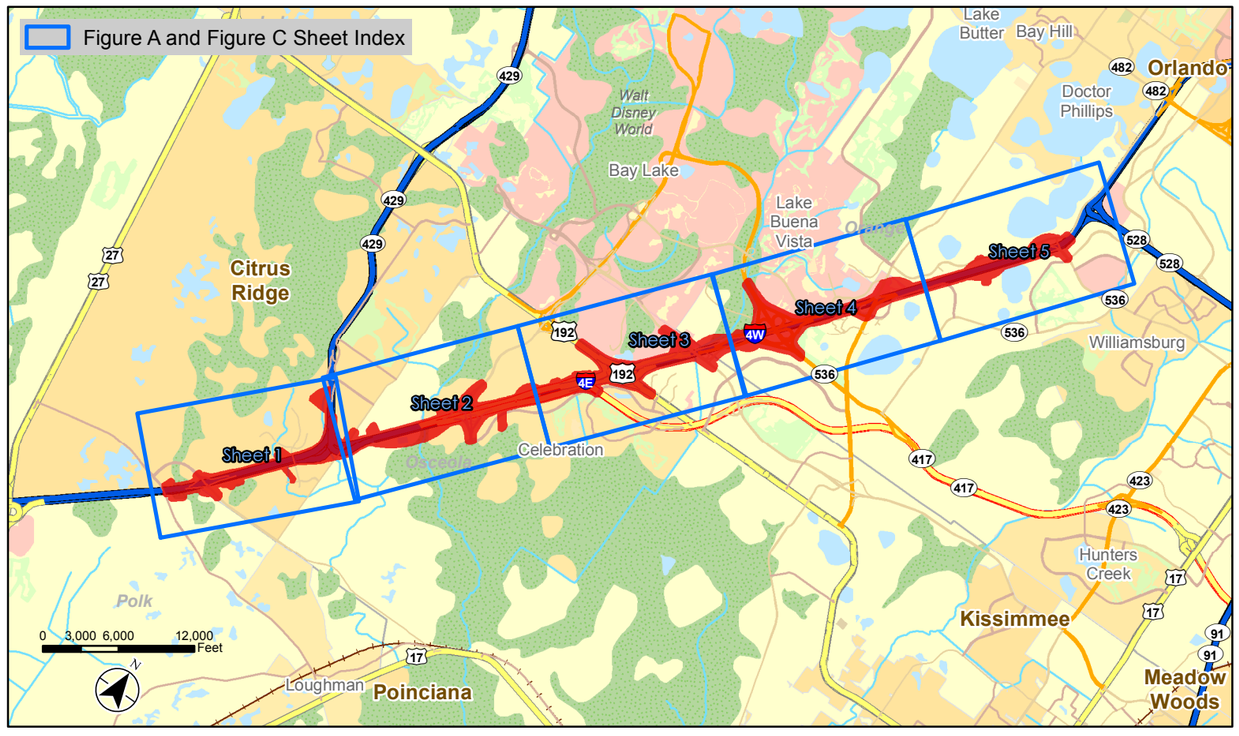
SR 400 (I-4) from West of SR 532 (Polk/Osceola County Line) to West of SR 528 Beachline Expressway

16320 Polk County
Begin: STA 604+50.00 - MP 31.607
End: STA 626+39.92 - MP 32.022

92130 Osceola County
Begin: STA 626+39.92 - MP 0.00
End: STA 11042+95 - MP 7.885

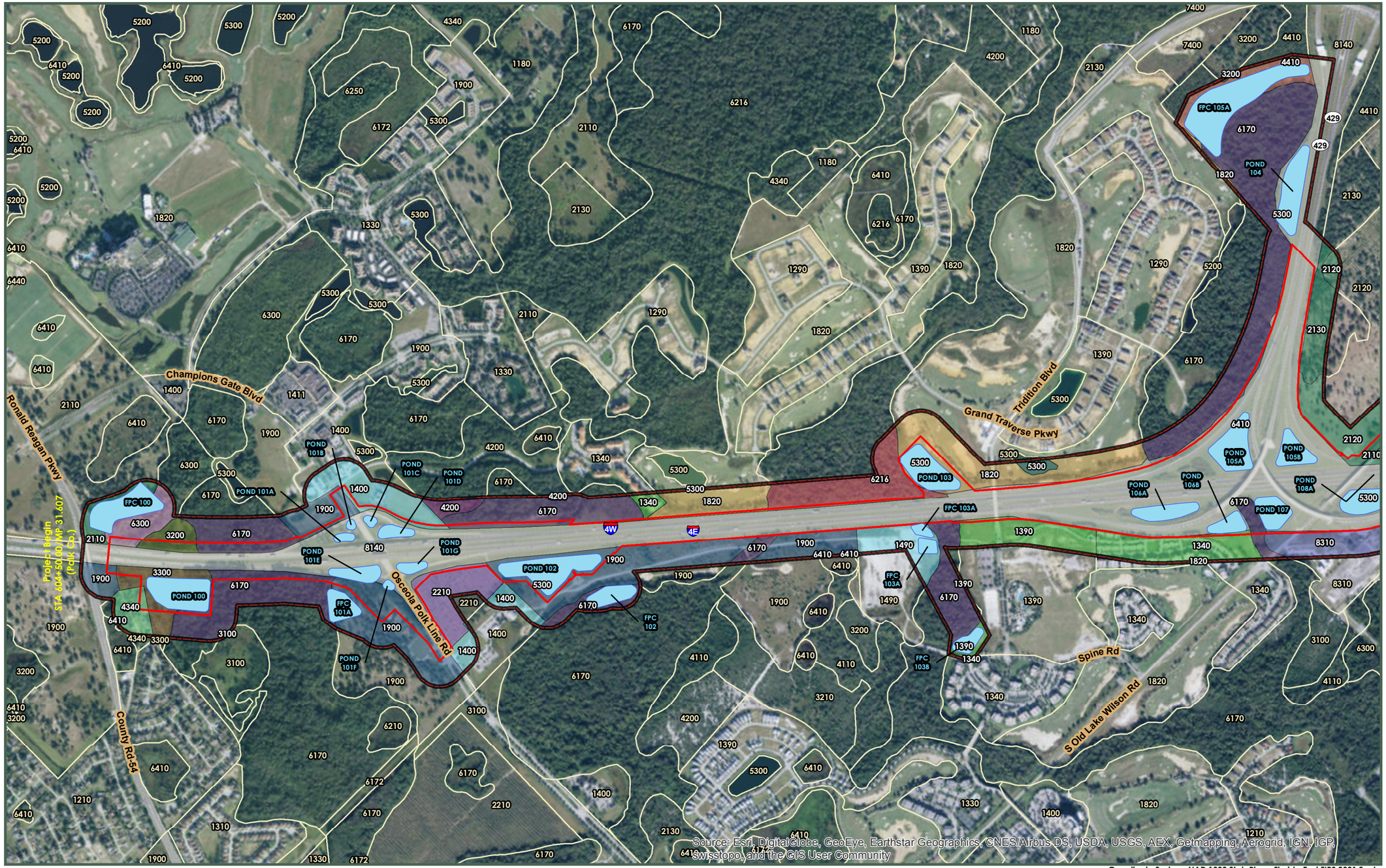
75280 Orange County
Begin: STA 1042+95 - MP 0.00
End: STA 1345+48.48 - MP 5.650





STN No. 2024230168

mleonard \ V:\2024\active\2024230168\100_environmental\design\drawing_gis\map_covers\100_150611.mxd



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Potential Pond Sites (06/05/15)

Land Use and Habitat Coverage

- 1110 FIXED SINGLE FAMILY UNITS
- 1300 RESIDENTIAL HIGH DENSITY
- 1400 COMMERCIAL & SERVICES
- 1700 INSTITUTIONAL
- 1800 RECREATIONAL
- 1900 OPEN LAND
- 2100 CROP & PASTURELAND
- 2200 TREE CROP
- 3100 HERBACEOUS (DRY PRAIRIE)
- 3200 UPLAND SHRUB AND BRUSHLAND
- 3300 MIXED RANGELAND
- 4100 UPLAND CONIFEROUS FORESTS
- 4200 UPLAND HARDWOOD FORESTS
- 4300 UPLAND HARDWOOD FORESTS
- 4400 TREE PLANTATIONS
- 5100 STREAMS & WATERWAYS
- 5200 LAKES
- 5300 RESERVOIRS
- 6100 WETLAND HARDWOOD FORESTS
- 6200 WETLAND CONIFEROUS FORESTS
- 6300 WETLAND FORESTED MIXED
- 6400 NON-FORESTED WETLANDS
- 7400 DISTURBED LAND
- 8140 ROADS AND HIGHWAYS
- 8310 ELECTRICAL POWER FACILITIES

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Land Use and Habitat Coverage Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W. of CR 532 to W. of SR 528 Beachline Expressway

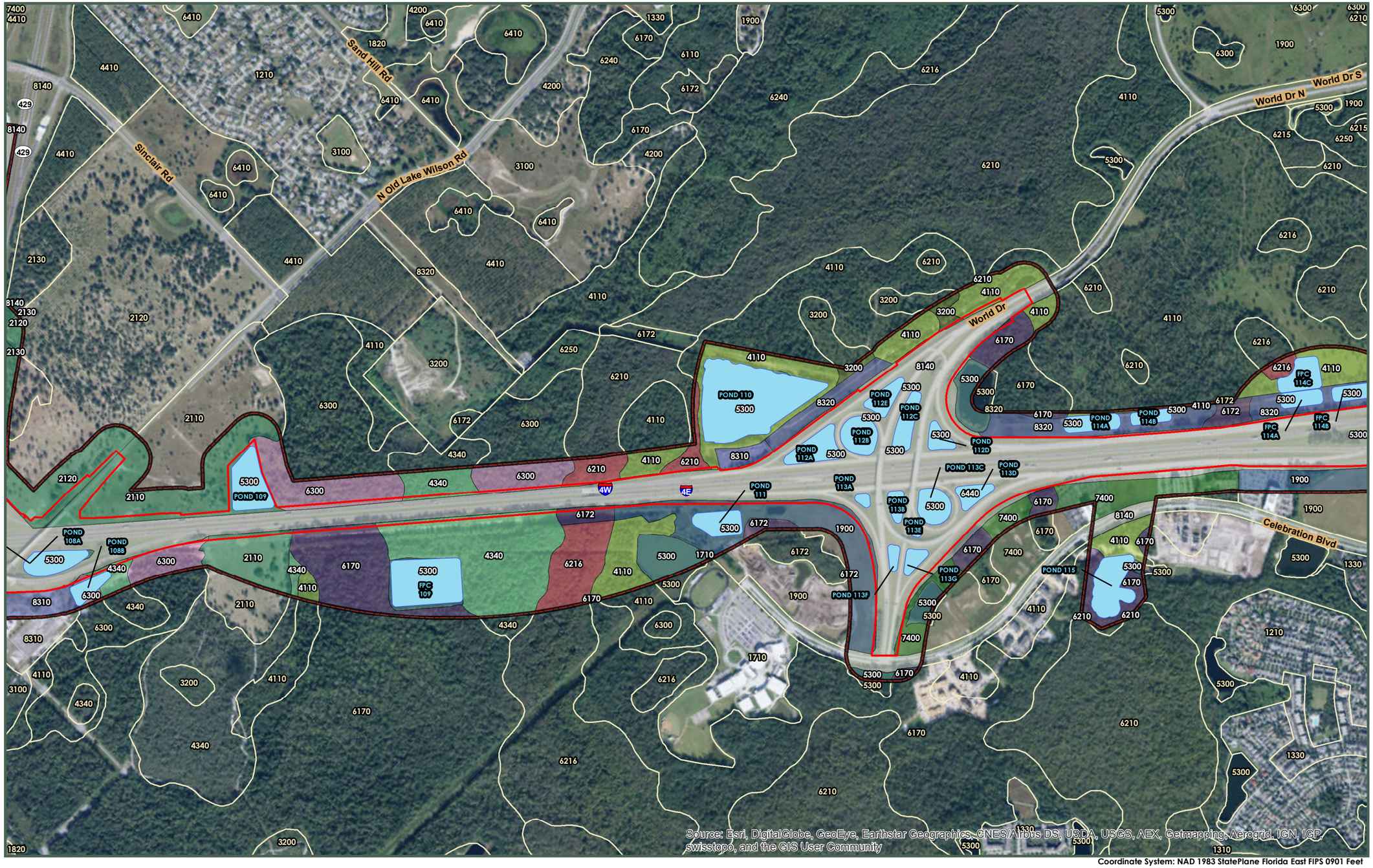
Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 1104 2+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Figure A -Land Use and Habitat Coverage Map: Sheet 1 of 5



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Potential Pond Sites (06/05/15)

Land Use and Habitat Coverage

- 1110 FIXED SINGLE FAMILY UNITS
- 1300 RESIDENTIAL HIGH DENSITY
- 1400 COMMERCIAL & SERVICES
- 1700 INSTITUTIONAL
- 1800 RECREATIONAL
- 1900 OPEN LAND
- 2100 CROP & PASTURELAND
- 2200 TREE CROP
- 3100 HERBACEOUS (DRY PRAIRIE)
- 3200 UPLAND SHRUB AND BRUSHLAND
- 3300 MIXED RANGELAND
- 4100 UPLAND CONIFEROUS FORESTS
- 4200 UPLAND HARDWOOD FORESTS
- 4300 UPLAND HARDWOOD FORESTS
- 4400 TREE PLANTATIONS
- 5100 STREAMS & WATERWAYS
- 5200 LAKES
- 5300 RESERVOIRS
- 6100 WETLAND HARDWOOD FORESTS
- 6200 WETLAND CONIFEROUS FORESTS
- 6300 WETLAND FORESTED MIXED
- 6400 NON-FORESTED WETLANDS
- 7400 DISTURBED LAND
- 8140 ROADS AND HIGHWAYS
- 8310 ELECTRICAL POWER FACILITIES

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Land Use and Habitat Coverage Map

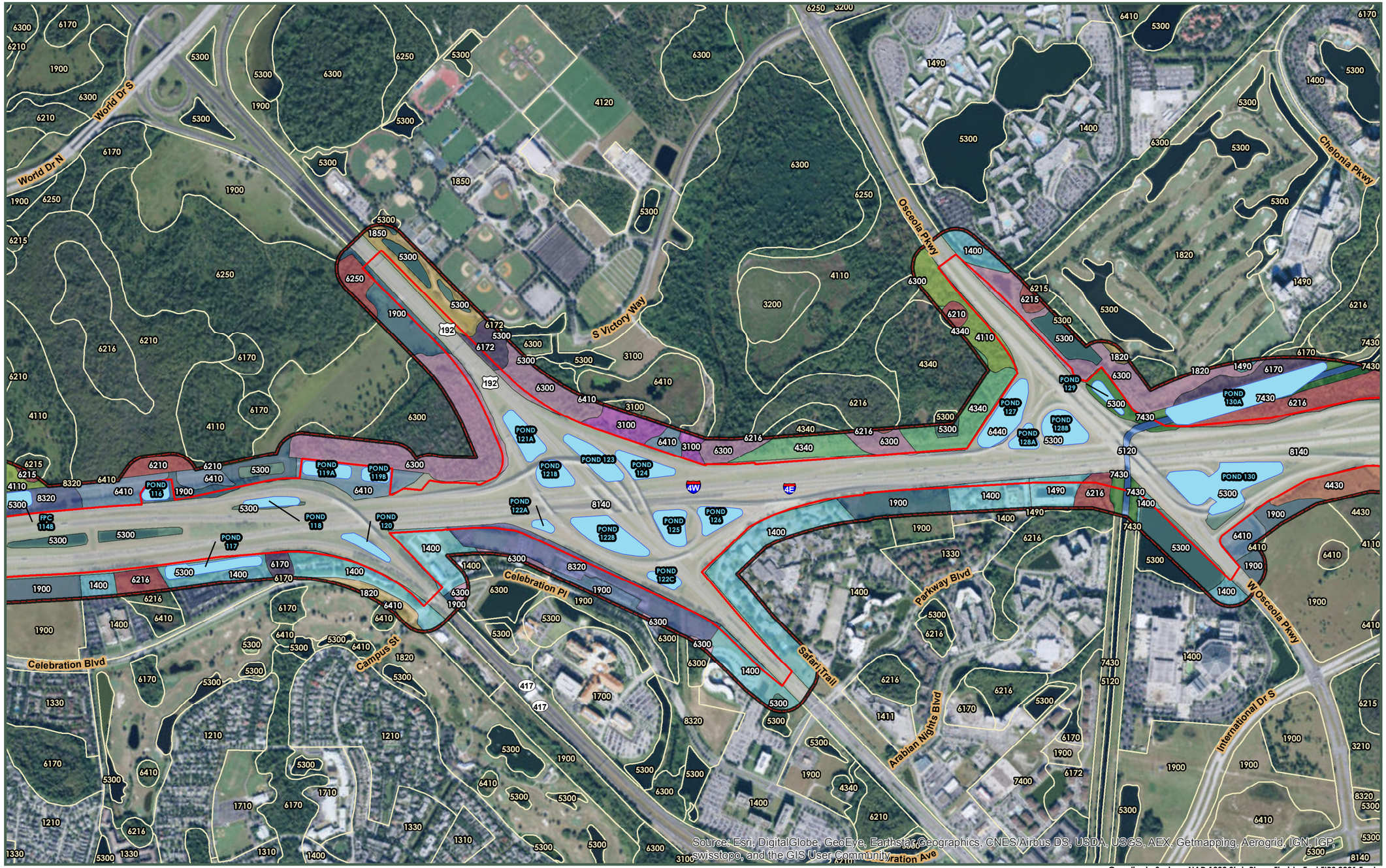
Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W. of CR 532 to W. of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Figure A -Land Use and Habitat Coverage Map: Sheet 2 of 5

mleonard \ V:\2024\active\202423016 8\100_envrionmental\design\drawing_gis\432100_1\phase1\mxd\cser_rdwy100_150611.mxd



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Potential Pond Sites (06/05/15)

Land Use and Habitat Coverage

- 1110 FIXED SINGLE FAMILY UNITS
- 1300 RESIDENTIAL HIGH DENSITY
- 1400 COMMERCIAL & SERVICES
- 1700 INSTITUTIONAL
- 1800 RECREATIONAL
- 1900 OPEN LAND
- 2100 CROP & PASTURELAND
- 2200 TREE CROP
- 3100 HERBACEOUS (DRY PRAIRIE)
- 3200 UPLAND SHRUB AND BRUSHLAND
- 3300 MIXED RANGELAND
- 4100 UPLAND CONIFEROUS FORESTS
- 4200 UPLAND HARDWOOD FORESTS
- 4300 UPLAND HARDWOOD FORESTS
- 4400 TREE PLANTATIONS
- 5100 STREAMS & WATERWAYS
- 5200 LAKES
- 5300 RESERVOIRS
- 6100 WETLAND HARDWOOD FORESTS
- 6200 WETLAND CONIFEROUS FORESTS
- 6300 WETLAND FORESTED MIXED
- 6400 NON-FORESTED WETLANDS
- 7400 DISTURBED LAND
- 8140 ROADS AND HIGHWAYS
- 8310 ELECTRICAL POWER FACILITIES

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Land Use and Habitat Coverage Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W. of CR 532 to W. of SR 528 Beachline Expressway

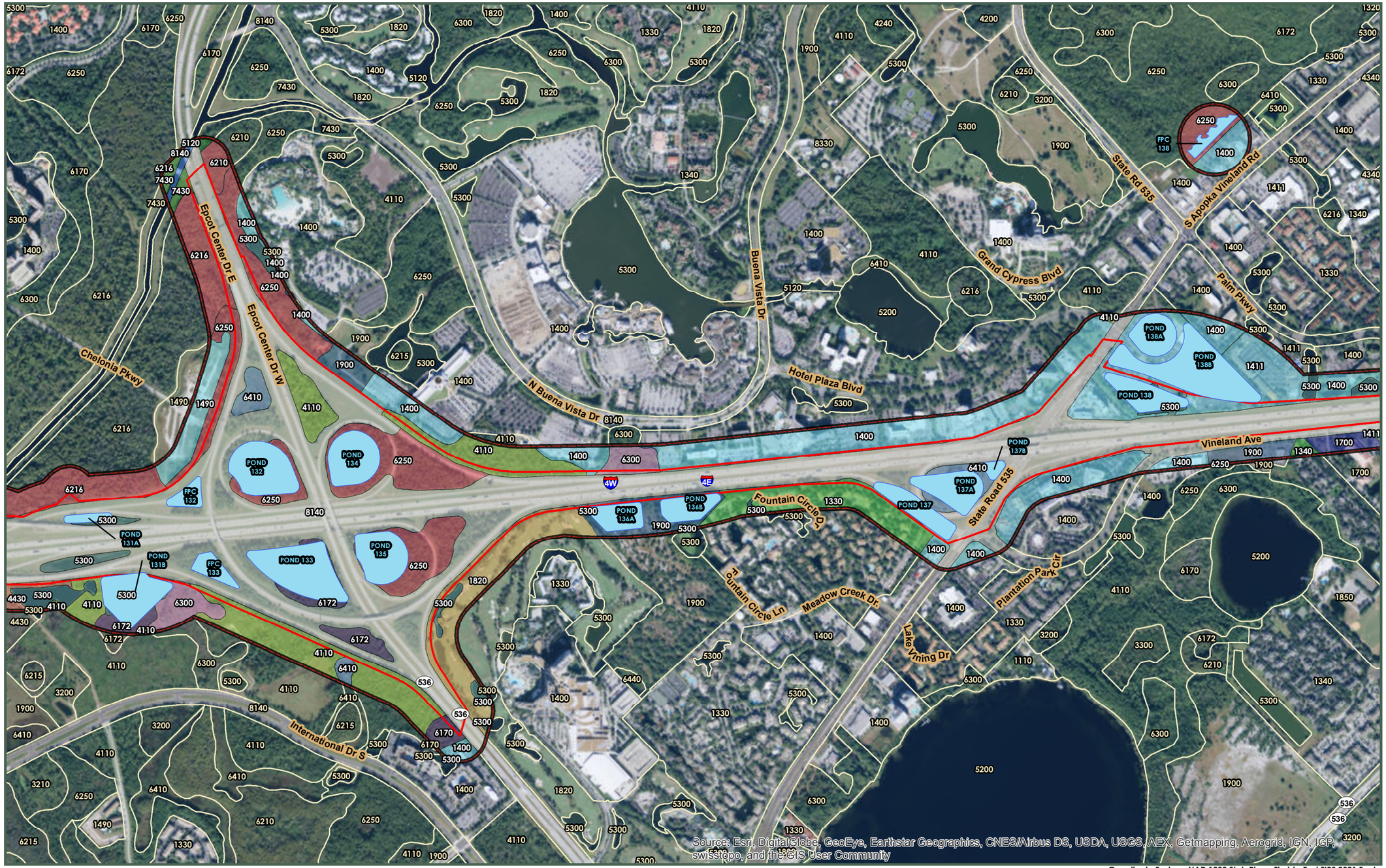
Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Figure A -Land Use and Habitat Coverage Map: Sheet 3 of 5



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Potential Pond Sites (06/05/15)

