

The Underline - Segment 6

BUILD Grant FY 2018

Appendix L

**Underline Environmental
Supplemental Phase I**



**SUPPLEMENTAL
PHASE I ENVIRONMENTAL SITE ASSESSMENT
AND SAMPLING PLAN**

**THE UNDERLINE -10 MILE CORRIDOR PARK, METRORAIL RIGHT-OF-WAY
MIAMI RIVER TO SW 98TH STREET ALONG US-1
MIAMI, FLORIDA**

- PREPARED FOR –

Miami-Dade County Parks, Recreation and Open Spaces Department

- PREPARED BY –

**MILIAN, SWAIN & ASSOCIATES, INC.
IN ASSOCIATION WITH
AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
5845 NW 158th Street
Miami Lakes, Florida 33014**

Amec Foster Wheeler Project Number 6783-16-2797

February 20, 2017



Millan, Swain & Associates, Inc.



amec
foster
wheeler

February 20, 2017

Mr. Mark Heinicke
Miami-Dade County Parks, Recreation,
and Open Spaces (MDPROS)
275 NW 2nd Street, 4th Floor
Miami, Florida 33128

Subject: **SUPPLEMENTAL PHASE I ENVIRONMENTAL SITE ASSESSMENT AND SAMPLING PLAN
THE UNDERLINE - 10 MILE CORRIDOR PARK**
Miami River to SW 98th Street along US-1, Miami, Florida
Amec Foster Wheeler Project Number 6783-16-2797

Dear Mr. Heinicke:

Milian, Swain & Associates, Inc. (MSA) and Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) herewith submit this Supplemental Phase I Environmental Site Assessment (ESA) report to address the DERM requirements for assessment of the 10 miles of the proposed Underline within the Metrorail right-of-way extending from the Miami River to SW 98th Street along US-1 in Miami, Florida. ~~The Supplemental-ESA includes a sampling and analysis plan for a Limited Phase II ESA of The Underline and addresses the Miami-Dade County Department of Environmental Resources Management (DERM) memoranda dated July 25, 2016 and September 28, 2016.~~

The purpose of the Supplemental ESA is to document additional current and historical information on and in the vicinity of the subject property (the site) to identify actual and potential environmental concerns. Miami-Dade County Parks, Recreation, and Open Spaces (MDPROS) intends to develop the site to use as a linear park, urban trail, and living art destination. This Supplemental ESA report will assist MDPROS with its evaluation of potential environmental risks at the site. Information from the Limited and Supplemental ESA reports have been utilized for the design of a Limited Phase II sampling and analysis program for review by MDPROS and the Miami-Dade County Department of Environmental Resources Management (DERM).


This report presents project information, which includes assessment procedures and limitations, along with our findings and conclusions. We appreciate the opportunity to serve you on this project. If you have any questions, please do not hesitate to contact Mr. Ashok Aitharaju at 305-818-8478 or Arsenio Milian at 305 441 0123.

Sincerely,
AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.


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MILIAN, SWAIN AND ASSOCIATES


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Attachments

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1.0 INTRODUCTION

Milian, Swain & Associates, Inc.'s (MSA) subconsultant, Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), conducted a Supplemental Phase I Environmental Site Assessment (ESA) for sections (designated as Character Zones) of the 10 miles of The Underline within the Miami-Dade Metrorail right-of-way site, extending from the Miami River to SW 98th Street along US-1 in Miami, Florida (the site or subject property). Miami-Dade County Parks, Recreation, and Open Spaces (MDPROS) intends to develop the subject property into a linear park, urban trail, and living art destination. The Character Zones of The Underline are proposed for extensive recreational uses including basketball courts, skating fields, soccer field, butterfly gardens, seating areas and exercise gymnasium. A Limited Phase I ESA dated May 23, 2016, prepared by Amec Foster Wheeler, was submitted to the Miami-Dade County Department of Environmental Resources Management (DERM). The Supplemental Phase I ESA was performed to address DERM's July 25, 2016 and September 28, 2016 memoranda in response to the Limited Phase I ESA. DERM's memoranda requested additional information and a sampling & analysis plan for a Phase II ESA of The Underline. Copies of the DERM memoranda are included in **Appendix A**.

Our Supplemental Phase I ESA services were conducted in accordance with industry-accepted standards. The services include a review of topographic, fire insurance maps, aerial photographs and historical use documents for sections of The Underline. The sections of The Underline reviewed are proposed for extensive use recreational purposes. MSA and Amec Foster Wheeler's qualifications and limitations for this Supplemental Phase I ESA are provided under the appropriate sections of this report.