Land Use and Habitat Coverage

- 1110 FIXED SINGLE FAMILY UNITS
- 1300 RESIDENTIAL HIGH DENSITY
- 1400 COMMERCIAL & SERVICES
- 1700 INSTITUTIONAL
- 1800 RECREATIONAL
- 1900 OPEN LAND
- 2100 CROP & PASTURELAND
- 2200 TREE CROP
- 3100 HERBACEOUS (DRY PRAIRIE)
- 3200 UPLAND SHRUB AND BRUSHLAND
- 3300 MIXED RANGELAND
- 4100 UPLAND CONIFEROUS FORESTS
- 4200 UPLAND HARDWOOD FORESTS
- 4300 UPLAND HARDWOOD FORESTS
- 4400 TREE PLANTATIONS
- 5100 STREAMS & WATERWAYS
- 5200 LAKES
- 5300 RESERVOIRS
- 6100 WETLAND HARDWOOD FORESTS
- 6200 WETLAND CONIFEROUS FORESTS
- 6300 WETLAND FORESTED MIXED
- 6400 NON-FORESTED WETLANDS
- 7400 DISTURBED LAND
- 8140 ROADS AND HIGHWAYS
- 8310 ELECTRICAL POWER FACILITIES

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Land Use and Habitat Coverage Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W. of CR 532 to W. of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

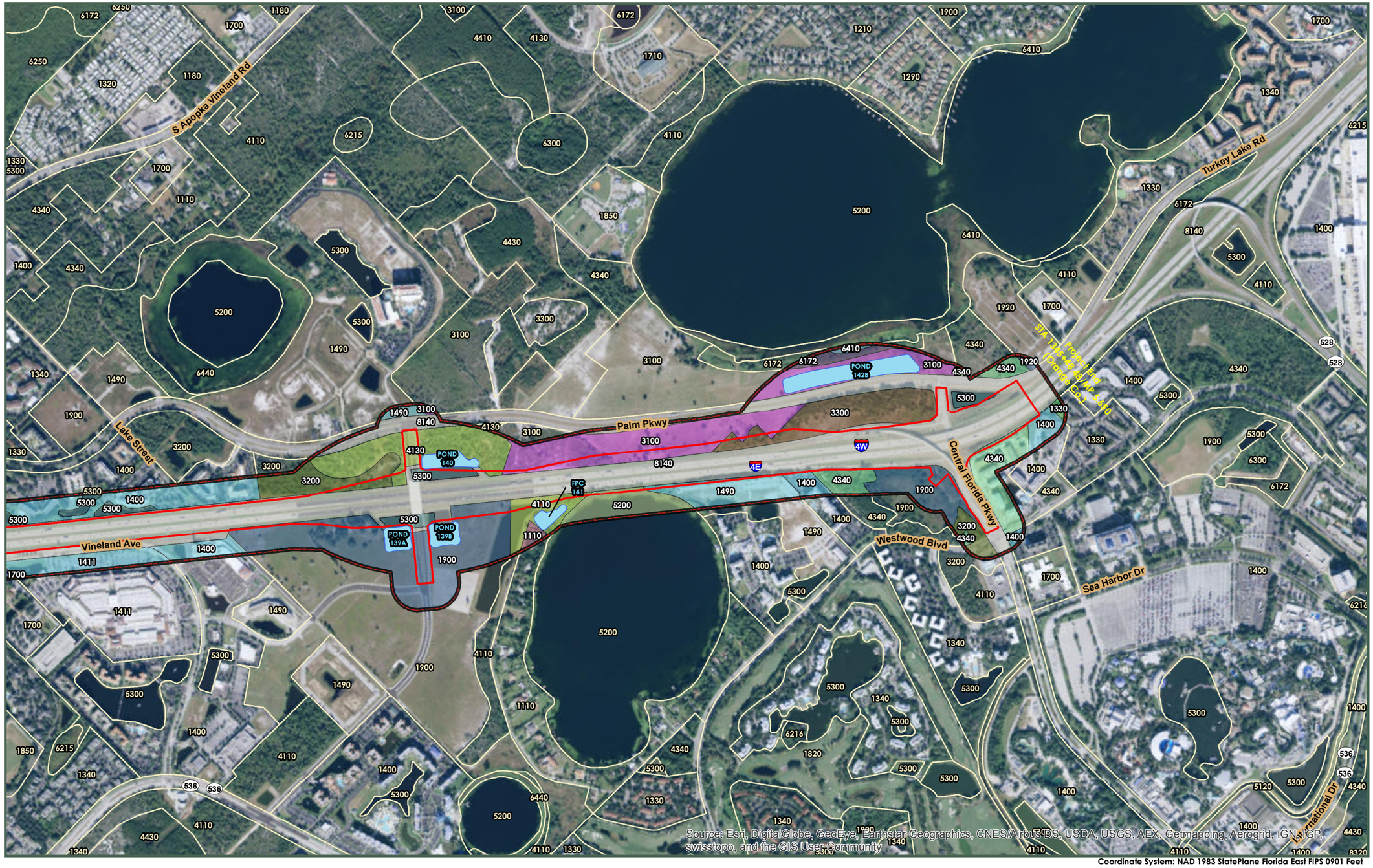
Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Figure A -Land Use and Habitat Coverage Map: Sheet 4 of 5

mleonard \ V:\2024\active\2024230168\100_envrionmental\design\drawing_gis\432100_1\phase1\mxd\cser_rdwy100_150611.mxd



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Potential Pond Sites (06/05/15)

Land Use and Habitat Coverage

- 1110 FIXED SINGLE FAMILY UNITS
- 1300 RESIDENTIAL HIGH DENSITY
- 1400 COMMERCIAL & SERVICES
- 1700 INSTITUTIONAL
- 1800 RECREATIONAL
- 1900 OPEN LAND
- 2100 CROP & PASTURELAND
- 2200 TREE CROP
- 3100 HERBACEOUS (DRY PRAIRIE)
- 3200 UPLAND SHRUB AND BRUSHLAND
- 3300 MIXED RANGELAND
- 4100 UPLAND CONIFEROUS FORESTS
- 4200 UPLAND HARDWOOD FORESTS
- 4300 UPLAND HARDWOOD FORESTS
- 4400 TREE PLANTATIONS
- 5100 STREAMS & WATERWAYS
- 5200 LAKES
- 5300 RESERVOIRS
- 6100 WETLAND HARDWOOD FORESTS
- 6200 WETLAND CONIFEROUS FORESTS
- 6300 WETLAND FORESTED MIXED
- 6400 NON-FORESTED WETLANDS
- 7400 DISTURBED LAND
- 8140 ROADS AND HIGHWAYS
- 8310 ELECTRICAL POWER FACILITIES

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Land Use and Habitat Coverage Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W. of CR 532 to W. of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 1104 2+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

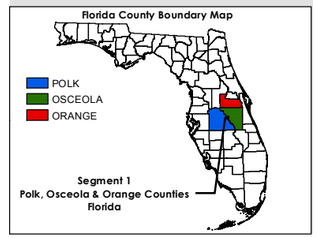
0 575 1,150 2,300 Feet

Figure A -Land Use and Habitat Coverage Map: Sheet 5 of 5

mleonard \ V:\2024\active\202423016 8\100_envrionmental\design\drawing_gis\432100_1\phase1\mxd\cser_rdwy100_150611.mxd

Map Key

- Florida County Boundary Limits
- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits



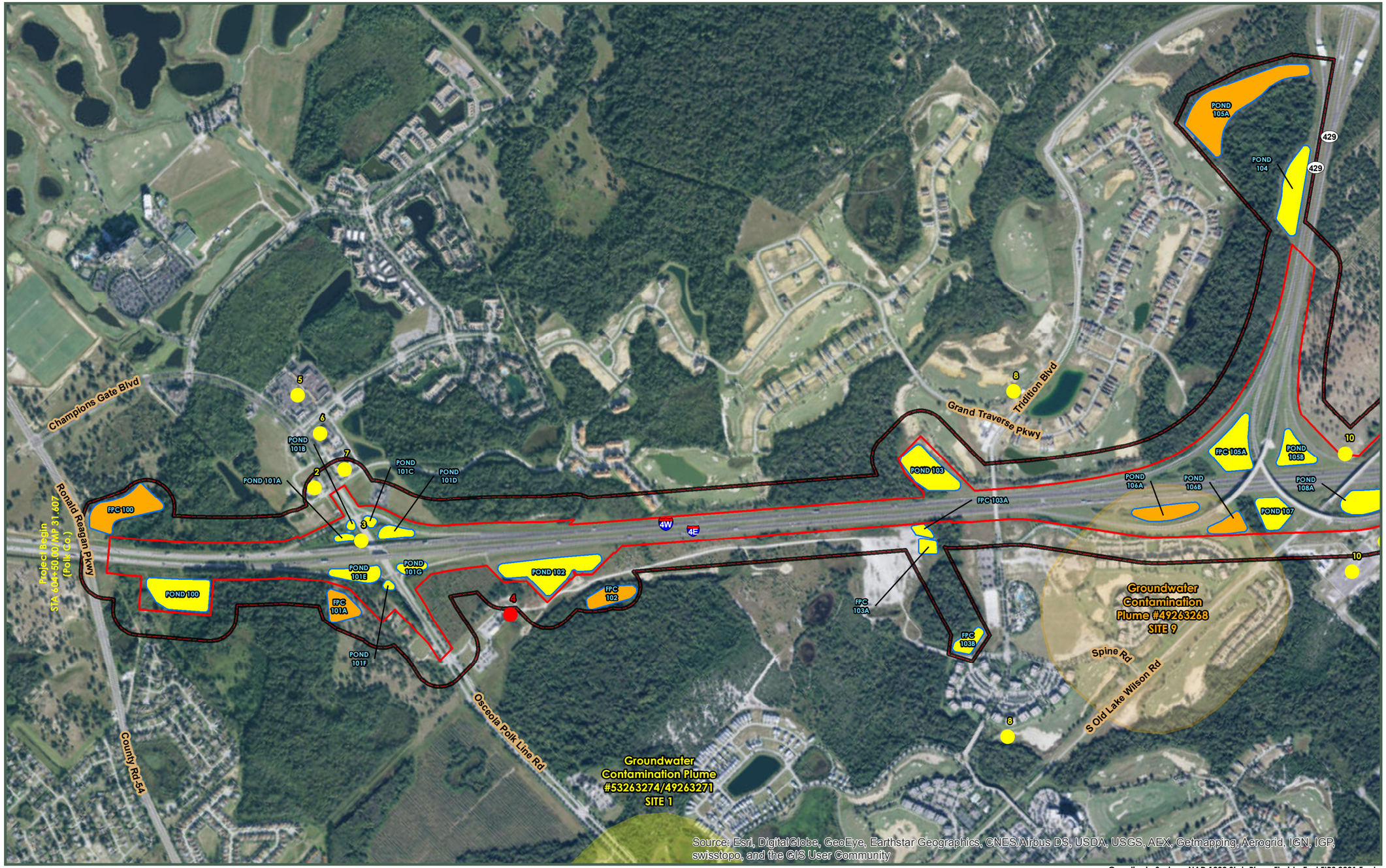
Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - USGS Topographical Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W. of CR 532 to W. of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 6/18/2015
Technical Review by: mDrauer 6/18/2015
Independent Review by: jMoore 6/18/2015

Figure B- Segment 1: USGS Topographical Map



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits (06/11/15)

Potential Pond Sites (06/05/15)

- Low Risk Rating
- Medium Risk Rating

Contamination Sites Risk Ratings

- No
- Low
- Medium
- High

Groundwater Contamination Plumes

- Low Risk Rating
- Medium Risk Rating

Medium/High Risk Sites

- Site 4: Austin Outdoor/Reunion Development Parcel
- Site 9: Groundwater Contamination #49263268
- Site 13: P&D Landfill
- Site 16: Patco Montgomery Spill Site
- Site 30: Orlando Sun Resort & Spa
- Site 59: Sunshine Food Mart #222/ 2nd City Chervon
- Site 74: Blue Seas Associations Citizen Site
- Site 82: Places of Learning Sea World Marketing
- Pond Sites: FPC100, FPC100A, FPC102, FPC105A, 106A, 106B, 136B, 138, 138A, 138B,142B

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Contamination Sites Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W of CR 532 to W of SR 528 Beachline Expressway

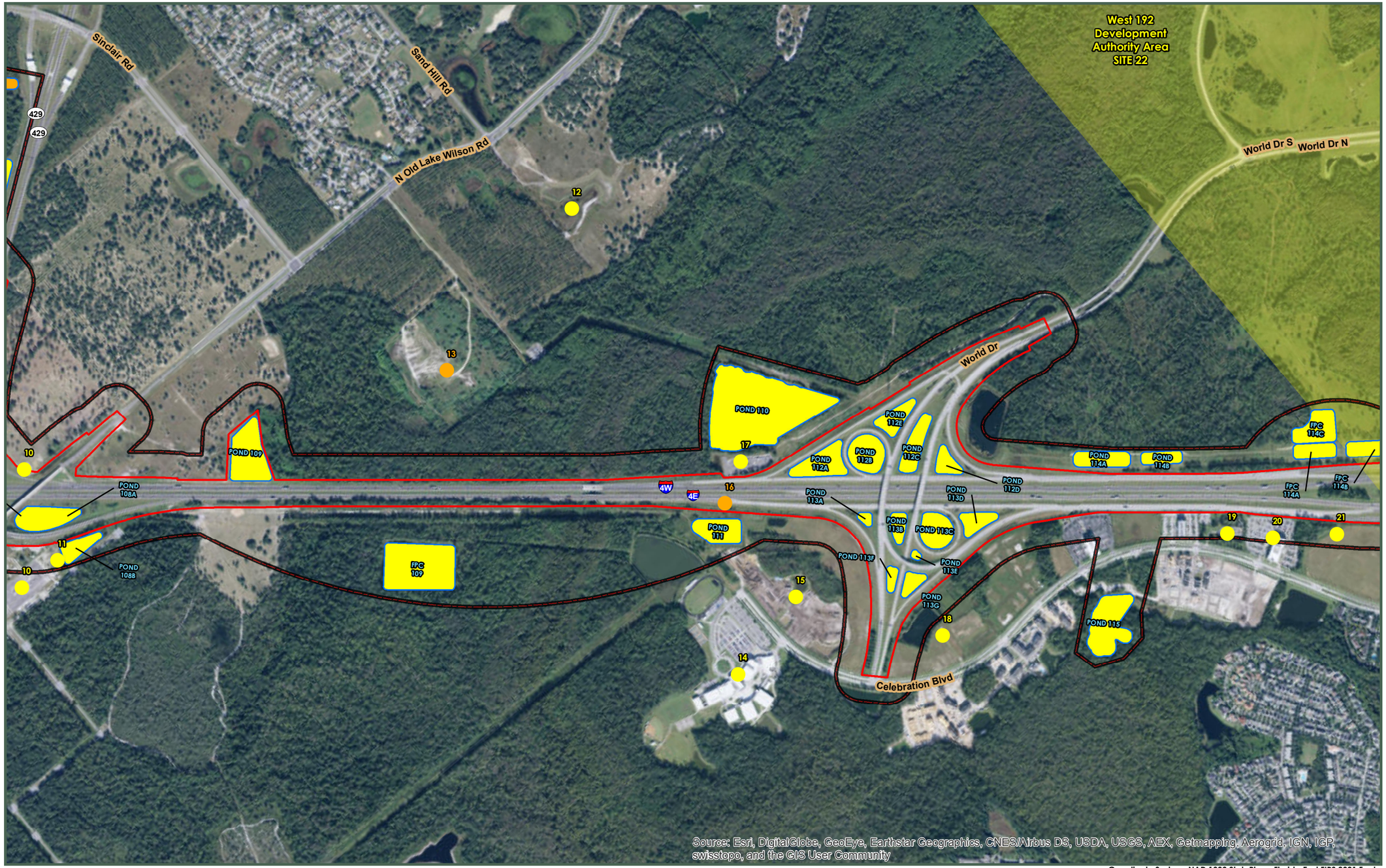
Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Figure C - Contamination Sites Map: Sheet Page 1 of 5



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits (06/11/15)

Potential Pond Sites (06/05/15)

- Low Risk Rating
- Medium Risk Rating

Contamination Sites Risk Ratings

- No
- Low
- Medium
- High

Groundwater Contamination Plumes

- Low Risk Rating
- Medium Risk Rating

Medium/High Risk Sites

- Site 4: Austin Outdoor/Reunion Development Parcel
- Site 9: Groundwater Contamination #49263268
- Site 13: P&D Landfill
- Site 16: Patco Montgomery Spill Site
- Site 30: Orlando Sun Resort & Spa
- Site 59: Sunshine Food Mart #222/ 2nd City Chervon
- Site 74: Blue Seas Associations Citizen Site
- Site 82: Places of Learning Sea World Marketing
- Pond Sites: FPC100, FPC100A, FPC102, FPC105A, 106A, 106B, 136B, 138, 138A, 138B,142B

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Contamination Sites Map

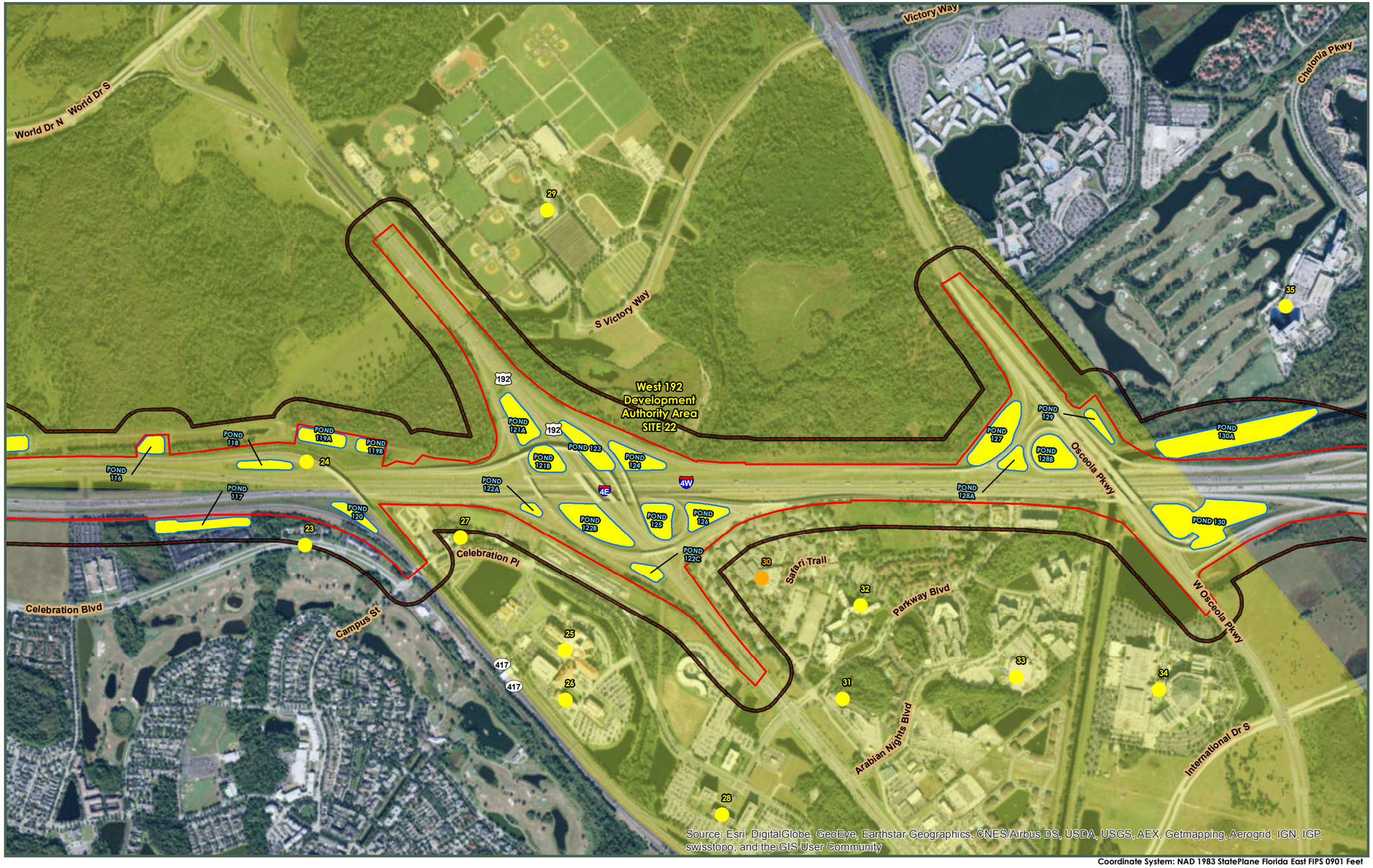
Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W of CR 532 to W of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Figure C - Contamination Sites Map: Sheet Page 2 of 5

mleonard \ V:\2024\active\2024230168\100_envrionmental\design\drawing_gis\432100_1\phase1\mxd\cser_rdwy100_150611.mxd



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits (06/11/15)

Potential Pond Sites (06/05/15)

- Low Risk Rating
- Medium Risk Rating

Contamination Sites Risk Ratings

- No
- Low
- Medium
- High

Groundwater Contamination Plumes

- Low Risk Rating
- Medium Risk Rating

Medium/High Risk Sites

- Site 4: Austin Outdoor/Reunion Development Parcel
- Site 9: Groundwater Contamination #49263268
- Site 13: P&D Landfill
- Site 16: Patco Montgomery Spill Site
- Site 30: Orlando Sun Resort & Spa
- Site 59: Sunshine Food Mart #222/ 2nd City Chervon
- Site 74: Blue Seas Associations Citizen Site
- Site 82: Places of Learning Sea World Marketing
- Pond Sites: FPC100, FPC100A, FPC102, FPC105A, 106A, 106B, 136B, 138, 138A, 138B,142B

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Contamination Sites Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W of CR 532 to W of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 11042+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

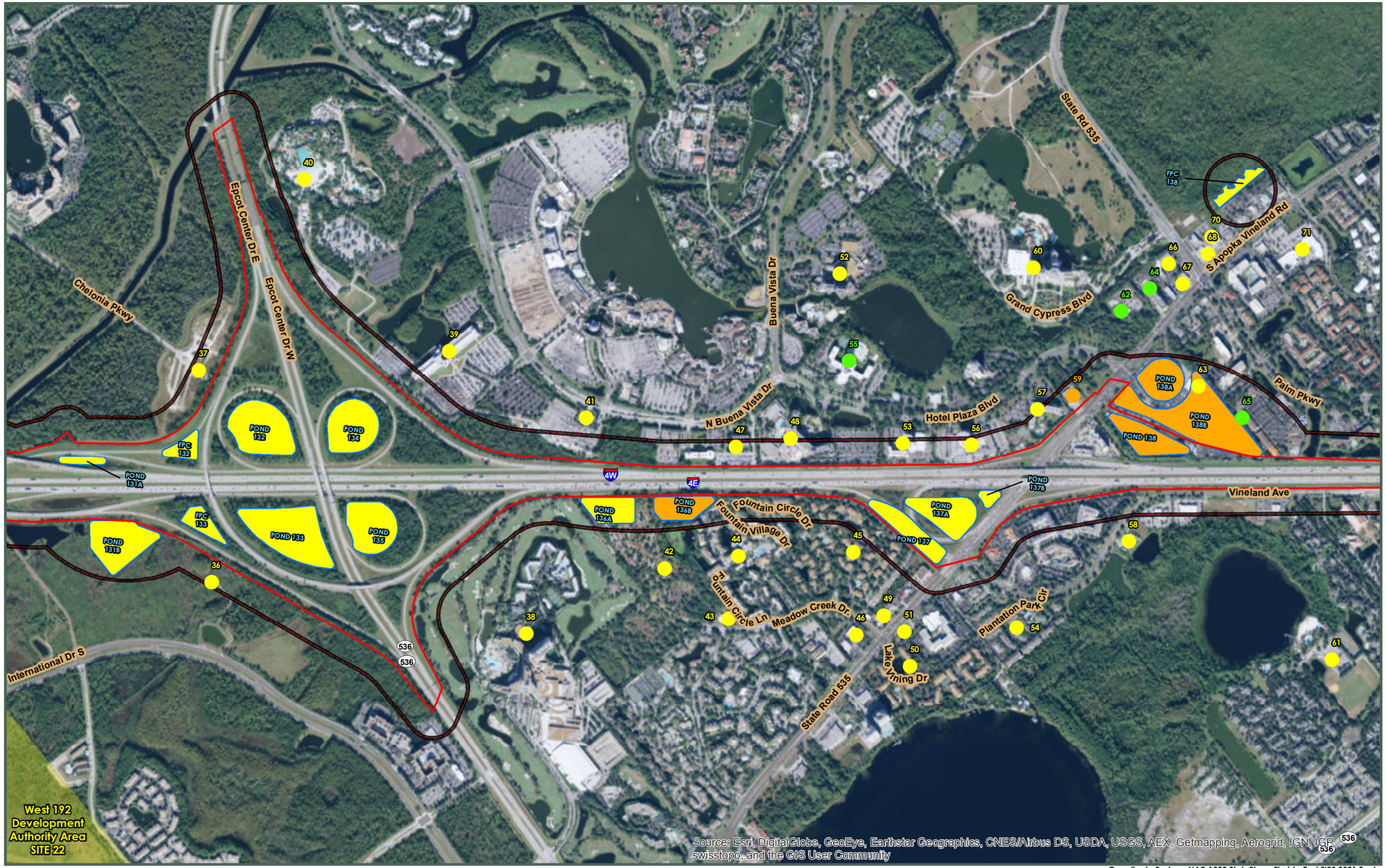
Figure C - Contamination Sites Map: Sheet Page 3 of 5

1 " = 1,150 '

SR 400 (I-4) Project Development and Environment (PD&E) Study | FM No. 432100-1-22-01

202423016 8

mleonard \ V:\2024\active\2024230168\100_envrionmental\design\drawing_gis\432100_1\phase1\mxd\cser_rdwy100_150611.mxd



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits (06/11/15)

Potential Pond Sites (06/05/15)

- Low Risk Rating
- Medium Risk Rating

Contamination Sites Risk Ratings

- No
- Low
- Medium
- High

Groundwater Contamination Plumes

- Low Risk Rating
- Medium Risk Rating

Medium/High Risk Sites

- Site 4: Austin Outdoor/Reunion Development Parcel
- Site 9: Groundwater Contamination #49263268
- Site 13: P&D Landfill
- Site 16: Patco Montgomery Spill Site
- Site 30: Orlando Sun Resort & Spa
- Site 59: Sunshine Food Mart #222/ 2nd City Chervon
- Site 74: Blue Seas Associations Citizen Site
- Site 82: Places of Learning Sea World Marketing
- Pond Sites: FPC100, FPC100A, FPC102, FPC105A, 106A, 106B, 136B, 138, 138A, 138B,142B

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

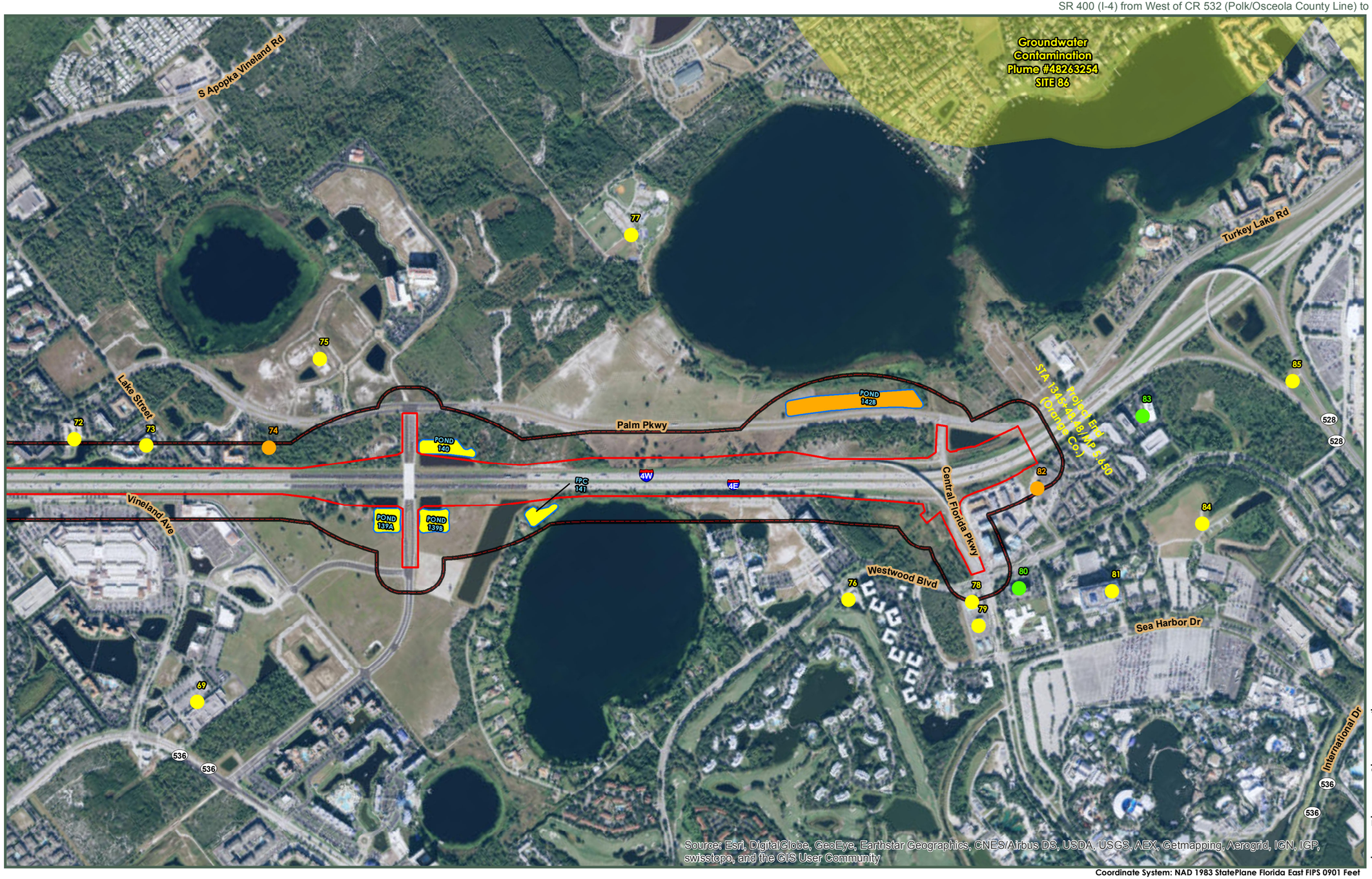
Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Contamination Sites Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W of CR 532 to W of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 1104+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Figure C - Contamination Sites Map: Sheet Page 4 of 5



Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (05/12/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits (06/11/15)

Potential Pond Sites (06/05/15)

- Low Risk Rating
- Medium Risk Rating

Contamination Sites Risk Ratings

- No
- Low
- Medium
- High

Groundwater Contamination Plumes

- Low Risk Rating
- Medium Risk Rating

Medium/High Risk Sites

- Site 4: Austin Outdoor/Reunion Development Parcel
- Site 9: Groundwater Contamination #49263268
- Site 13: P&D Landfill
- Site 16: Patco Montgomery Spill Site
- Site 30: Orlando Sun Resort & Spa
- Site 59: Sunshine Food Mart #222/ 2nd City Chervon
- Site 74: Blue Seas Associations Citizen Site
- Site 82: Places of Learning Sea World Marketing
- Pond Sites: FPC100, FPC100A, FPC102, FPC105A, 106A, 106B, 136B, 138, 138A, 138B,142B

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 1 - Contamination Sites Map

Client/Project:
Florida Department of Transportation- D5
SR 400 (I-4) Beyond the Ultimate PD&E Study
Segment 1: SR 400 (I-4) from W of CR 532 to W of SR 528 Beachline Expressway

Project Location:
Polk Co.-Begin: STA 604+50.00/MP 31.607 | End: STA 626+39.92/MP 32.022
Osceola Co.-Begin: STA 626+39.92/MP 0.00 | End: STA 1104+95/MP 7.885
Orange Co.-Begin: STA 1042+95/MP 0.00 | End: STA 1345+48.48/MP 5.650

Prepared by: mLeonard 7/6/2015
Technical Review by: mDrauer 7/6/2015
Independent Review by: jMoore 7/6/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 575 1,150 2,300 Feet

Figure C - Contamination Sites Map: Sheet Page 5 of 5

APPENDIX B
Photos

Pond Site Photos

I-4 PD&E Segment 1 Pond Site Photographs

Pond Site FPC 100

Pond Site 100

Pond Site FPC 101A

Pond Site 101A

Pond Site 101B

Pond Site 101C

Pond Site 101D

Pond Site 101E

Pond Site 101F

Pond Site 101G

Pond Site 102

Pond Site FPC 102

Pond Site 103

Pond Site FPC 103A

Pond Site FPC 103B

Pond Site 104

Pond Site FPC 105A

Pond Site 105A

Pond Site 105B

Pond Site 106A

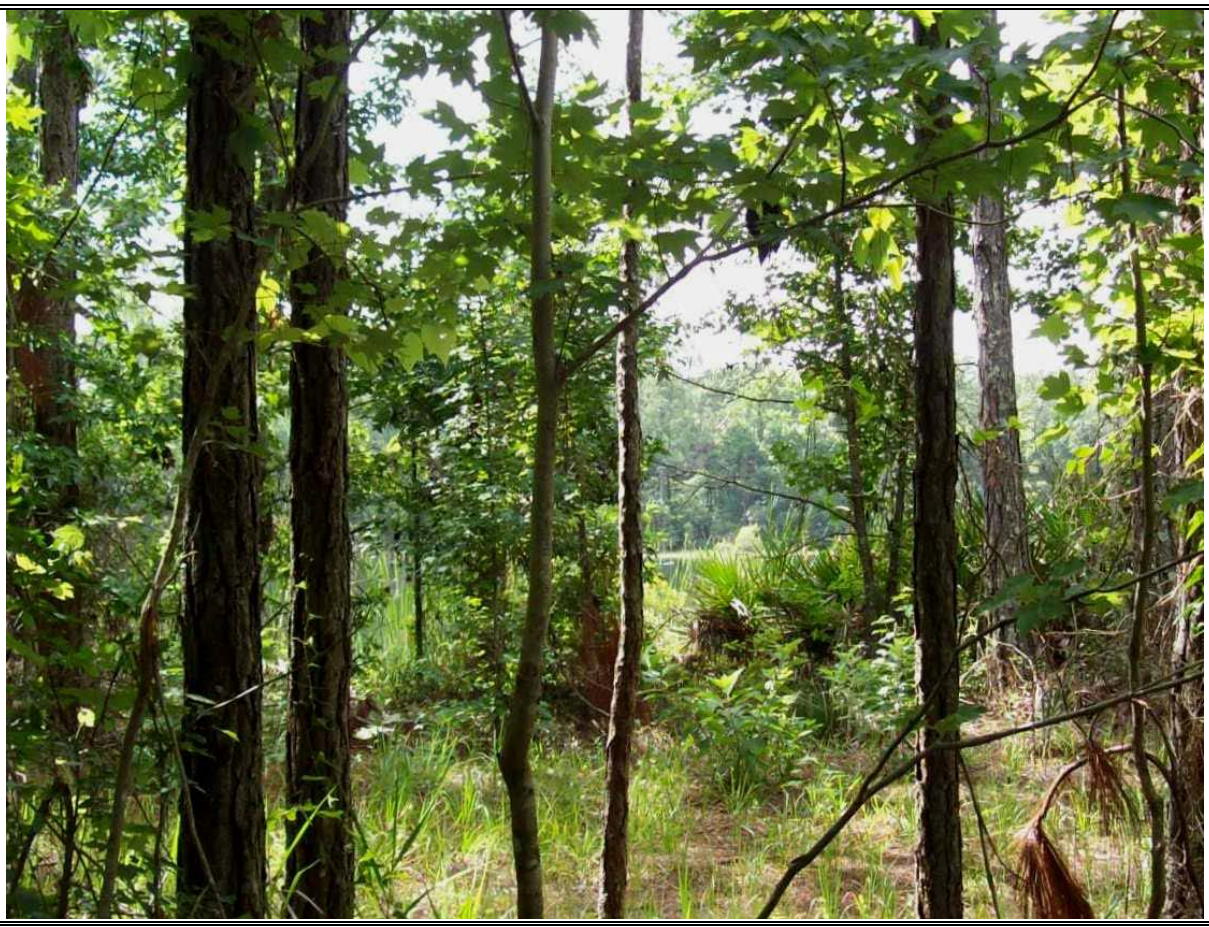
Pond Site 106B

Pond Site 107

Pond Site 108A

Pond Site 108B

Pond Site 109



Pond Site FPC 109

Pond Site 110

Pond Site 110: Empty Drums

Pond Site 111

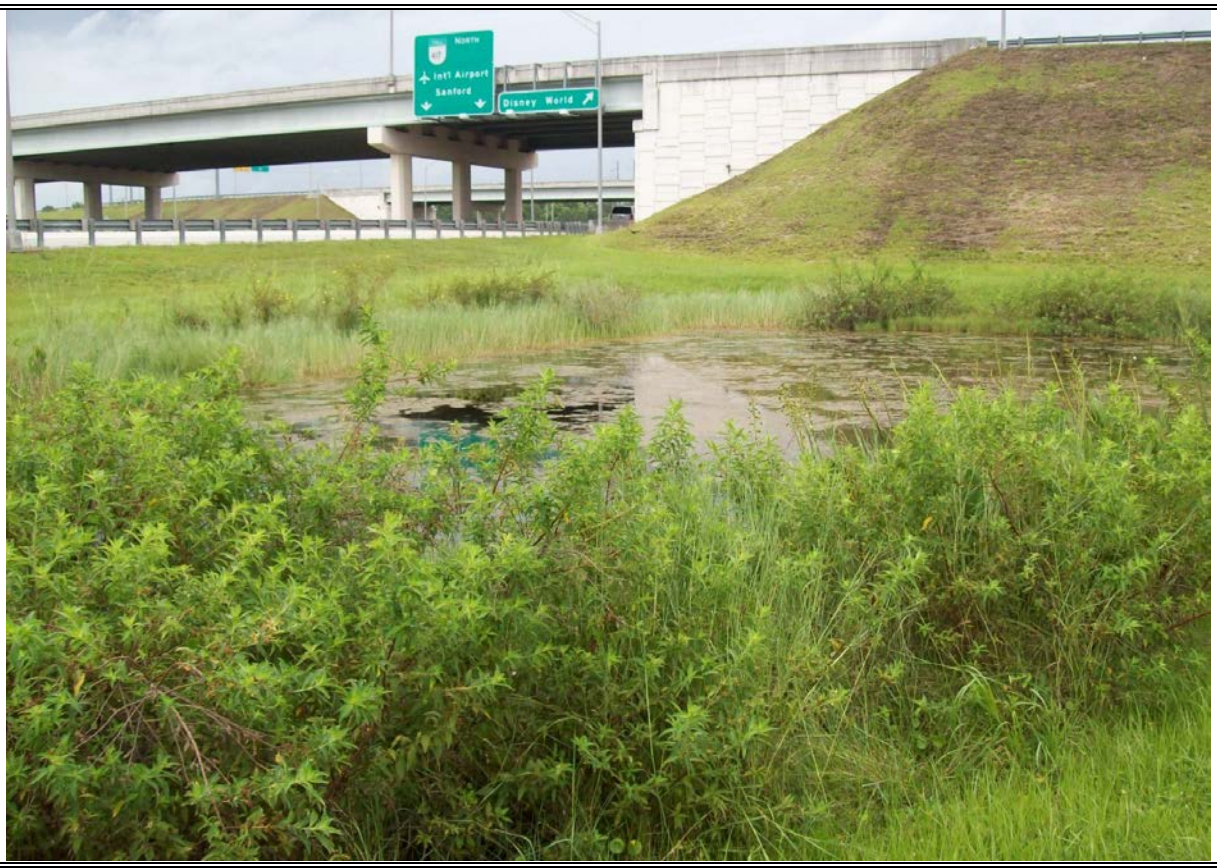
Pond Site 112A

Pond Site 112B

Pond Site 112C

Pond Site 112D

Pond Site 112E



Pond Site 113A

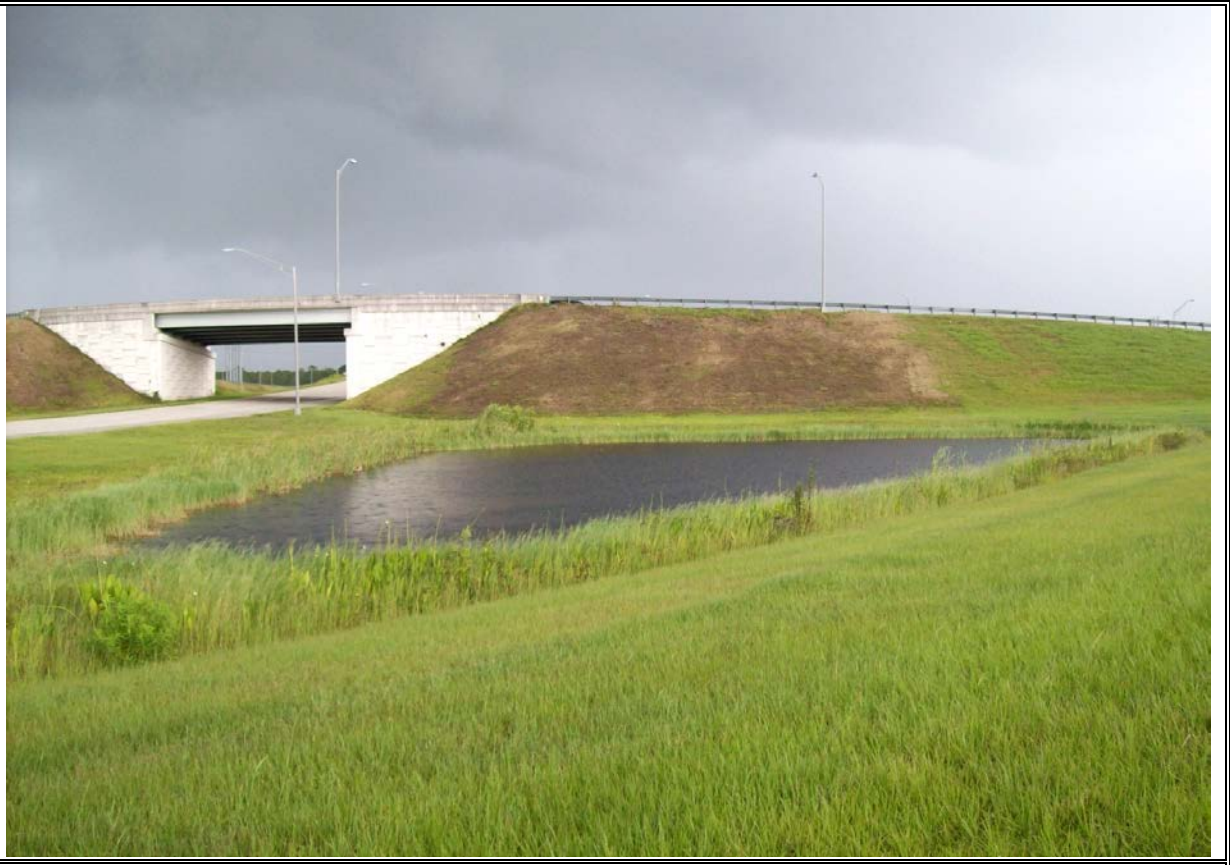
Pond Site 113B

Pond Site 113C

Pond Site 113D

Pond Site 113E

Pond Site 113F



Pond Site 113G

Pond Site 114A

Pond Site 114B

Pond Site FPC 114A

Pond Site FPC 114B

Pond Site FPC 114C: Cypress area

Pond Site FPC 114C: Pasture area

Pond Site 115

Pond Site 116

Pond Site 117

Pond Site 118

Pond Site 119A

Pond Site 119B

Pond Site 120

Pond Site 121A

Pond Site 121B

Pond Site 122A

Pond Site 122B

Pond Site 122C

Pond Site 123

Pond Site 124

Pond Site 125

Pond Site 126

Pond Site 127

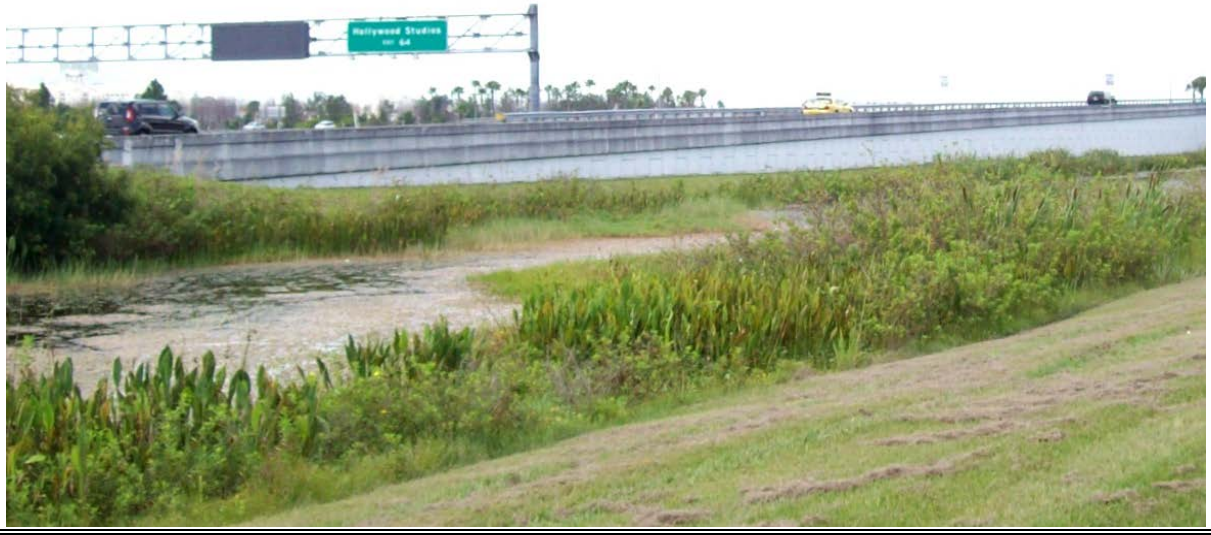
Pond Site 128A

Pond Site 128B

Pond Site 129

Pond Site 130

Pond Site 130A



Pond Site 131A

Pond Site 131B

Pond Site FPC 132

Pond Site 132

Pond Site FPC 133

Pond Site 133

Pond Site 134

Pond Site 135

Pond Site 136A: Existing pond

Pond Site 136A: Open sandy area

Pond Site 136B

Pond Site 136B: Abandoned structure

Pond Site 136B: Discarded paint cans

Pond Site 137

Pond Site 137A

Pond Site 137B

Pond Site 138

Pond Site 138A

Pond Site 138B

Pond Site FPC 138

Pond Site 139A

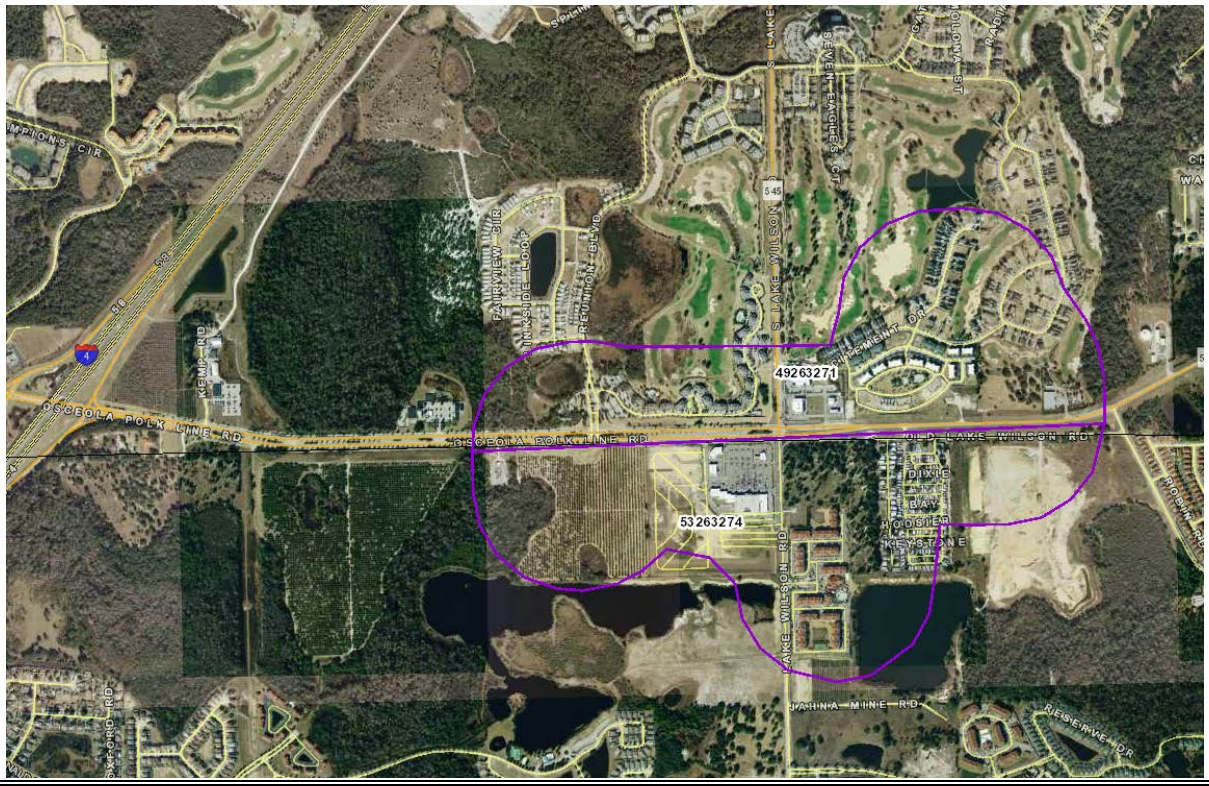
Pond Site 139B

Pond Site 140

Pond Site FPC 141

Pond Site 142B

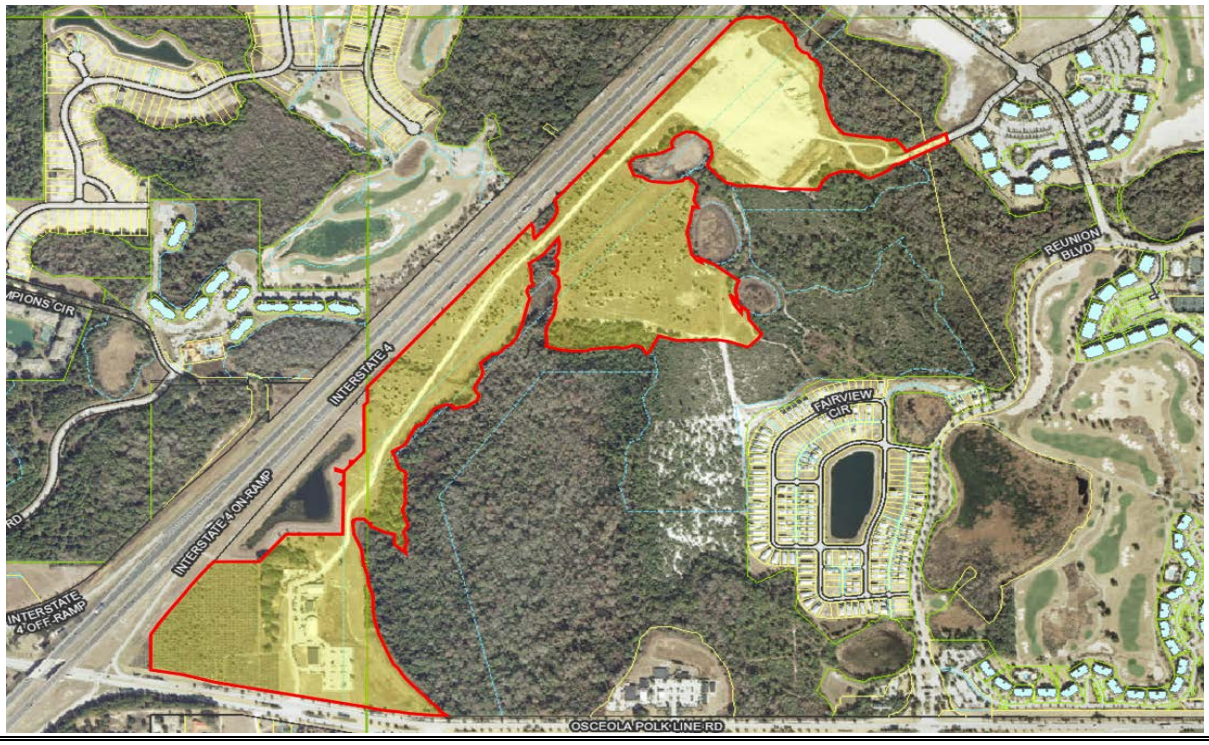
Contamination Site Photos



Site 1:Groundwater Contamination Plume #53263274/49263271

Site 2: Circle K #2708968

Site 3: FDOT Diesel Powered Emergency Generator A



Site 4: Austin Outdoor, Reunion Development Parcel

Site 4: Austin Outdoor, Reunion Development Parcel

Site 4: Austin Outdoor, Reunion Development Parcel

Site 4: Austin Outdoor, Reunion Development Parcel

Site 4: Austin Outdoor, Reunion Development Parcel

Site 4: Austin Outdoor, Reunion Development Parcel

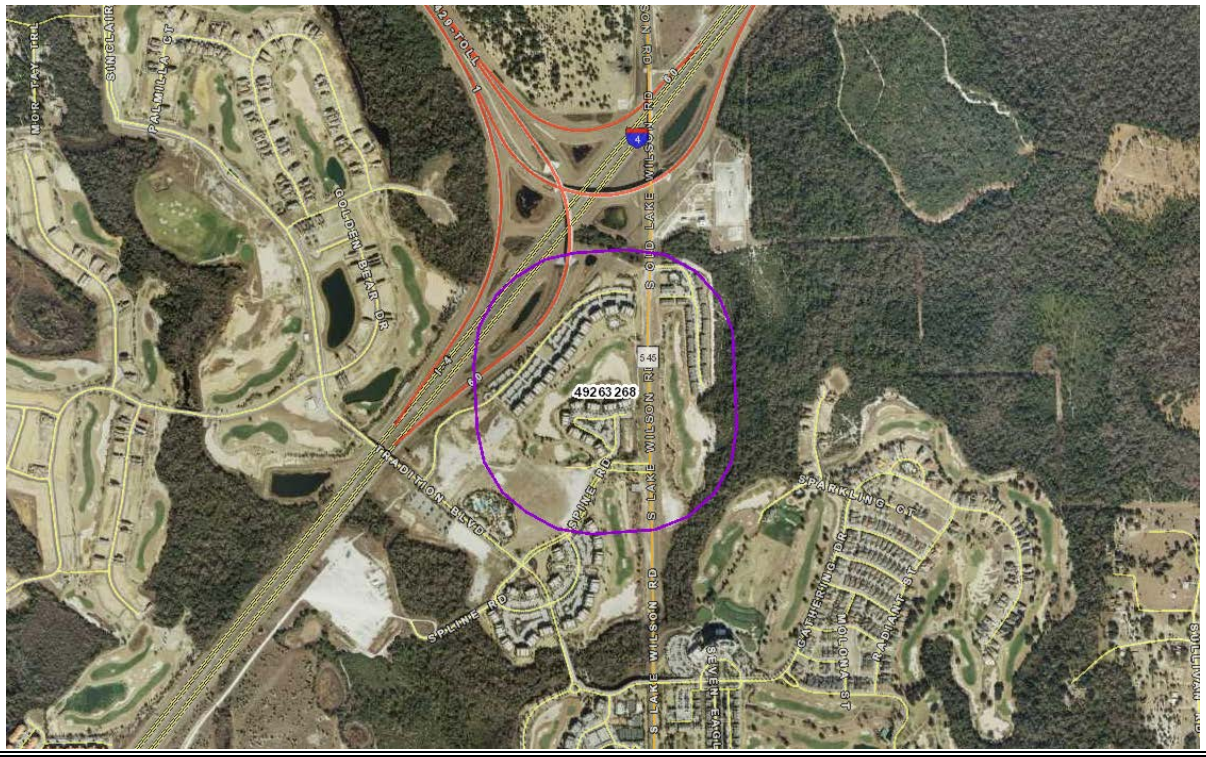
Site 5: Publix Super Market Plaza

Site 6: Walgreens #7219

Site 7: 7-Eleven Food Store #33249

Site 8: Reunion Resort, formerly Herman J Heidrich & Sons Inc.

Site 8: Reunion Resort, formerly Herman J Heidrich & Sons Inc.



Site 9: Groundwater Contamination Plume #49263268

Site 10: Florida Gas Transmission Company – eastern facility

Site 10: Florida Gas Transmission Company – eastern facility

Site 10: Florida Gas Transmission Company – historic foundation

Site 10: Florida Gas Transmission Company – western facility

Site 11: Cell Tower with Diesel Powered Emergency Generator A

Site 12: Heller Brothers Packing Corporation – former grove

Site 13: P&D Landfill

Site 14: Celebration High School

Site 15: The Preserve at Celebration

Site 16: Patco Montgomery Spill Site

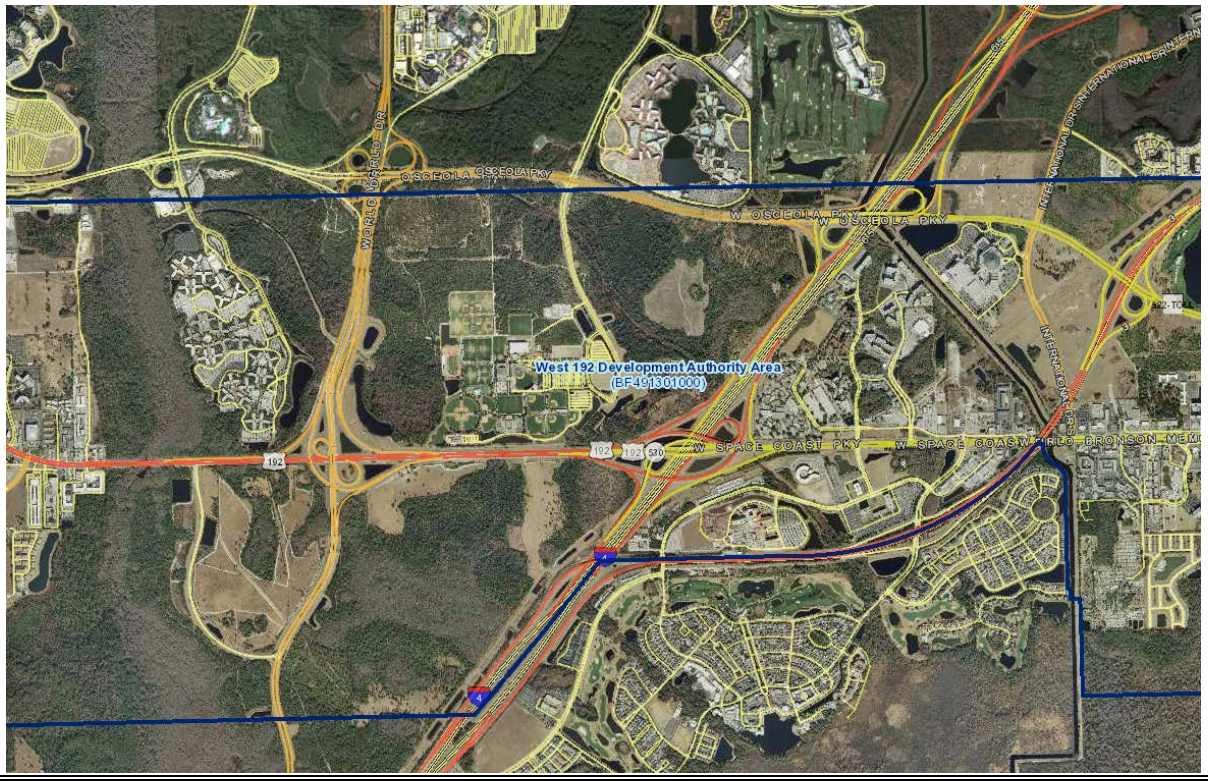
Site 17: TECO Substation #2360

Site 18: Celebration Boulevard Lift Station #1

Site 19: Progress Energy Celebration Substation

Site 20: Disney Vacation Club

Site 21: Kissimmee City Lift Station #111



Site 22: West 192 Development Authority Area

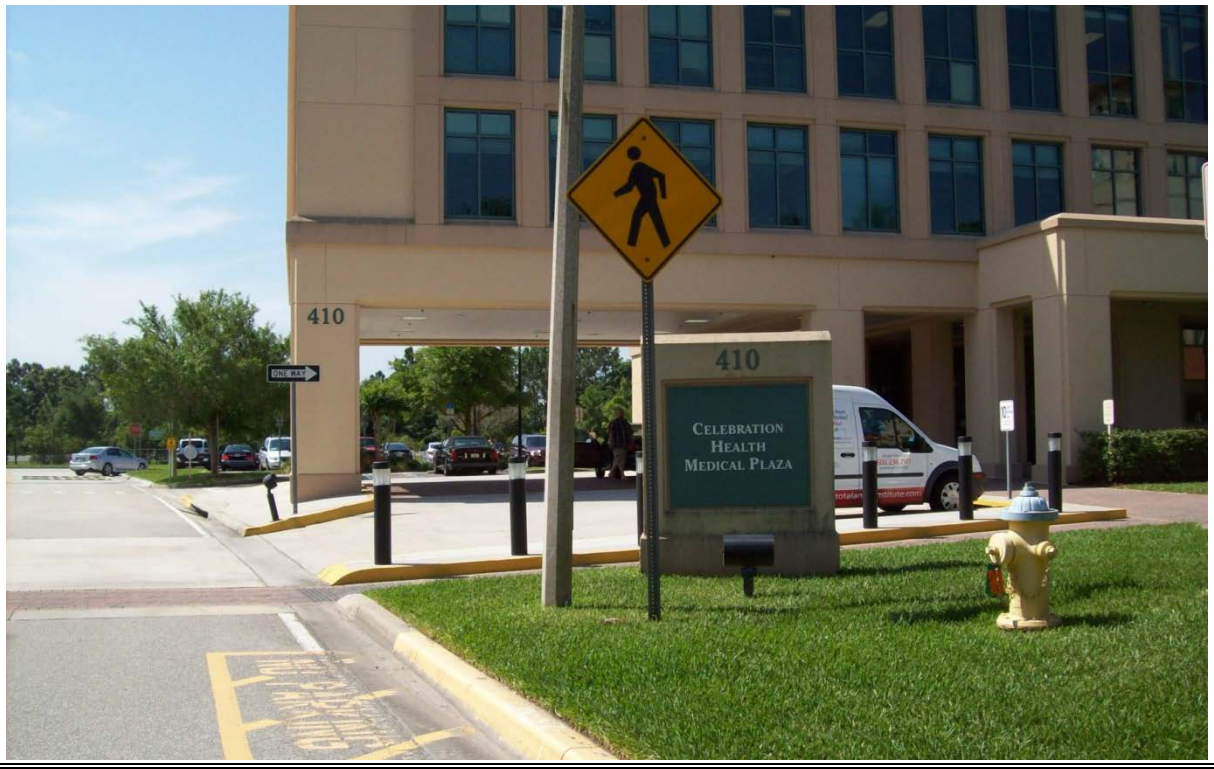
Site 22: West 192 Development Authority Area

Site 23: Celebration Golf Club

Site 24: FDOT Diesel Powered Emergency Generator B

Site 25: Florida Hospital Celebration Health

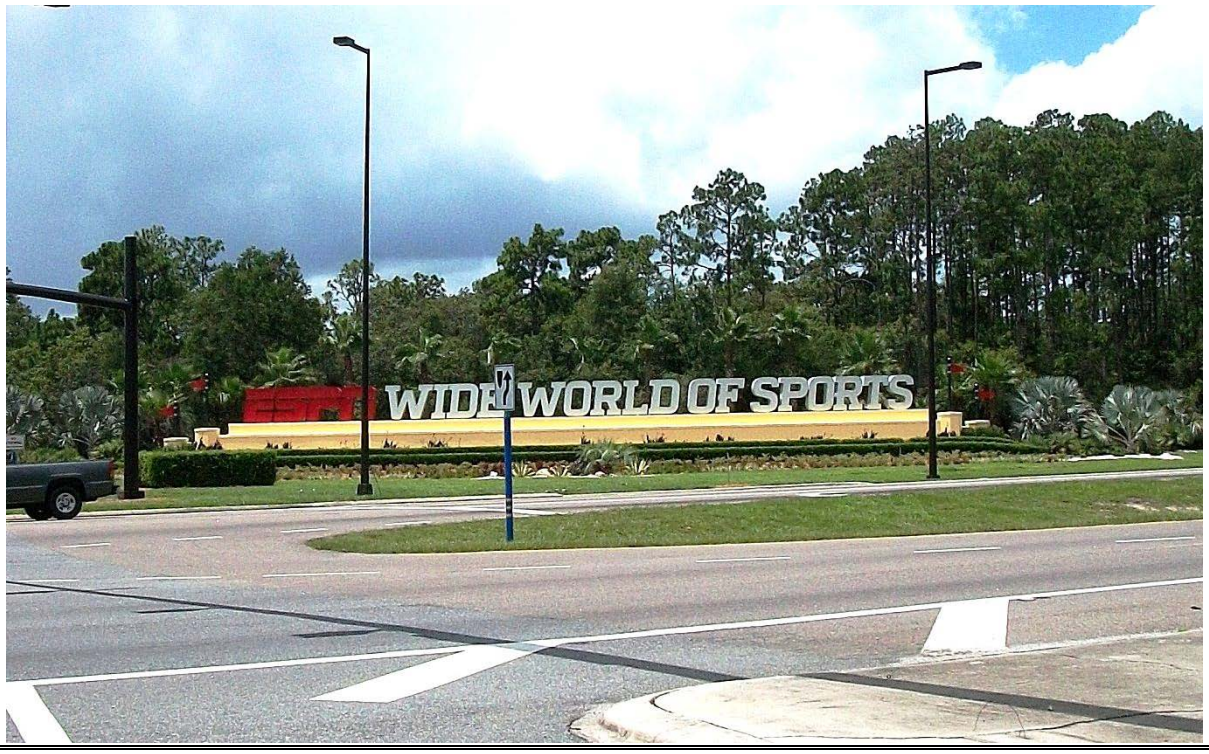
Site 25: Florida Hospital Celebration Health



Site 26: Celebration Health Center

Site 27: Comcast Cable Communications

Site 28: DCL Celebration



Site 29: Walt Disney Sports Complex

Site 30:Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center

Site 30:Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center

Site 30:Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center

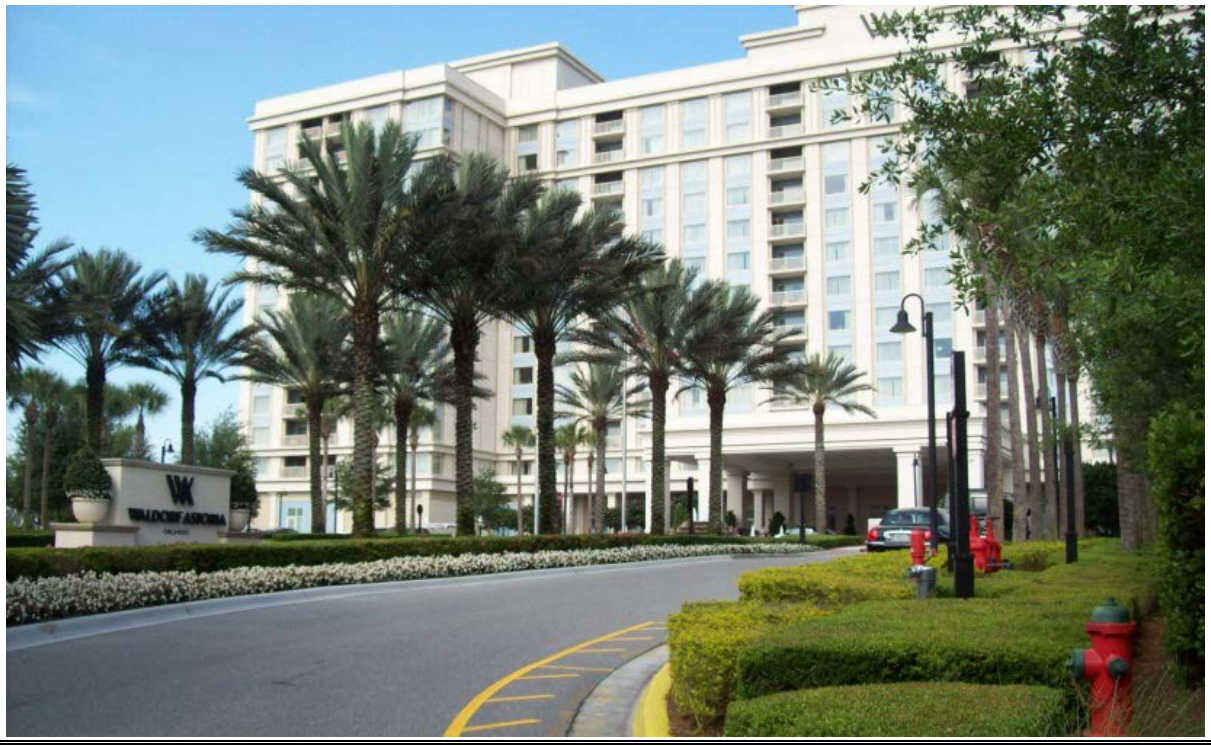
Site 30:Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center

Site 31: Shops at the Parkway Plaza

Site 32: Radisson Resort Orlando Celebration

Site 33: Arabian Nights

Site 34: Gaylord Palms Resort, including Five Star Laundry Orlando LLC



Site 35: Waldorf Astoria Orlando and Hilton Bonnet Creek Resort

Site 36: Cell Tower with Diesel Powered Emergency Generator B

Site 37: Lift Station with Diesel Powered Emergency Generator

Site 38: Marriott Orlando World Center including Marriott Resorts Hospitality Inc. and Hawk's Landing Golf Course

Site 39: Walt Disney World Office Complex

Site 40: Walt Disney World Typhoon Lagoon

Site 41: Hess #09574, former Exxon RAS #40433

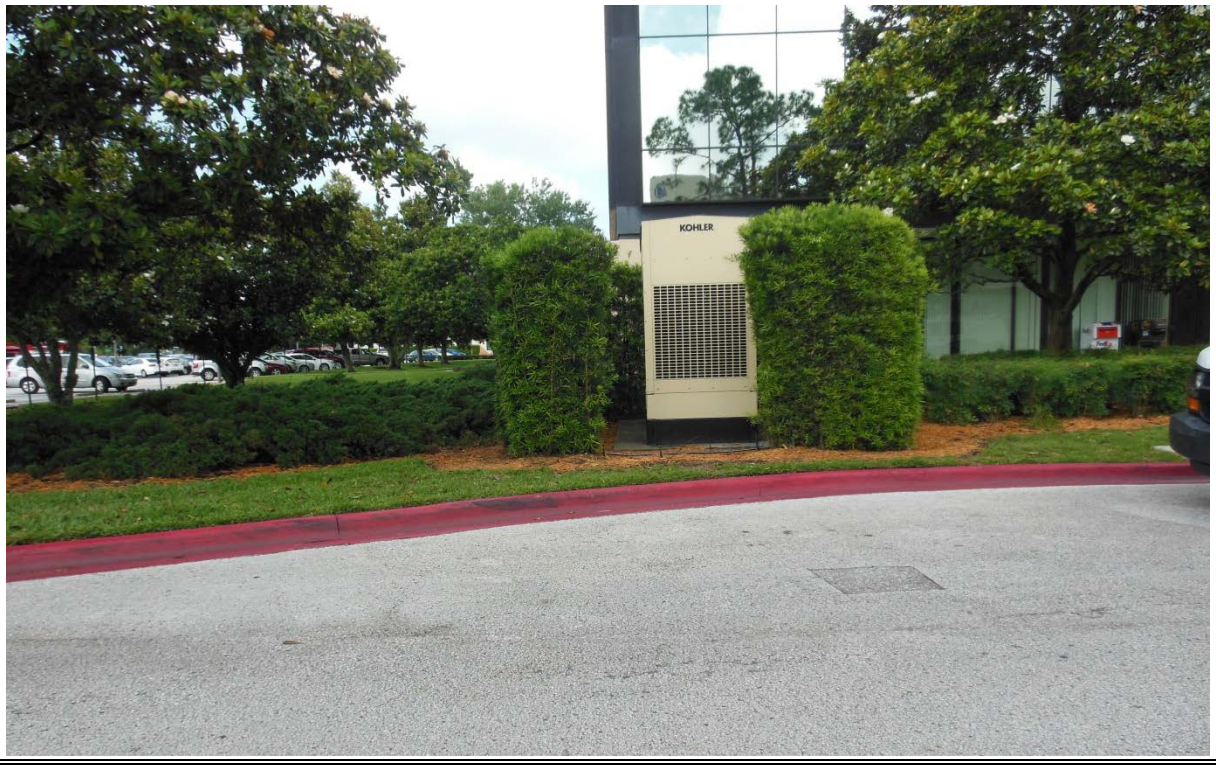
Site 42: Residence Inn by Marriott Parcel

Site 43: Orange County Utilities Vistana Water Supply Facility

Site 44: Sheraton Vistana Resort

Site 45: Transtar Transportation Group Inc. at Vista Way

Site 46: Walgreens #3460



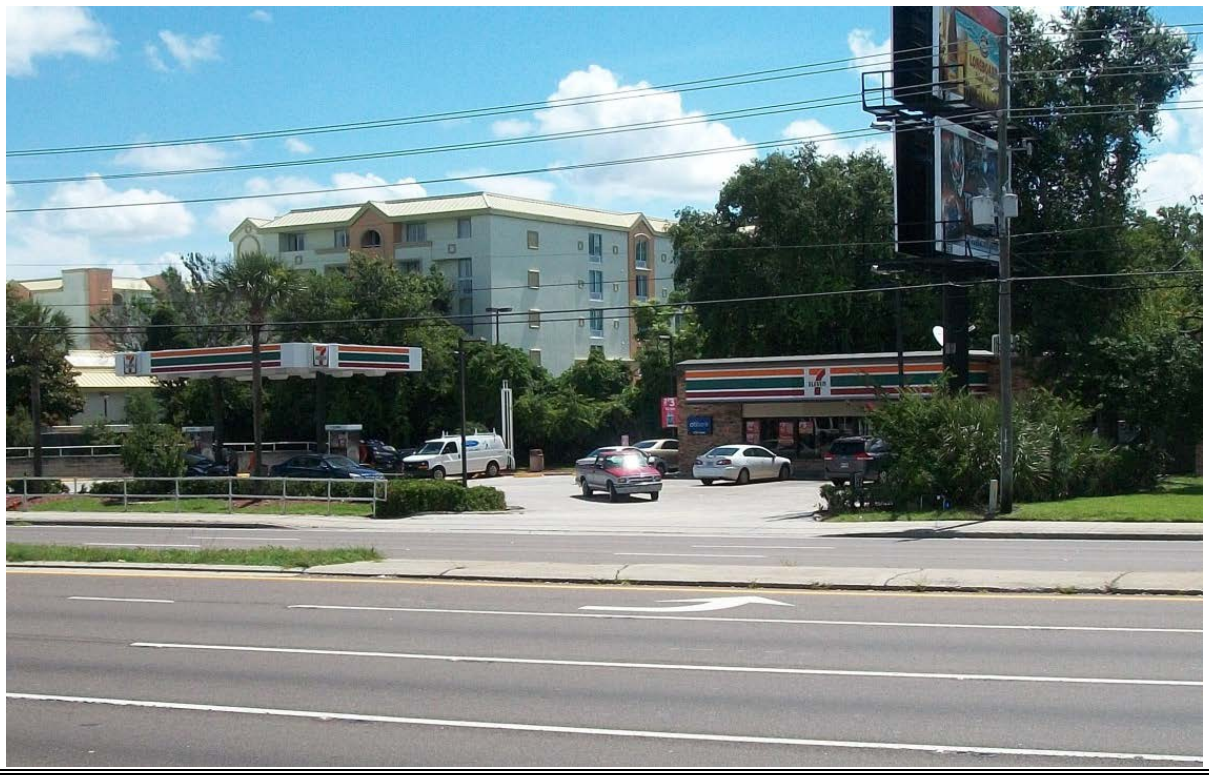
Site 47: SunTrust Bank

Site 48: Hilton in the Walt Disney World Village

Site 48: Hilton in the Walt Disney World Village

Site 49: Sunshine Food Mart #185

Site 50: Limited Transportation LLC

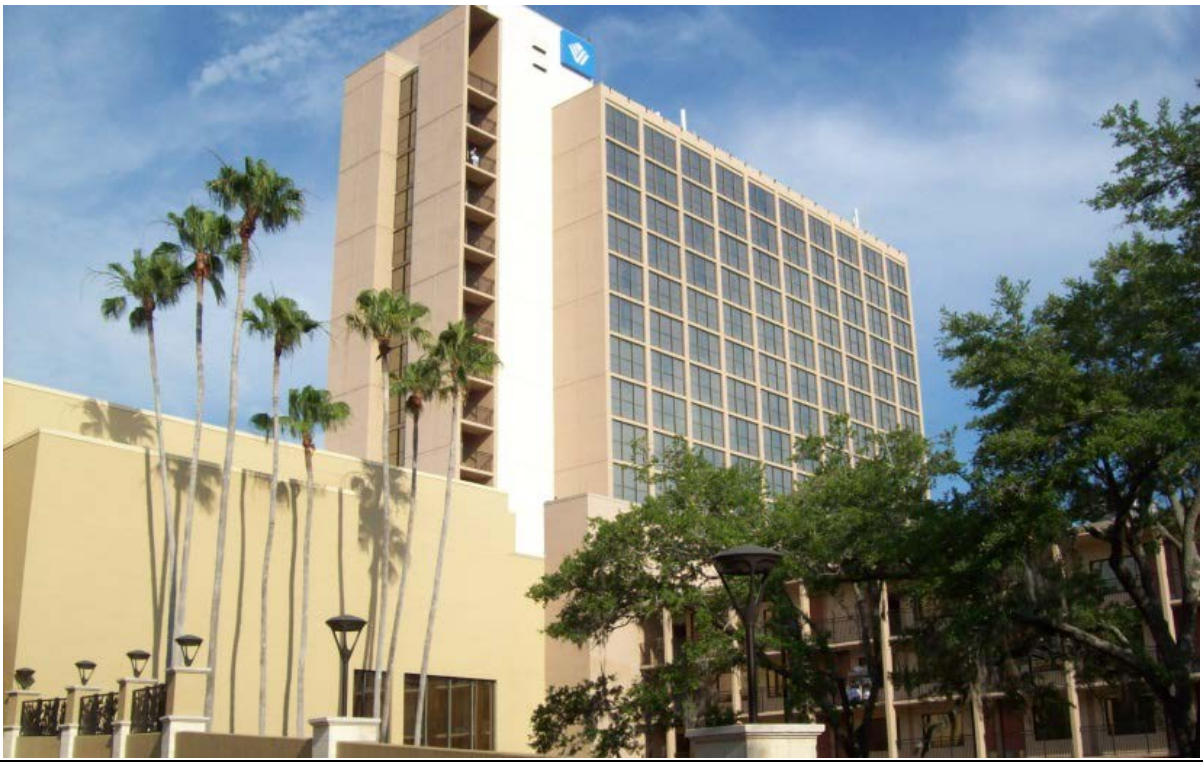


Site 51: 7-Eleven Food Store #24607

Site 52: Buena Vista Palace

Site 53: Holiday Inn Lake Buena Vista

Site 54: Plantation Park Condominiums listed Businesses



Site 55: Wyndham Lake Buena Vista Resort, formerly Sunspree Resort

Site 56: Hotel Royal Plaza

Site 57: Double Tree Suites by Hilton

Site 58: Shell Vineland

Site 59: Sunshine Food Mart #222, 2nd City Chevron

Site 60: Hyatt Regency Grand Cypress

Site 61: Walt Disney World Little Lake Bryan

Site 62: Florida Hospital Centra Care

Site 63: Gooding's Supermarkets Inc.

Site 64: Orlando Vista Hotel

Site 65: E-Cigs, formerly New Vision Enterprises USA

Site 66: Nice Nails

Site 67: Circle K #2709745, formerly Texaco #240250151

Site 68: 7-Eleven Food Store #23429

Site 69: Publix Super Market #812

Site 70: Bargain World, Formerly Johnny's Country Store

Site 71: Shoppes at Buena Vista Plaza

Site 72: Quality Suites

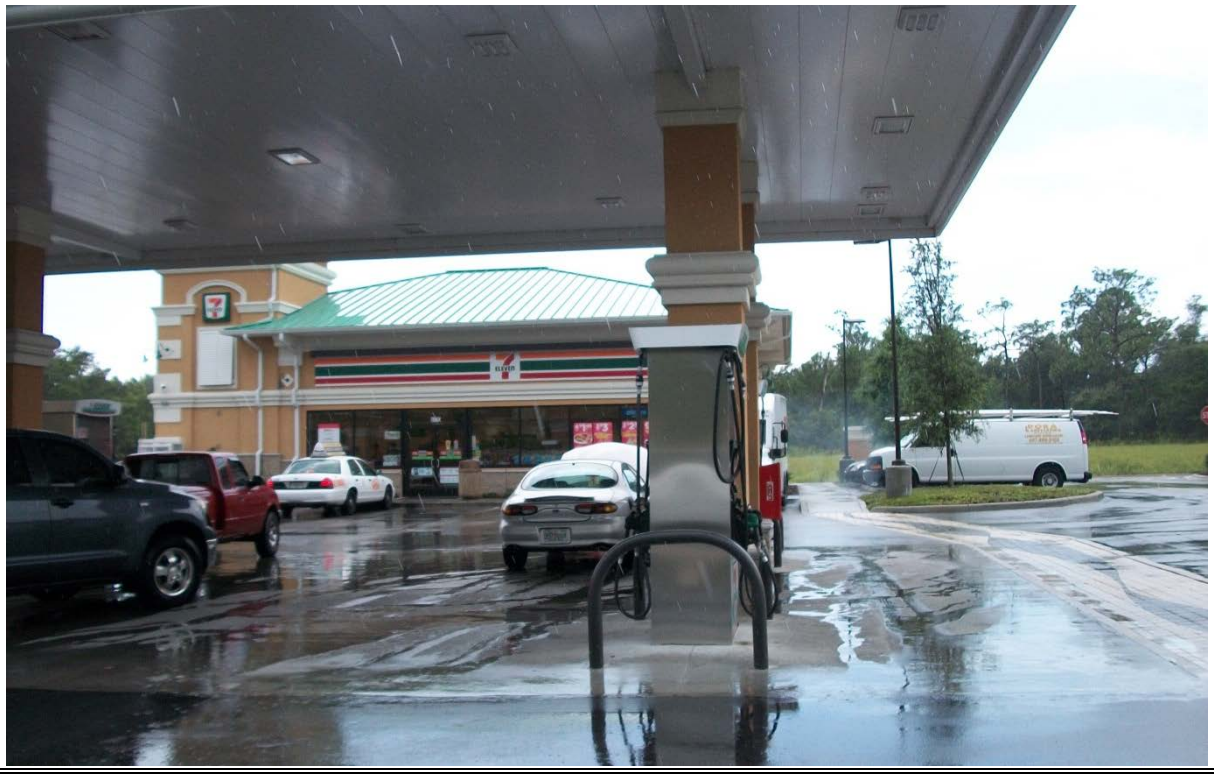
Site 73: Embassy Suites

Site 74: Blue Seas Associations Citizen Site

Site 75: Ruby Lake Ranch, Marbella Property

Site 76: Marriott Cyprus Pines Golf Course Maintenance Facility

Site 77: Dr Phillips Community Park, formerly Orange County Trap and Skeet Club

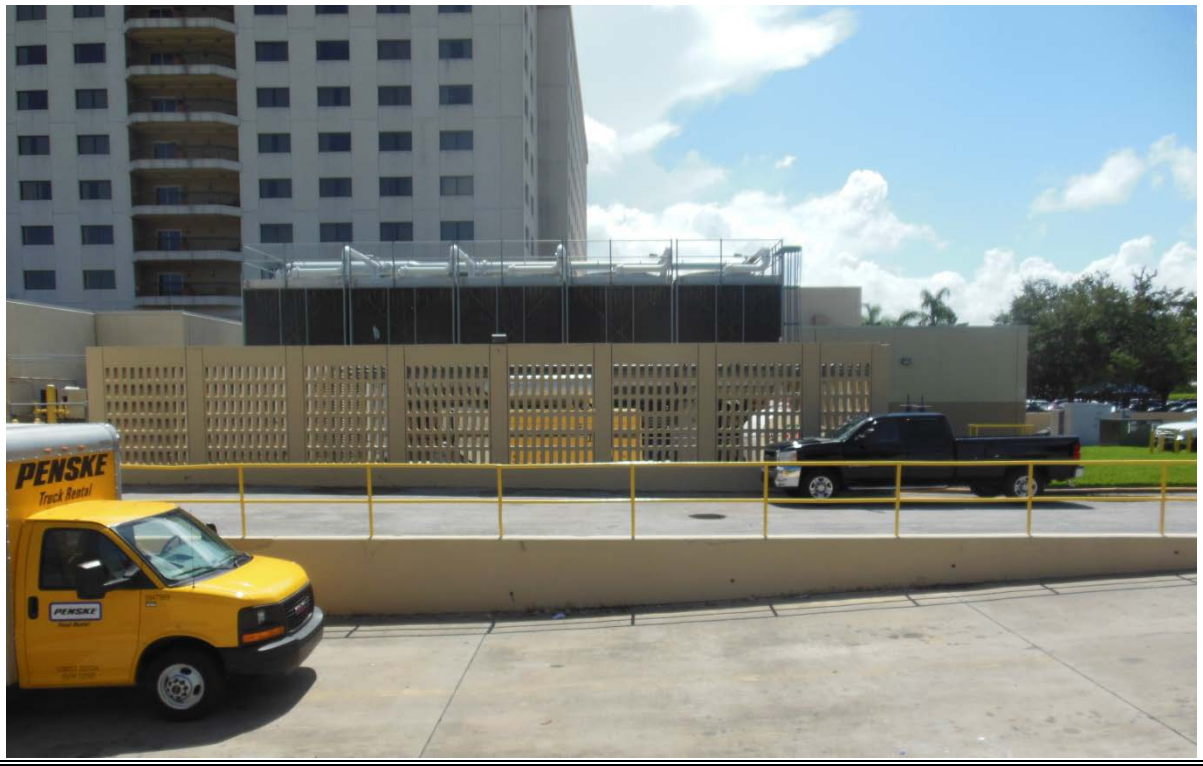


Site 78: 7-Eleven Store #35277

Site 79: CVS Pharmacy #5400

Site 80: Hilton Garden Inn

Site 81: Renaissance Resort Sea World



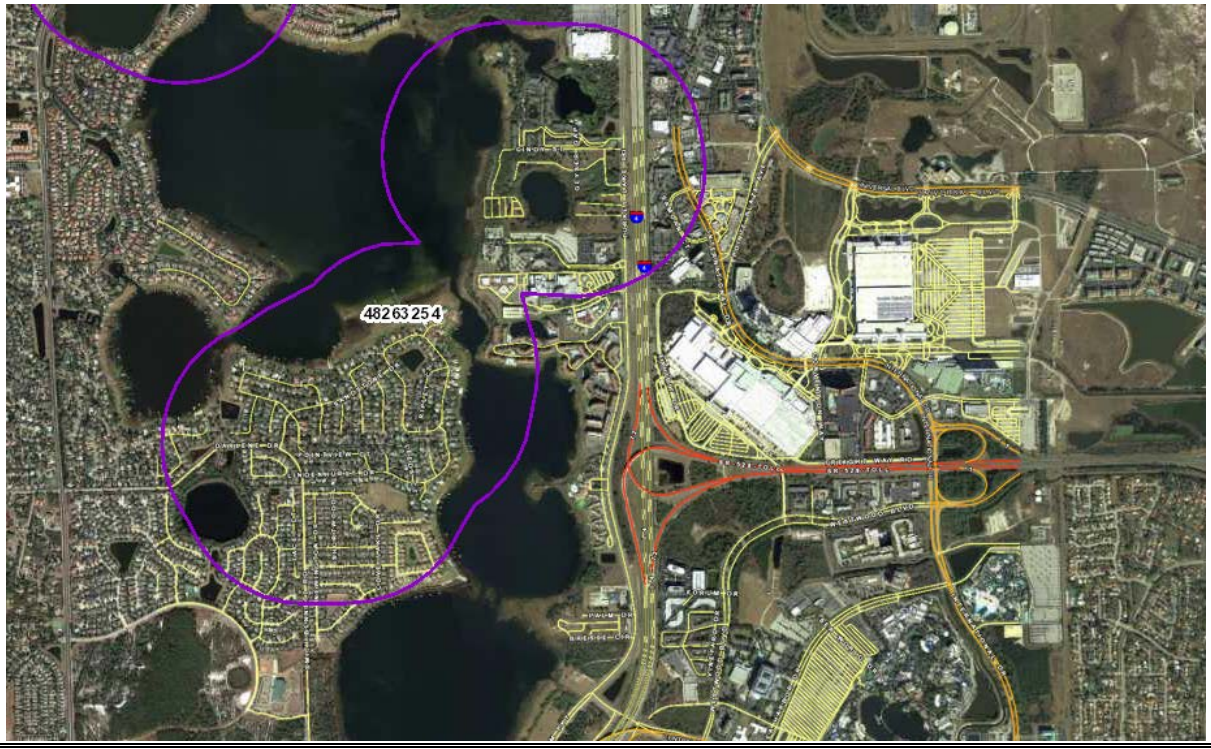
Site 81: Renaissance Resort Sea World

Site 82: Places of Learning SeaWorld Orlando Marketing

Site 83: Sea World Parks and Entertainment Admin Office

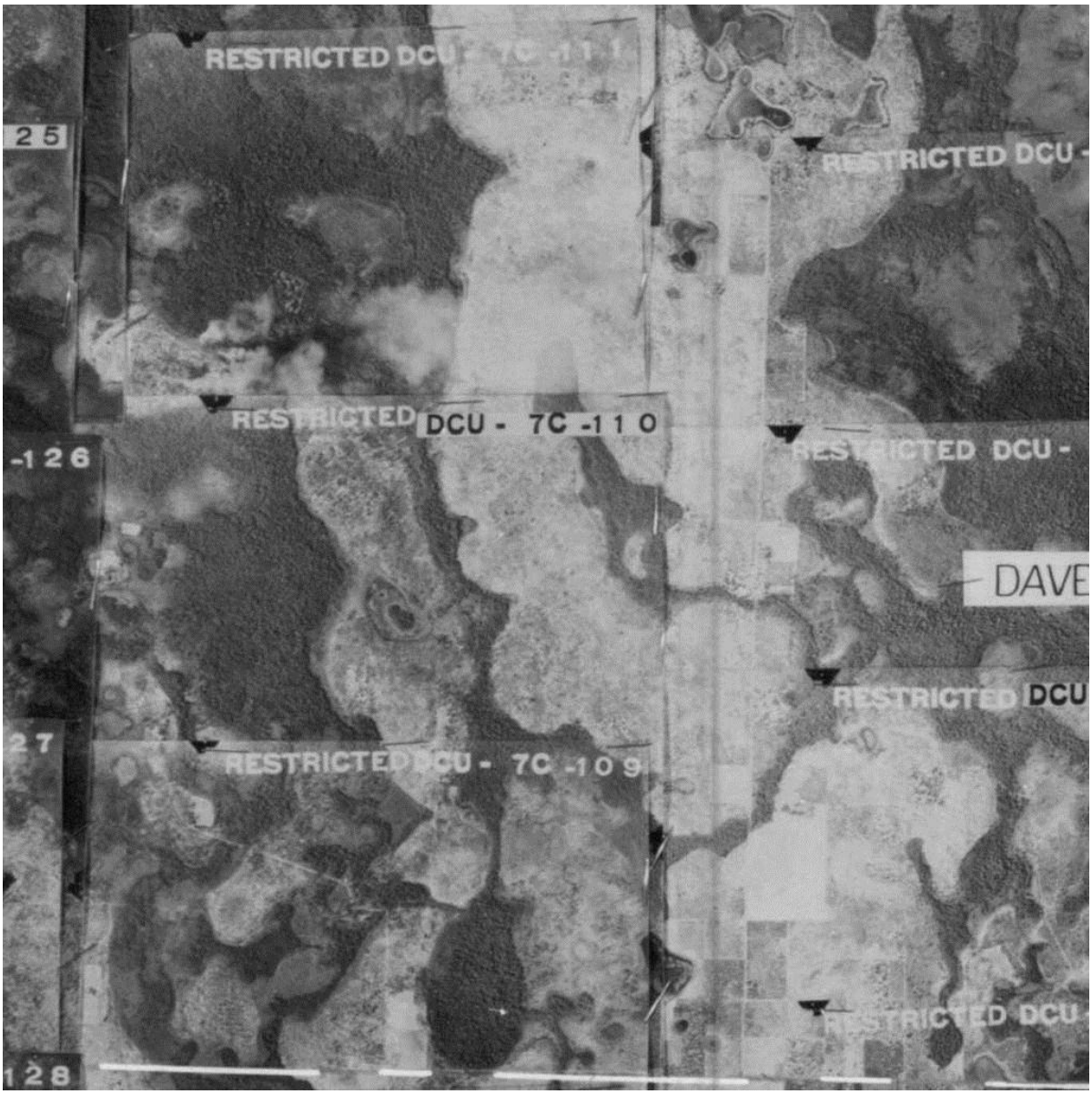
Site 84: SeaWorld of Florida Inc., Florida Festival

Site 85: FDOT Diesel Powered Emergency Generator B

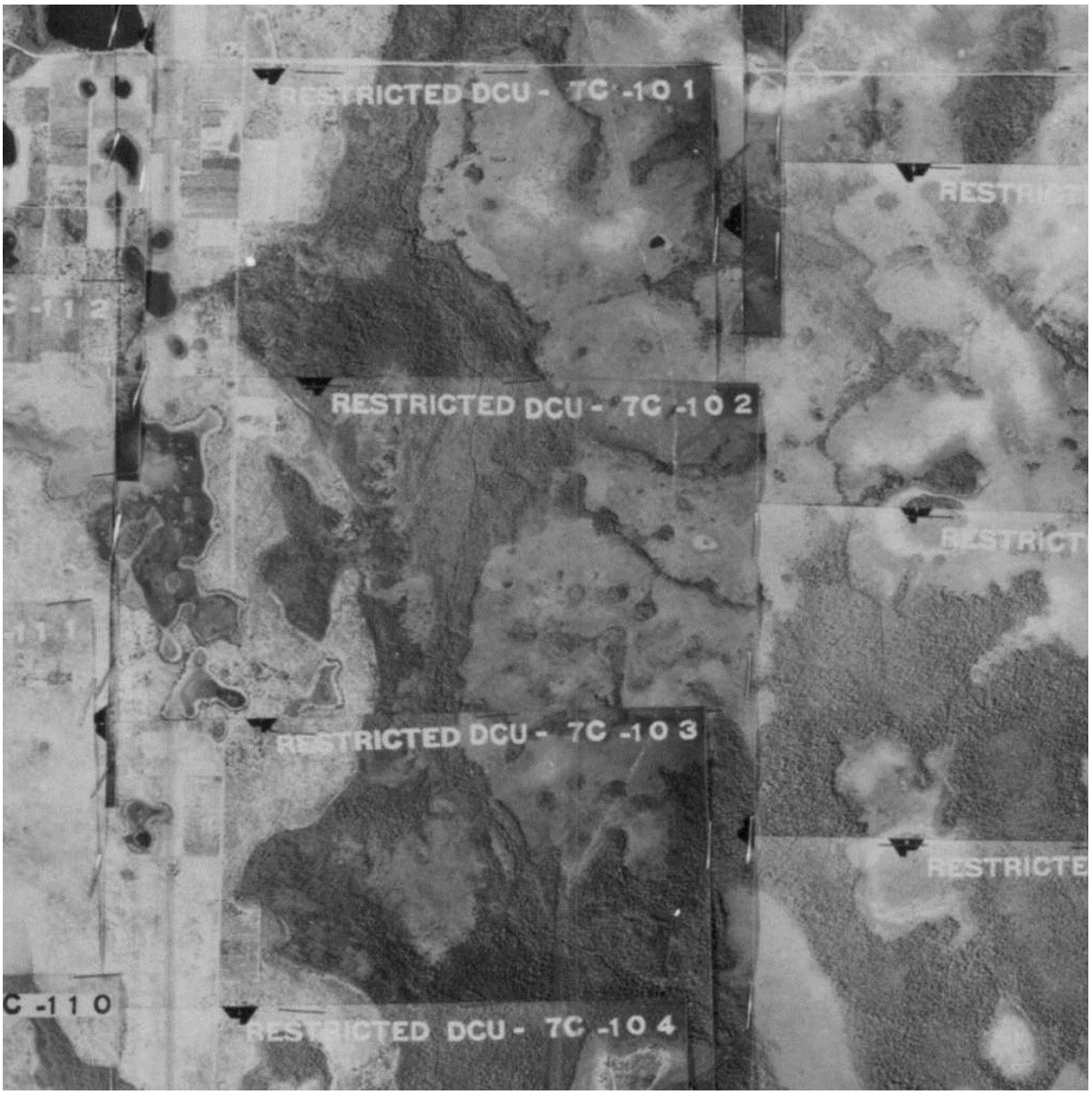


Site 86: Groundwater Contamination Plume #48263254

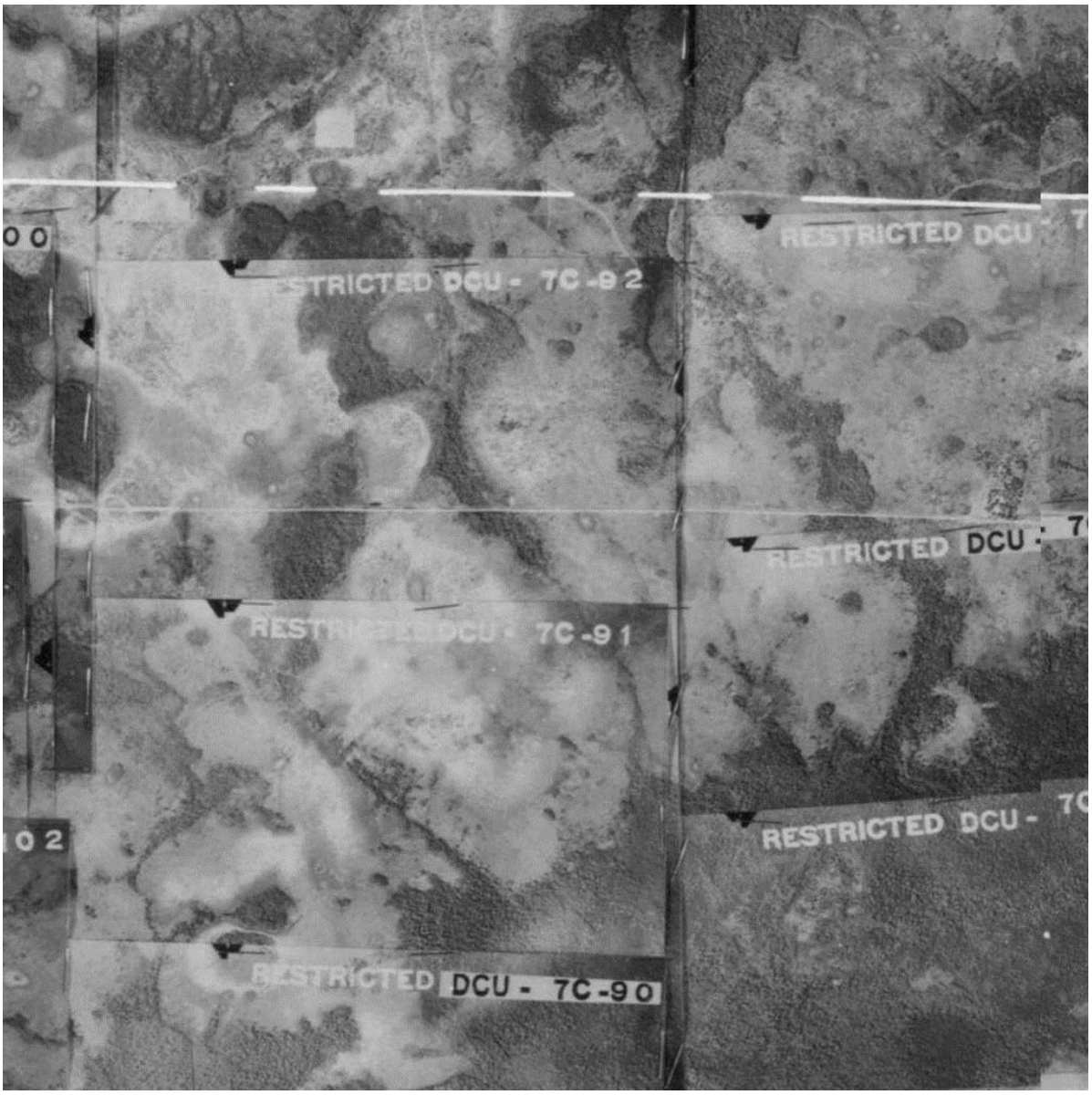
APPENDIX C
Aerial Photography



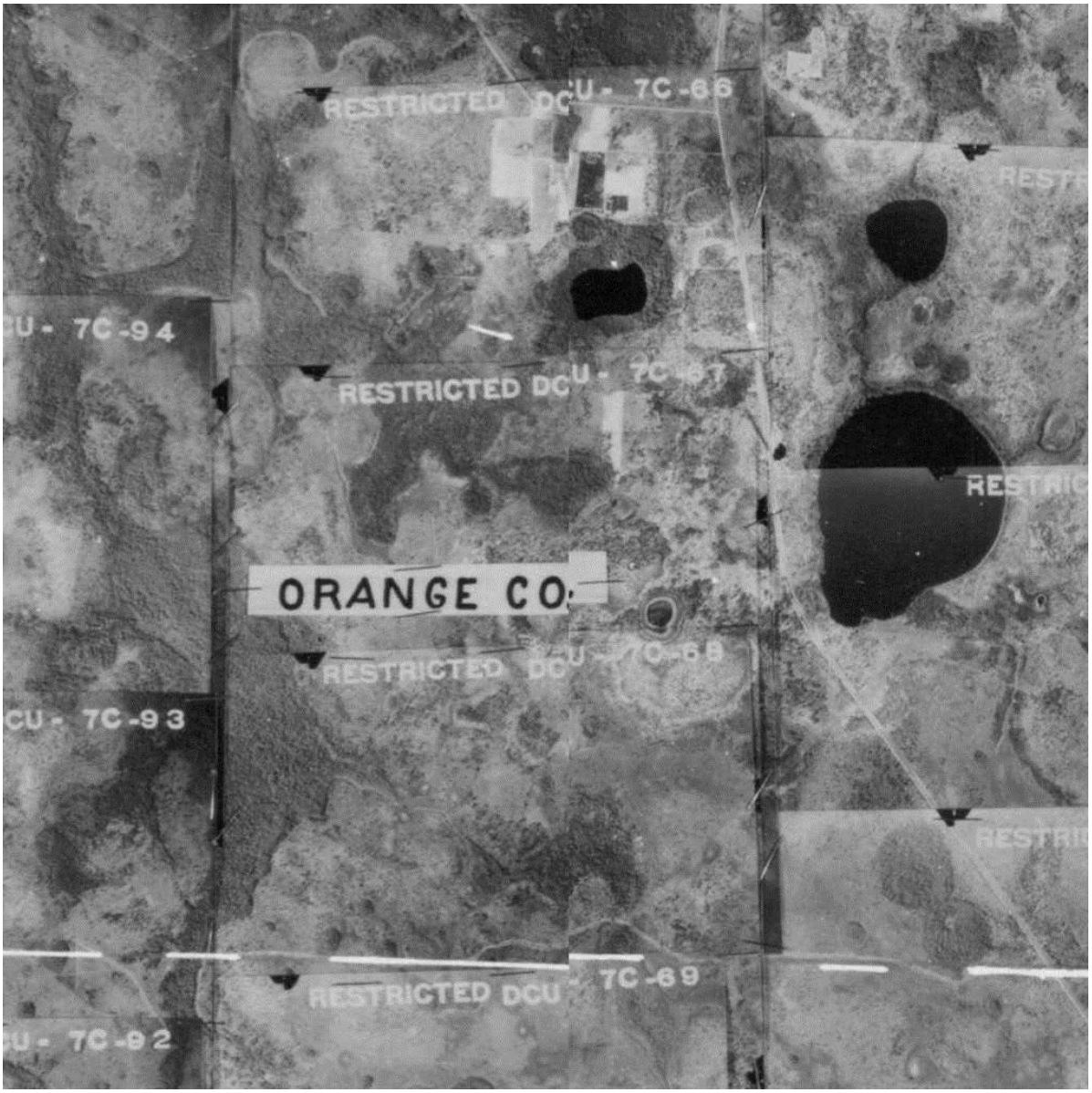
Aerial Photography: 1944A



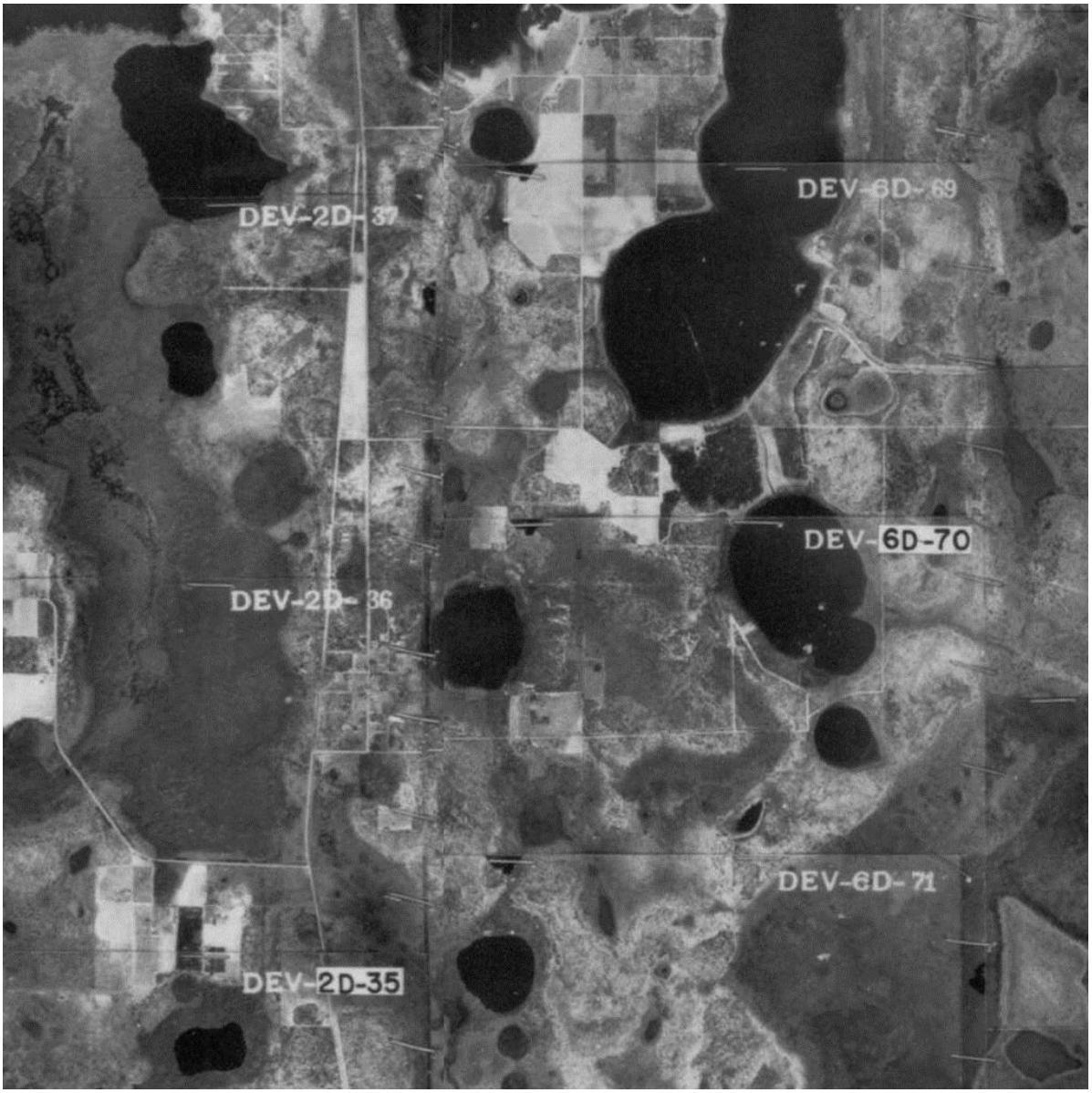
Aerial Photography: 1944B



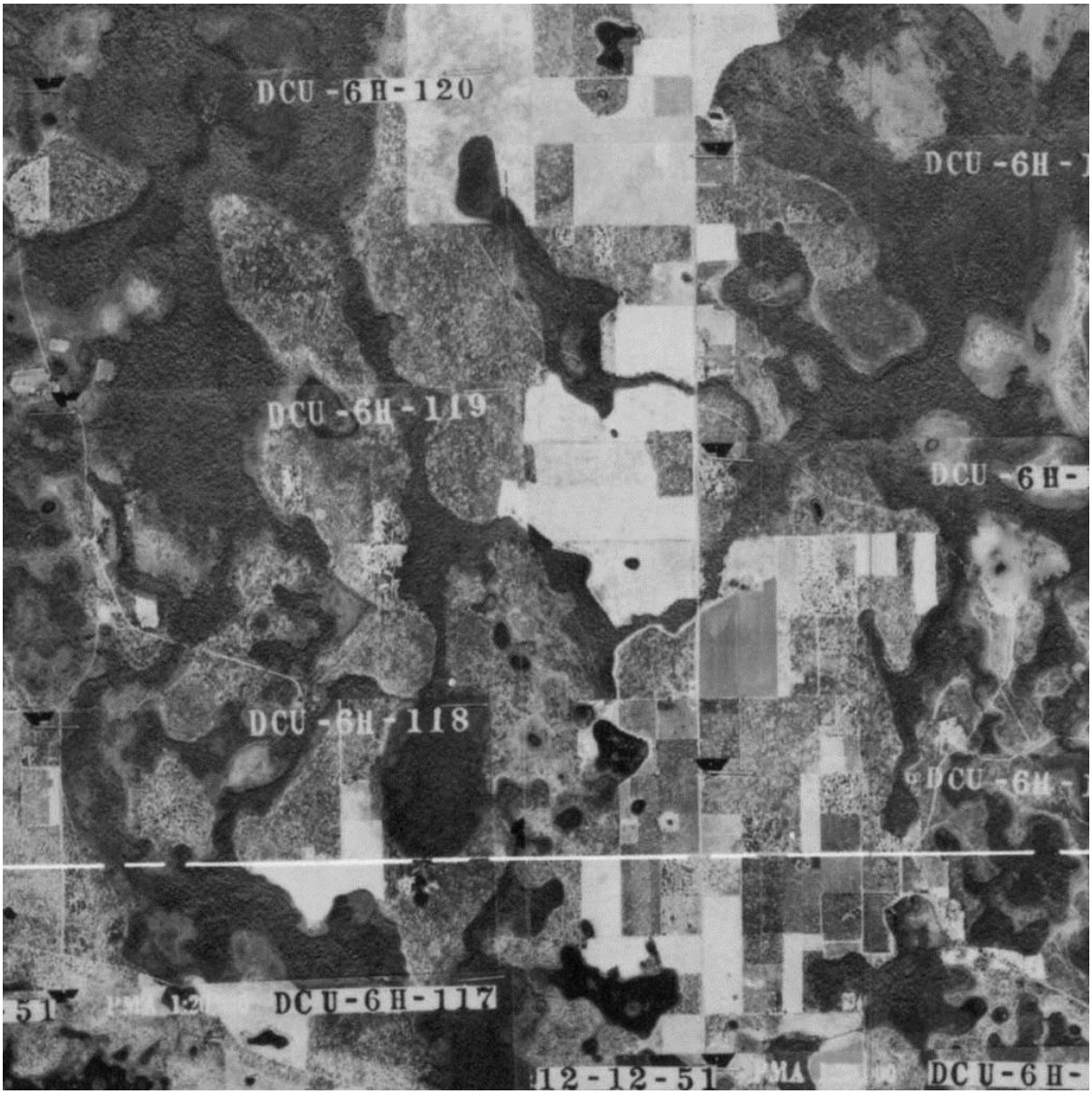
Aerial Photography: 1944C



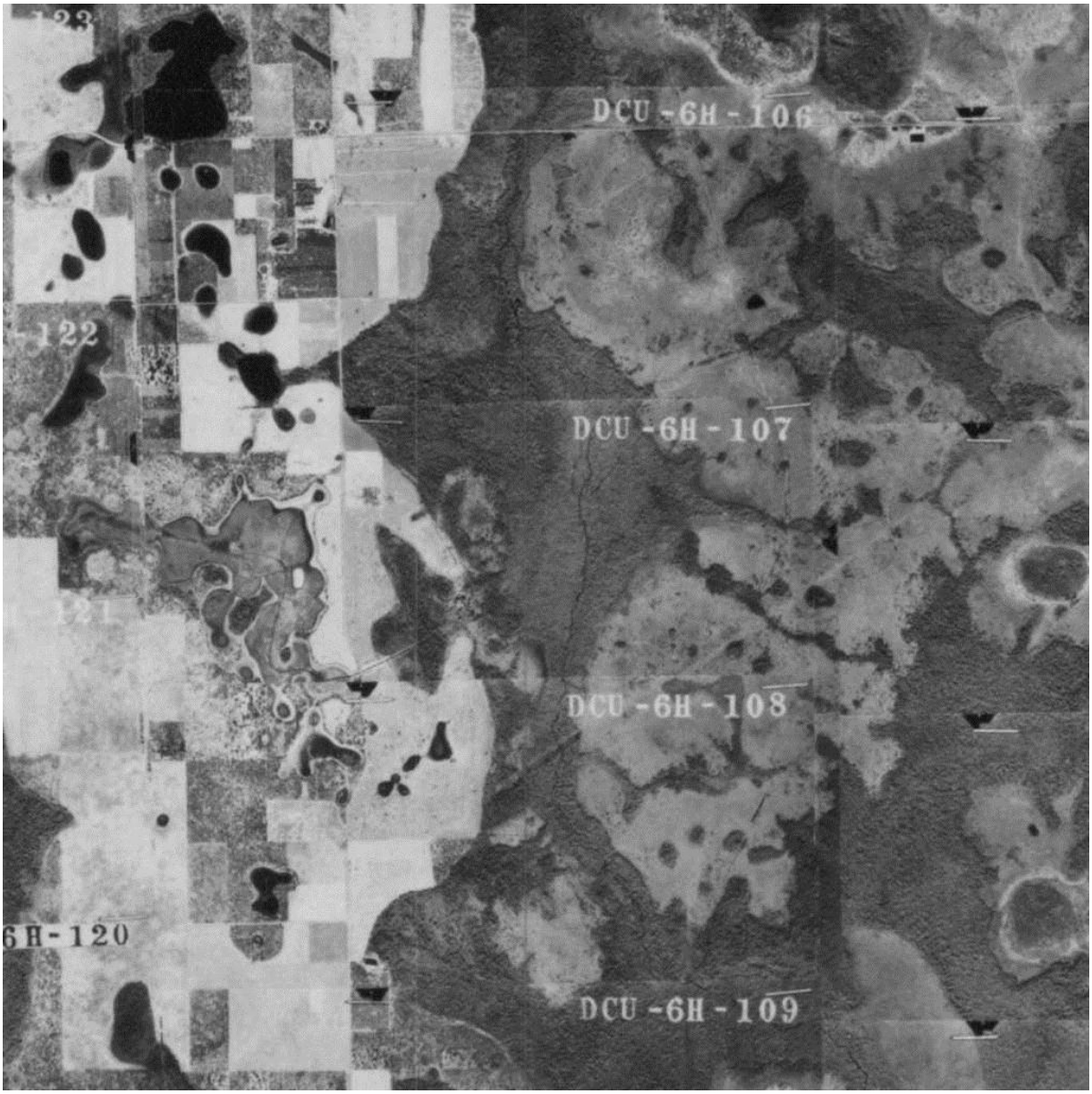
Aerial Photography: 1944D



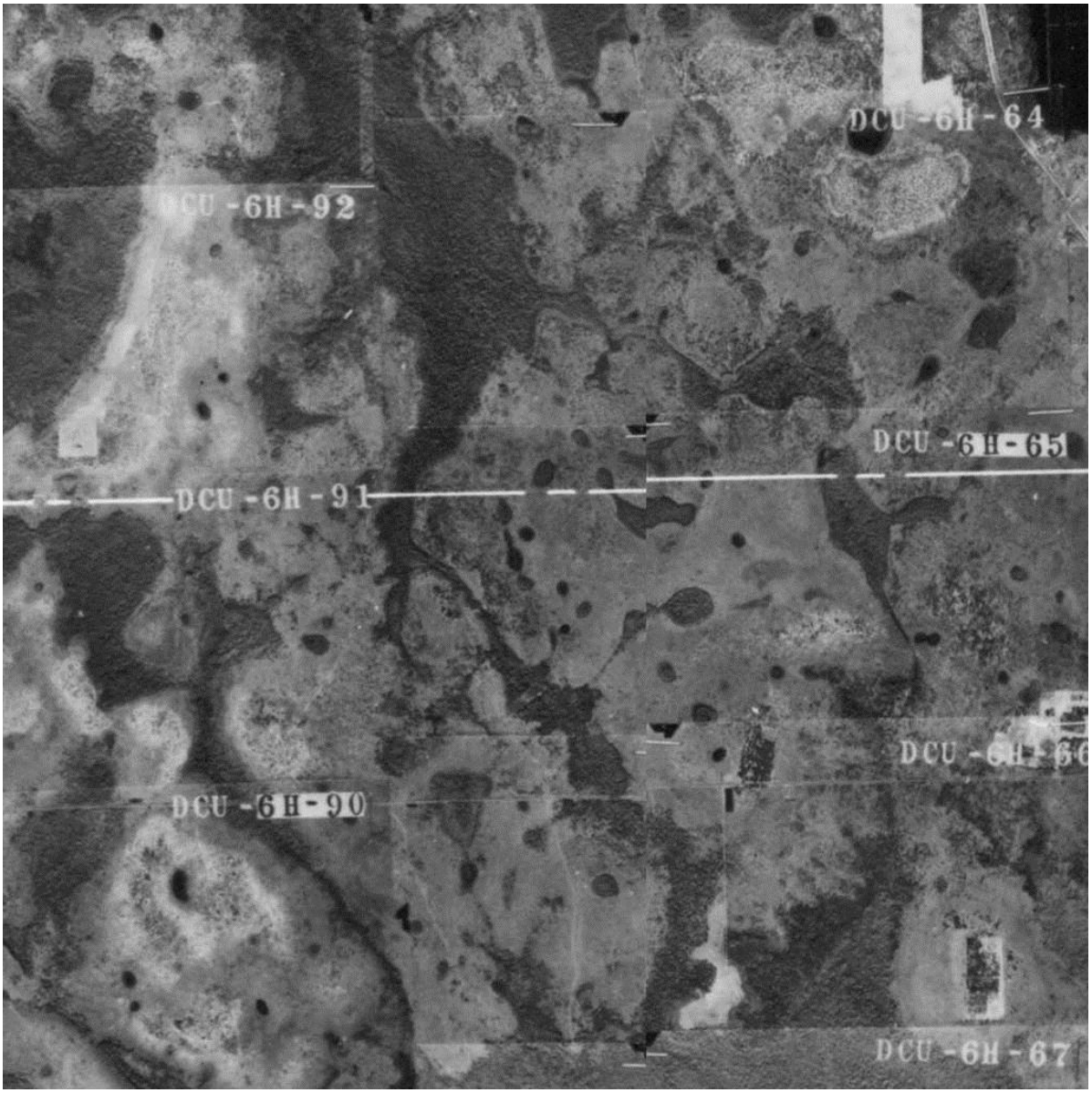
Aerial Photography: 1947



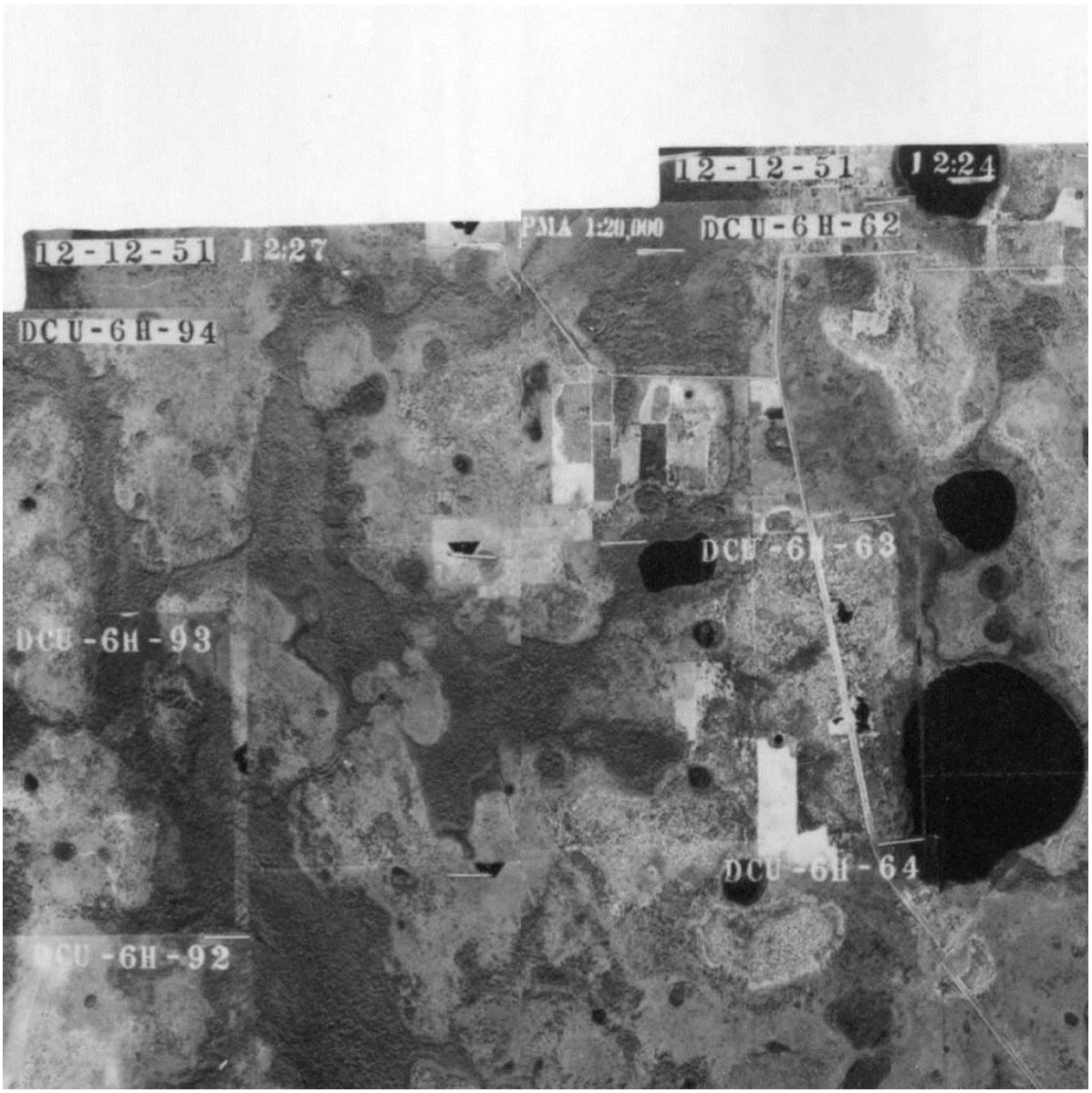
Aerial Photography: 1952A



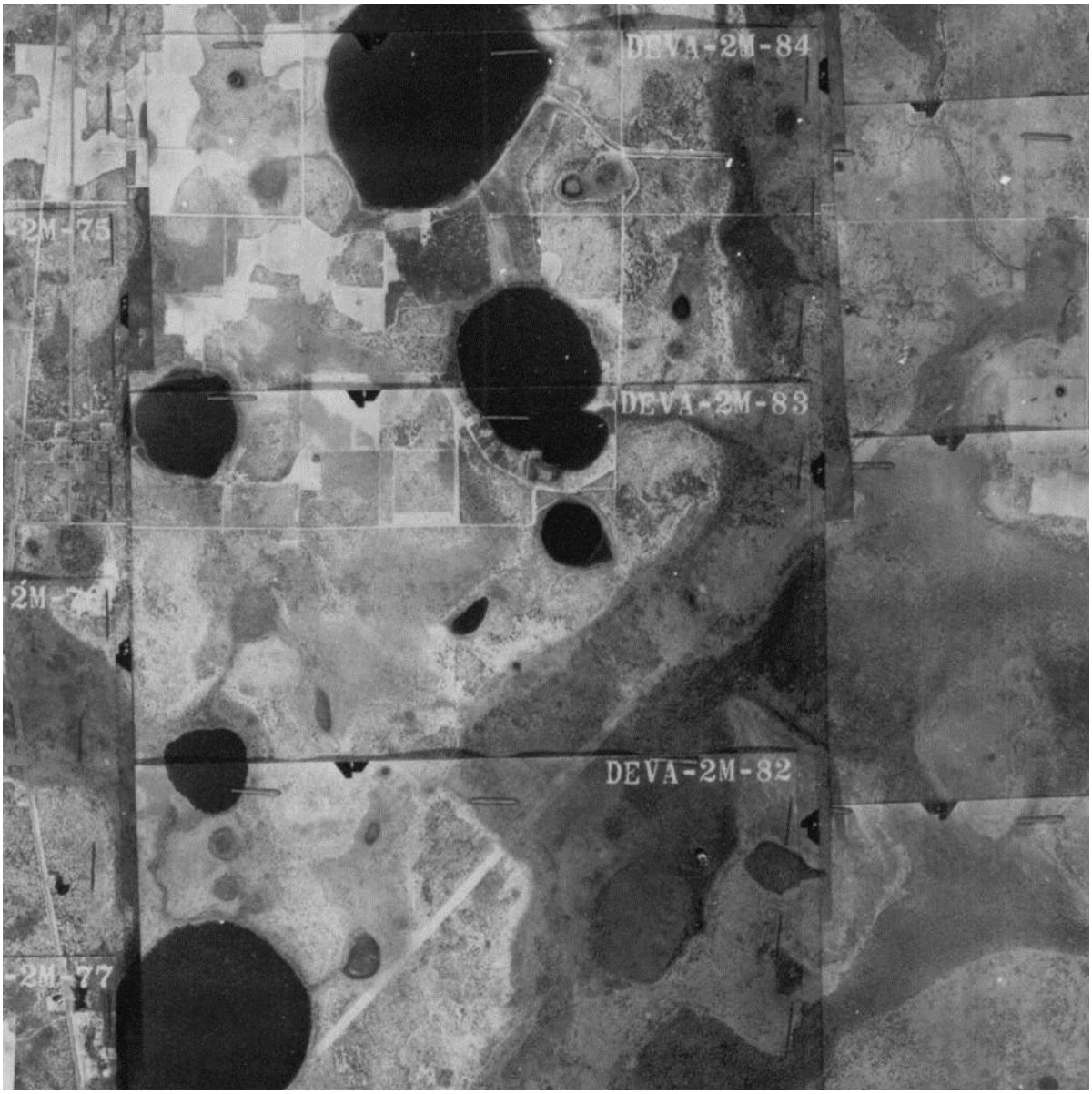
Aerial Photography: 1952B



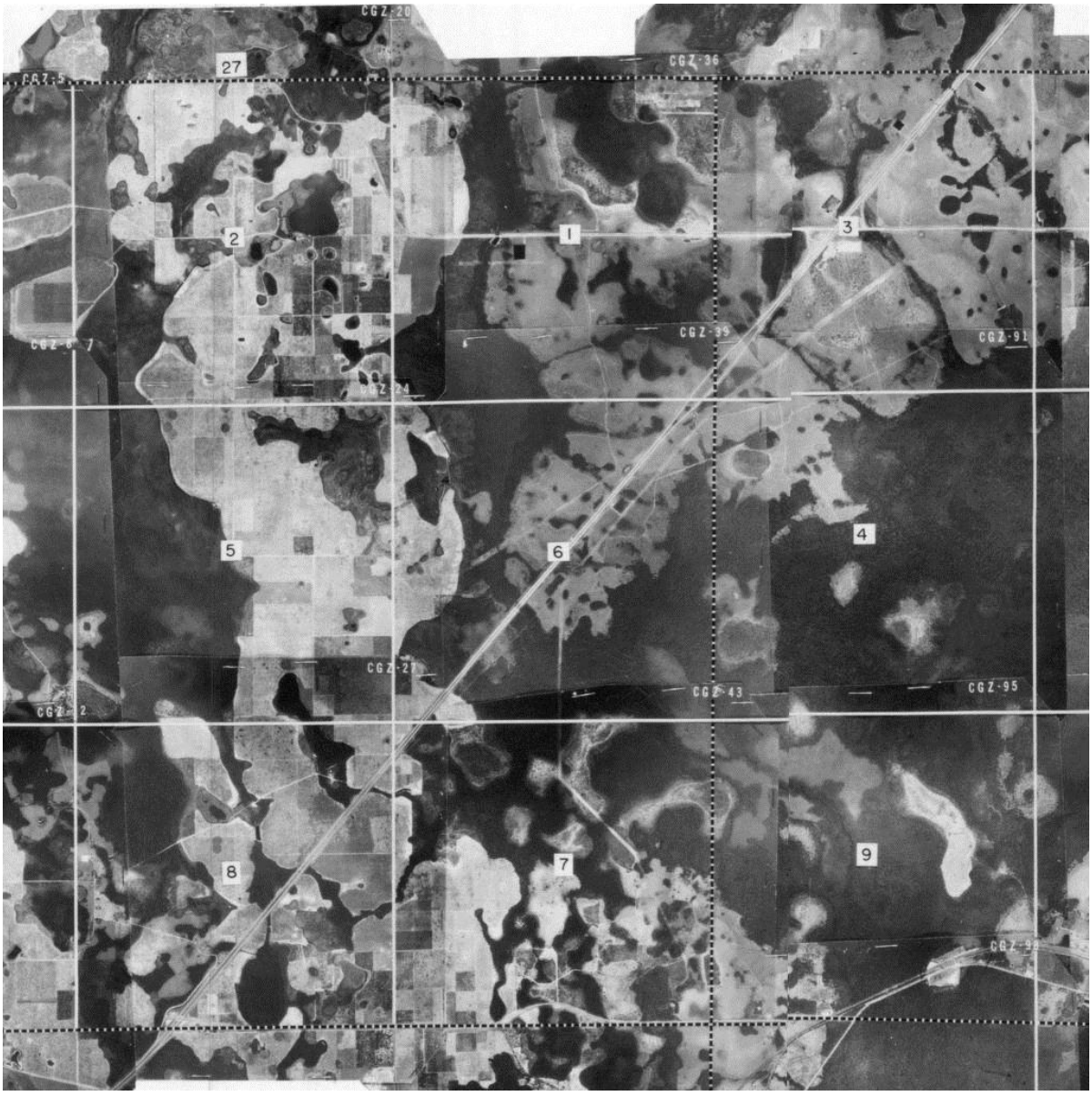
Aerial Photography: 1952C



Aerial Photography: 1952D

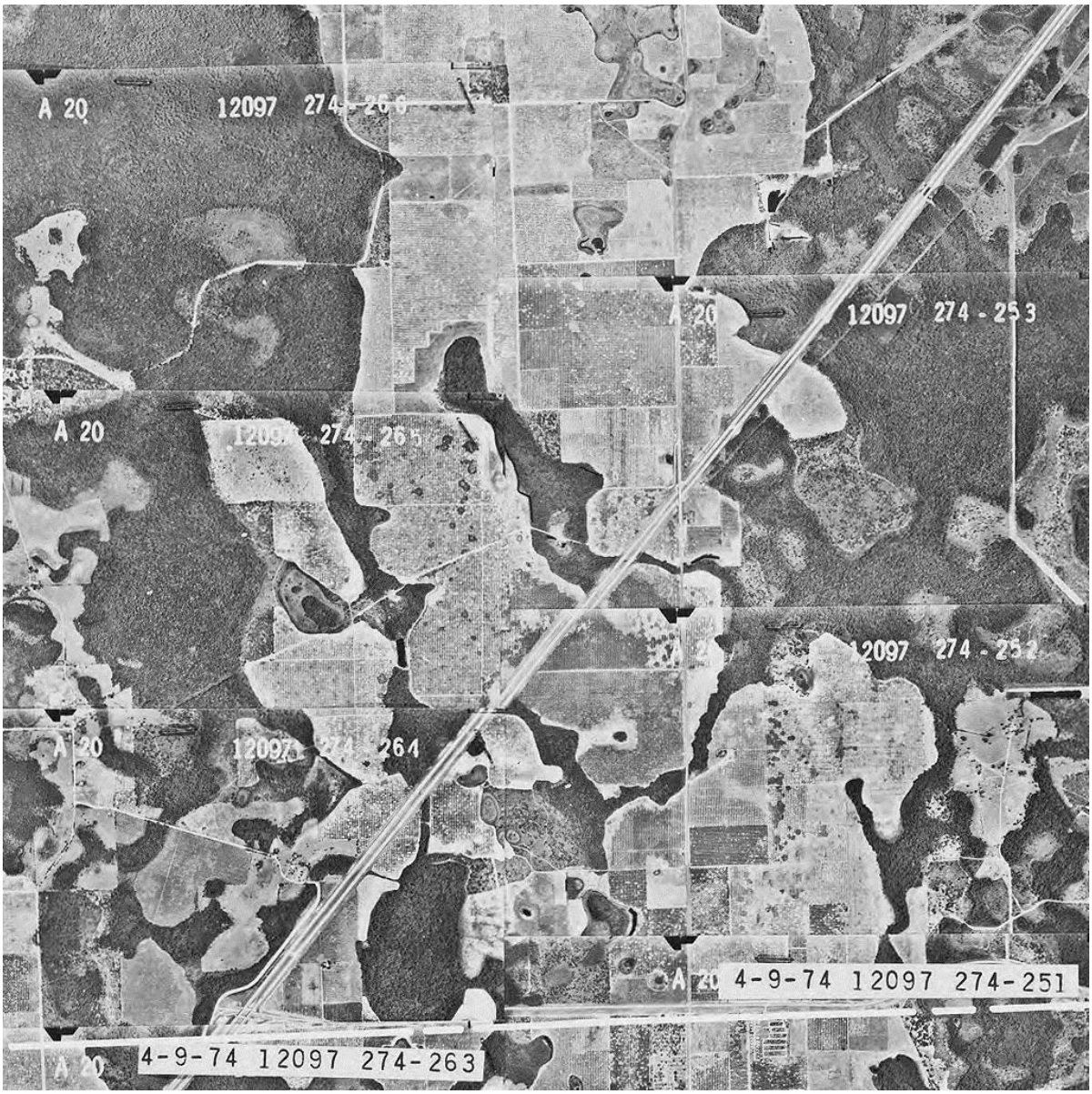


Aerial Photography: 1954

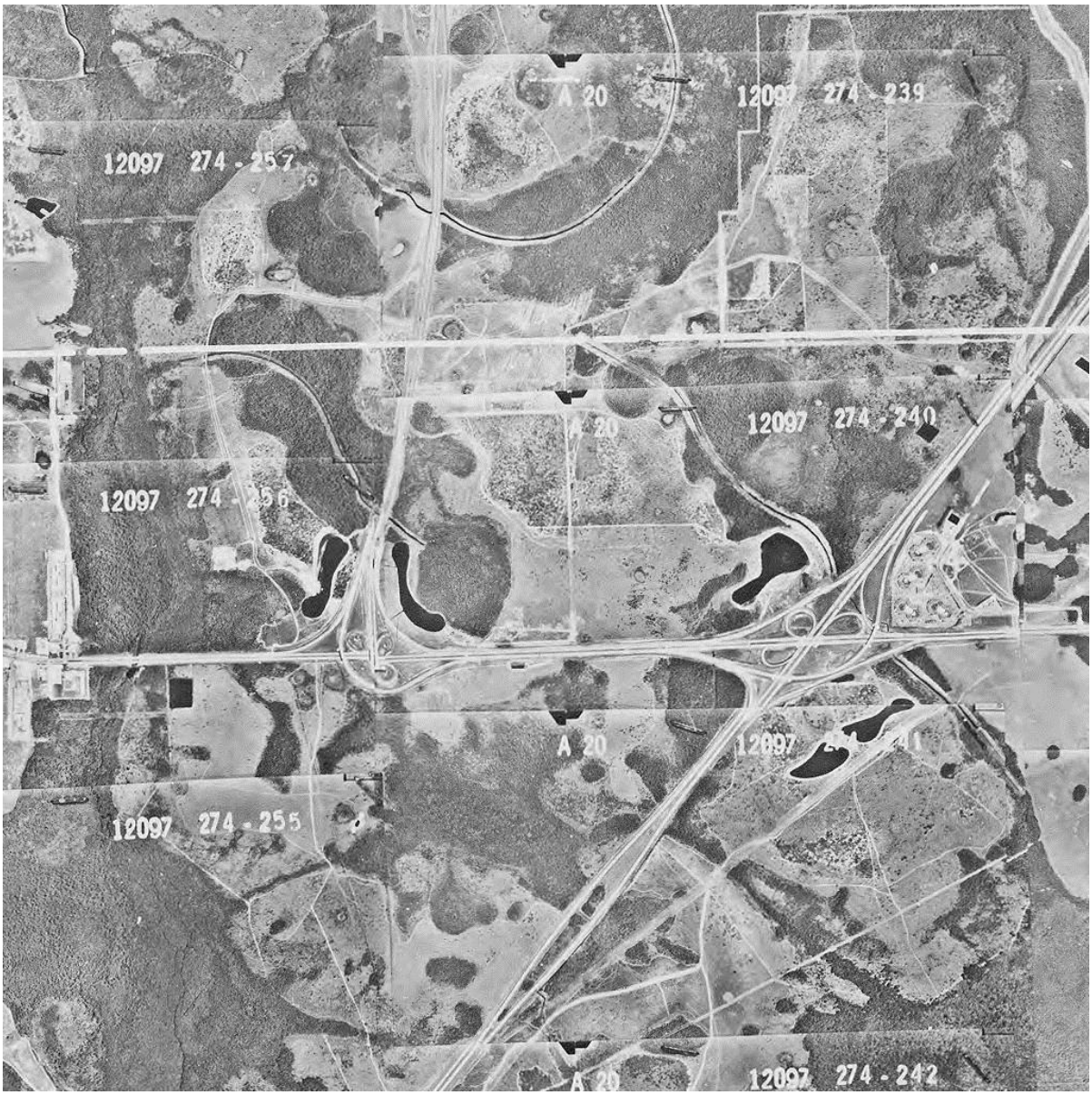


Aerial Photography: 1968

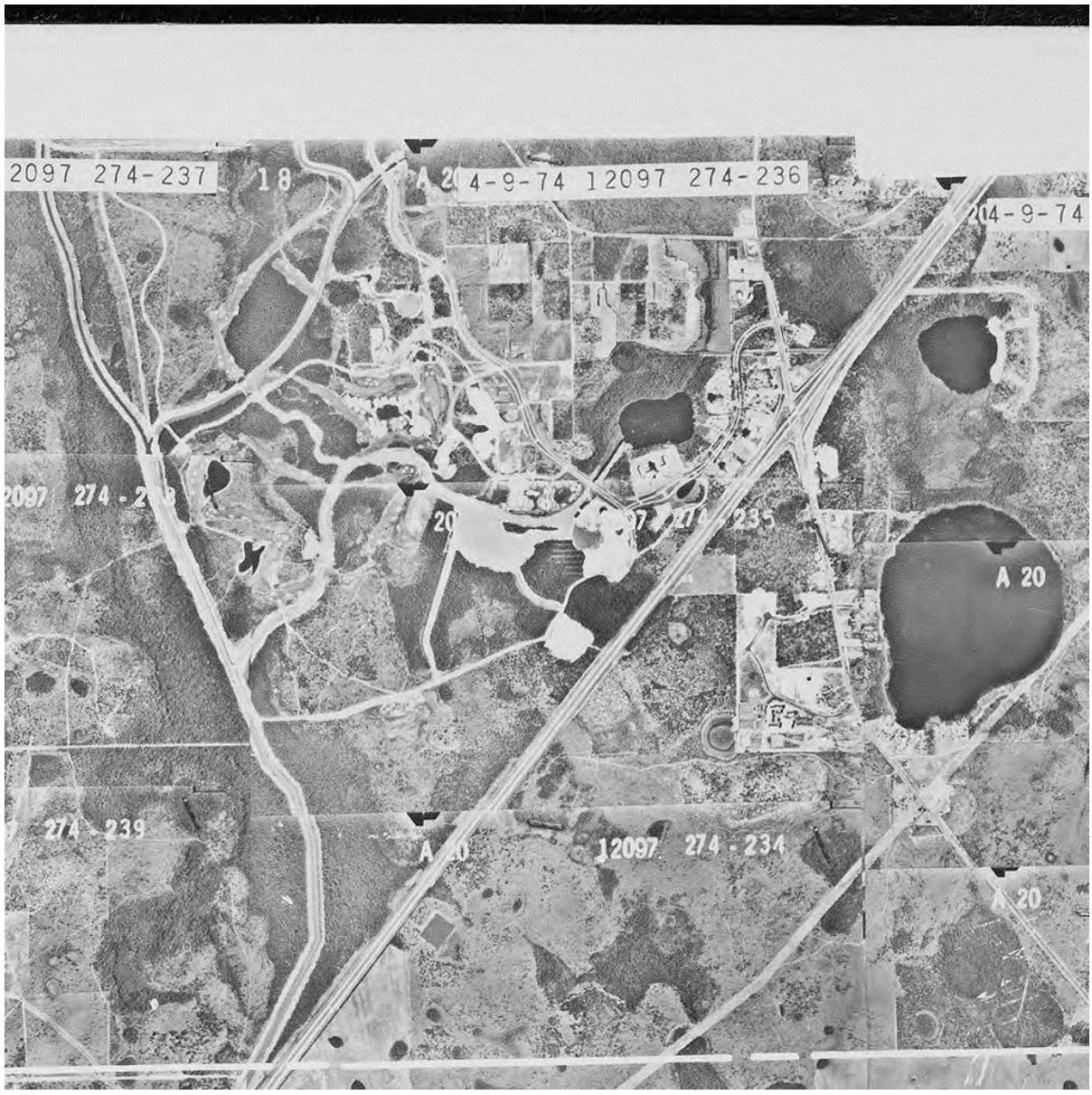
Aerial Photography: 1969



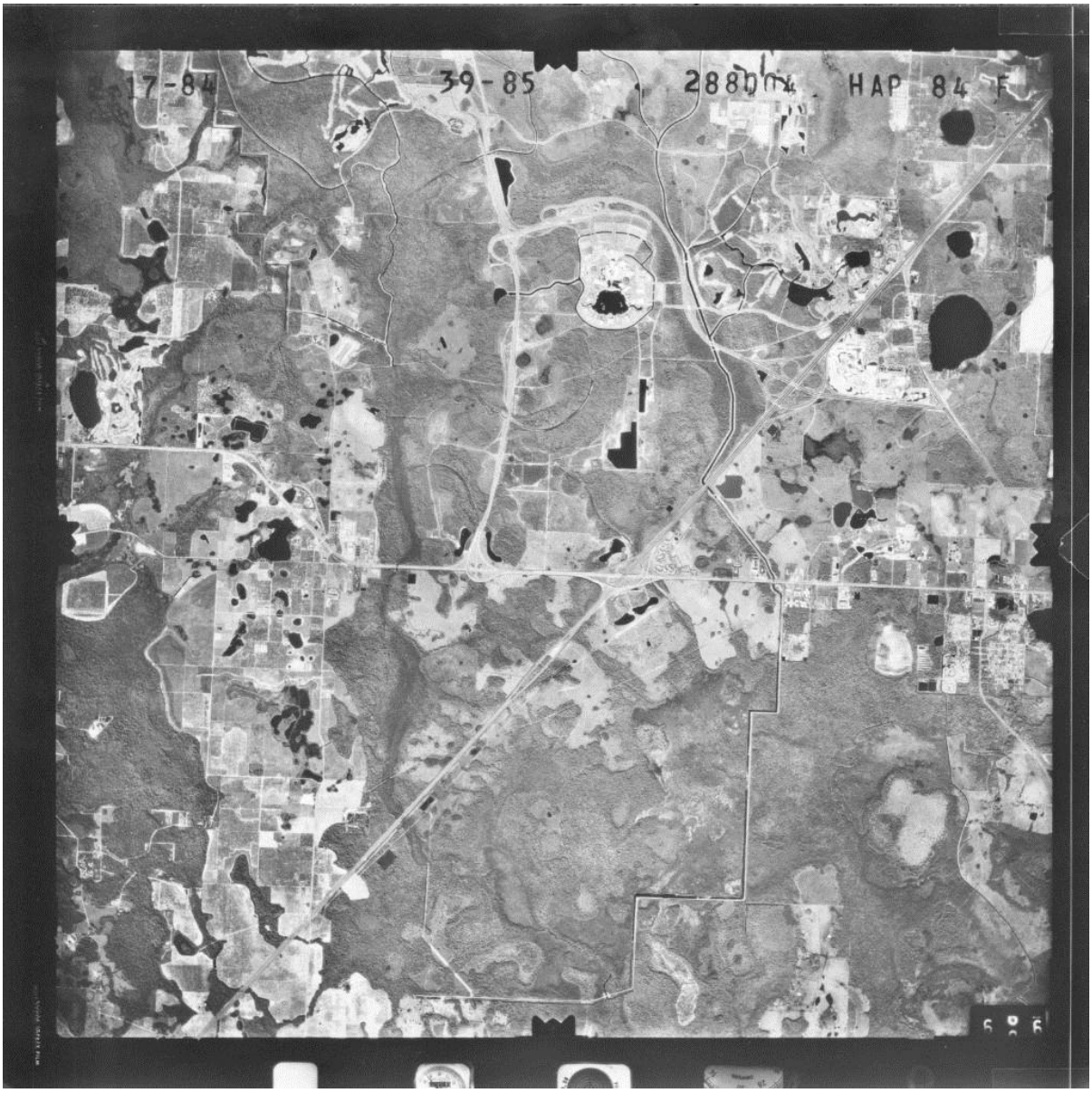
Aerial Photography: 1974A



Aerial Photography: 1974B



Aerial Photography: 1974C



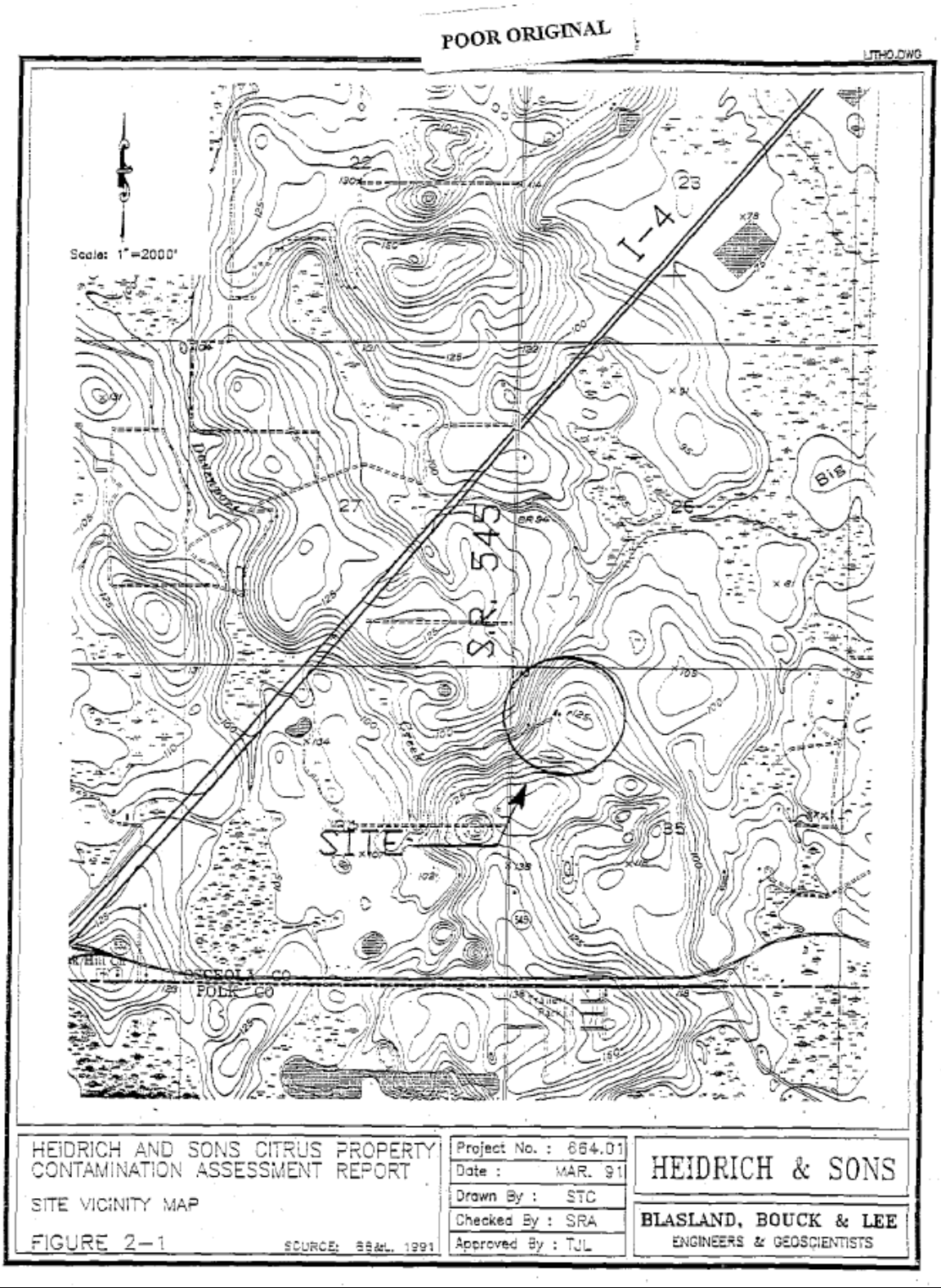
Aerial Photography: 1984

Aerial Photography: 1996A

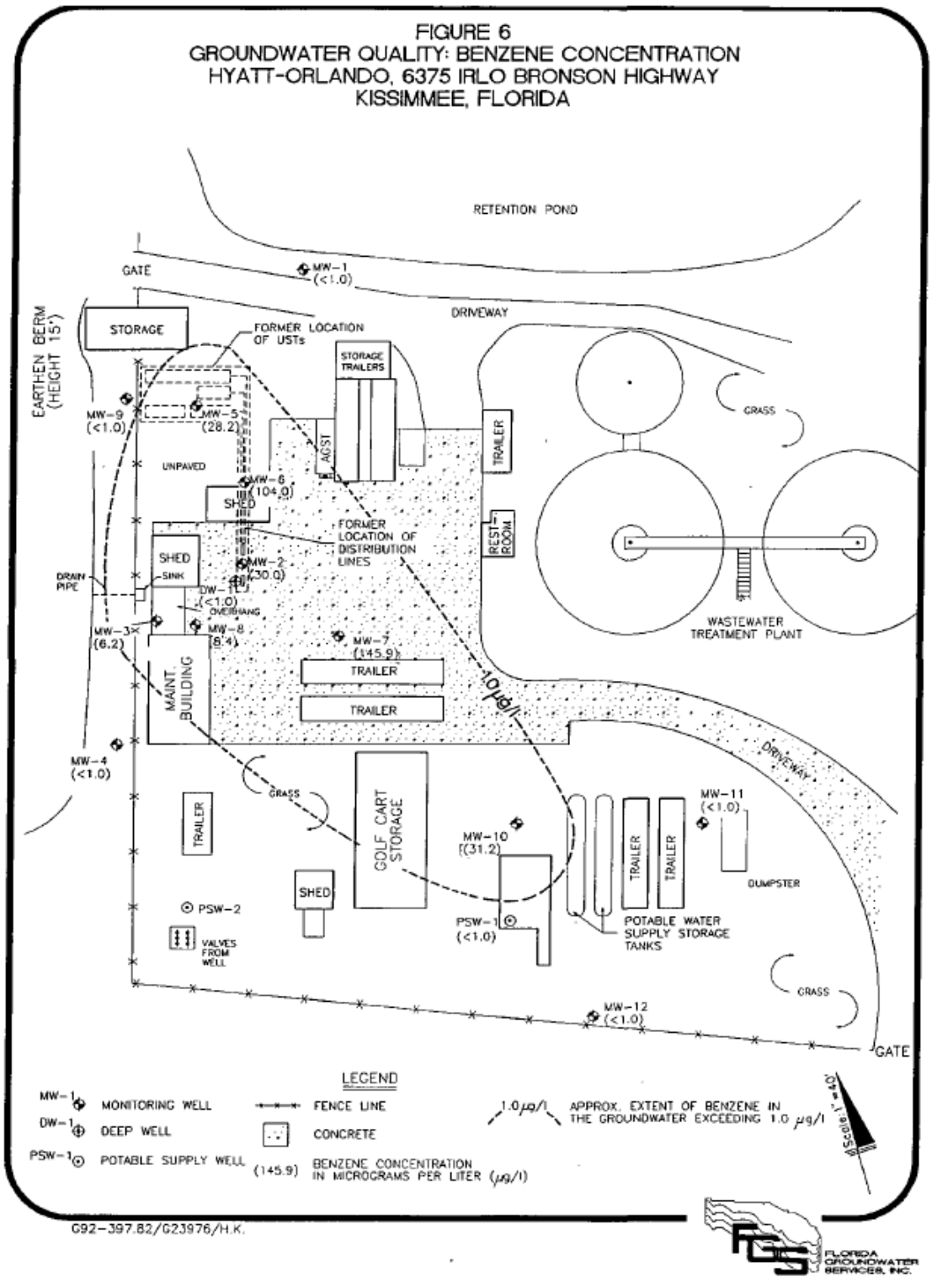
Aerial Photography: 1996B

Aerial Photography: 1996C

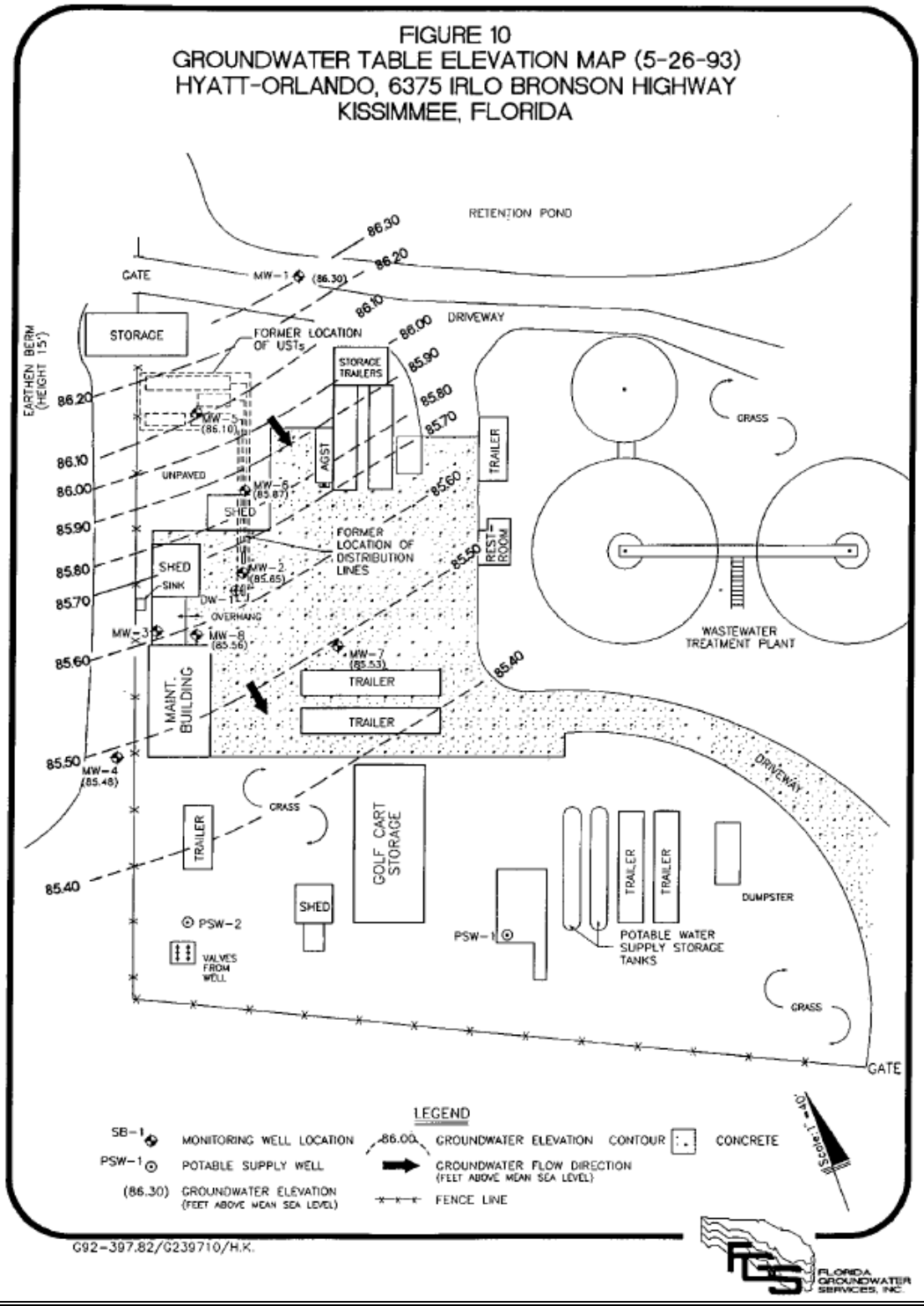
APPENDIX D
Site Diagrams



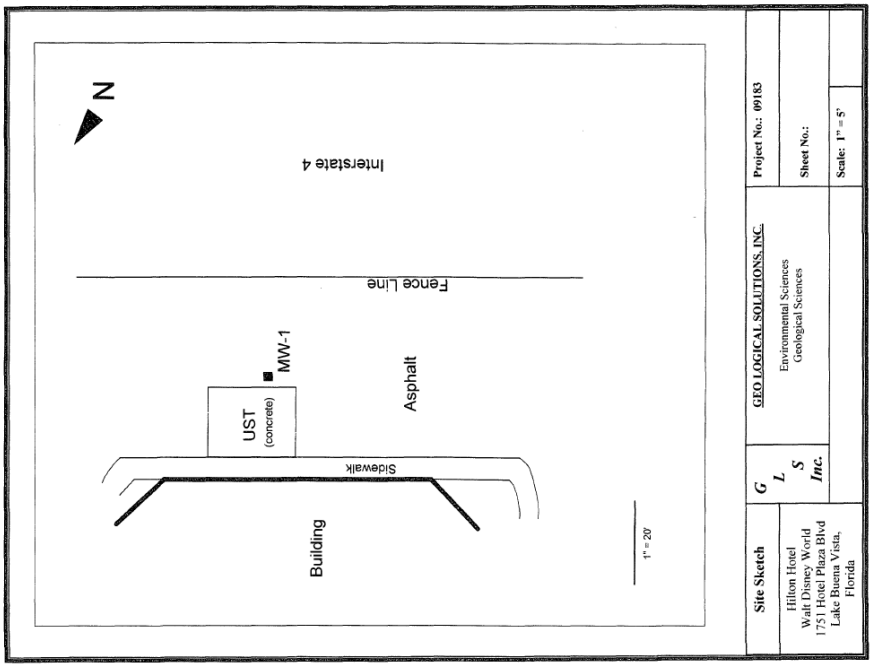
Site 8: Reunion Resort, formerly Herman J Heidrich & Sons Inc. – Site Vicinity Map by Blasland, Bouck & Lee Inc.



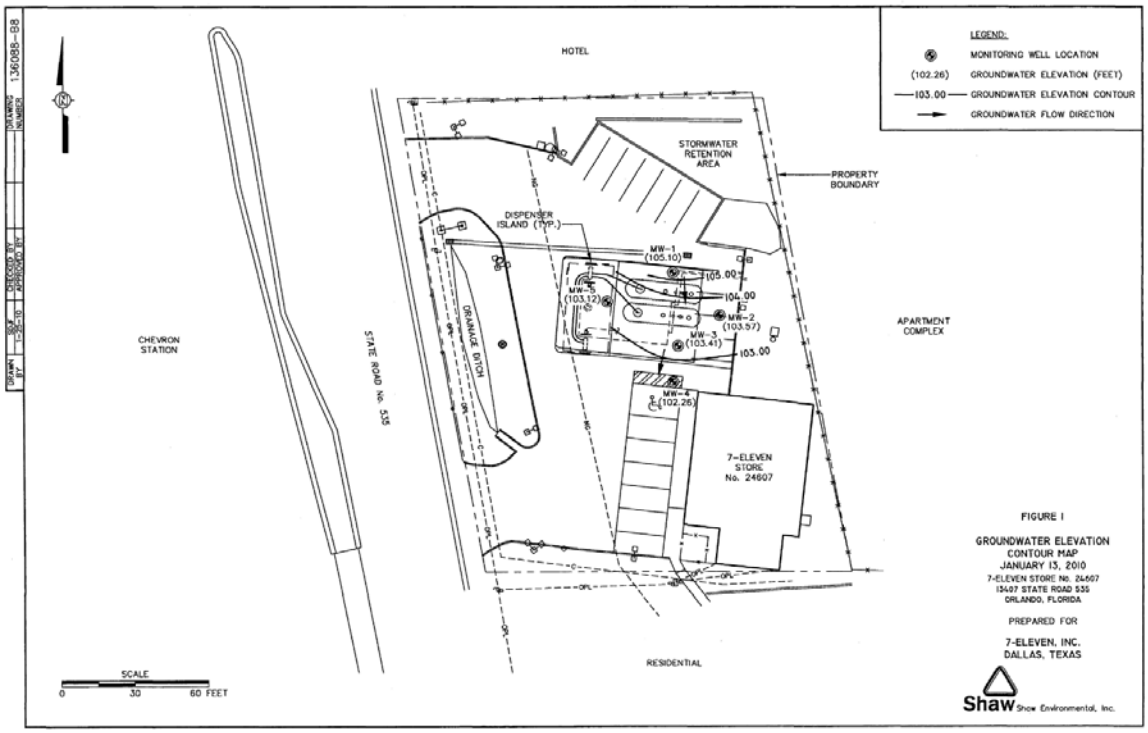
Site 30: Orlando Sun Resort & Spa, formerly Hyatt Orlando and Ramada Orlando Celebration Resort & Convention Center – Benzene Concentration Map by Florida Groundwater Services Inc.



Site 30: Orlando Sun Resort & Spa, formerly Hyatt Orlando – Groundwater Table Elevation Map by Florida Groundwater Services Inc.



Site 48: Hilton in the Walt Disney World Village – Site Sketch by Geological Solutions Inc.



Site 51: 7-Eleven Food Store #24607 – Groundwater Elevation Contour Map by Shaw Environmental Inc.