1.1 PURPOSE

The purpose of the Supplemental Phase I ESA is to further document current and historical use information on sections (Character Zones) of the subject property and in the site vicinity (within 500 feet laterally of the site) to identify actual and potential environmental concerns relative to the site. The report is intended to assist MDPROS in the evaluation of the risk of adverse environmental impact to the subject property. In addition, the report provides information for the design of a Phase II sampling and analysis program included in the report for review by MDPROS DERM as the next step in the environmental evaluation of the site.

The goal of the Supplemental Phase I ESA process is to identify additional recognized environmental conditions (RECs). The term *REC* means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a site: (1) due to any release to the environment, (2) under conditions indicative of a release to the environment, or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not RECs. A *de minimis* condition generally does not present a

threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

Separate and distinct from a REC are two other types of conditions that may be noted in a Phase I ESA: a controlled REC (CREC) or historical REC (HREC).

A CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the current satisfaction of the applicable regulatory authority (for example, as evidenced by a no further action [NFA] letter or the equivalent, or meeting risk-based criteria established by the regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls, such as site use restrictions, activity and use limitations (AULs), institutional controls, or engineering controls.

An HREC is a REC from a past release of any hazardous substances or petroleum products that has occurred in connection with the site and has been addressed to the satisfaction of the applicable regulatory authority (using current criteria) or meets the unrestricted residential use criteria established by the regulatory authority and applicable at the time of this Supplemental Phase I ESA without subjecting the site to any required controls.

1.2 DETAILED SCOPE OF SERVICES

A Supplementary Phase I was conducted at the request of DERM. Based on the linear nature of the site, the Supplemental ESA scope is as requested by DERM and was designed to adhere to the applicable aspects of Guidance Document E-1527-13 - ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The deviations from the ASTM standard are designed to better serve the intended purpose of the report – to provide the basis for the design of a Phase II sampling and analysis plan for the site. Because there is no proposed property sale or purchase transaction, the elements of the ASTM guidance that are designed only to provide protection for property purchasers, were not included. The exclusion of the property transaction aspects of the ASTM standard were discussed during separate planning meetings and telephone conversations with DERM and MDPROS. DERM agreed with the modification of the study area to address the linear nature of the property and determined that the exclusion of property transaction aspects of the ASTM Standard should be discussed with MDPROS. MDPROS agreed that, because there would be no property transaction, it would not be necessary to adhere to the property transaction aspects of the ASTM Standard. MDPROS also indicated that groundwater would not be used for irrigation or any other purpose in their planned use for the property. As such, potential groundwater impacts to the site are not a significant element of this ESA.



1.3 SITE LOCATION AND DESCRIPTION

The site is The Underline within the Miami-Dade Metrorail right-of-way extending from SW 98th Street northeast to the Brickell Station located south of the Miami River at 1001 SW 1st Avenue, Miami, Florida. The ten mile site includes the following Metrorail stations going south from the Brickell Station: Vizcaya, Coconut Grove, Douglas Road, University, South Miami and Dadeland North. Part of the site is located within the City of Miami, Miami-Dade County, Florida. According to the Miami-Dade County Property Appraiser the site is owned by the Miami-Dade County Transit Department. **Figures 1 to 12** present the location of the Site.

1.4 SITE AND VICINITY GENERAL CHARACTERISTICS

The site consists of 10 miles of The Underline within the Miami-Dade Metrorail right-of-way extending from SW 98th Street northeast to the Brickell Station at the north end. The site is located in mixed-use areas including residential and commercial areas.

1.5 CURRENT USES OF THE ADJOINING PROPERTIES

Residential and commercial properties are located on the eastern and western portions of the rail running north from SW 15th Road to the Brickell Station. US-1 Highway runs adjacent and parallel generally along a majority of the southern portion of the rail running northeast to southwest from the Vizcaya Station at SW 32nd Road to SW 90th Street. A mix of residential, commercial properties, and parks are located on both sides of the rail.



2.0 ENVIRONMENTAL RECORDS REVIEW

Amec Foster Wheeler staff reviewed the results of a search of standard environmental records sources within 500 feet on each side of the site and provided a summary of the results in the Limited Phase I ESA dated May 23, 2016. EDR provided results of a regulatory agency database search in their report dated March 16, 2016. The report was reviewed for information pertaining to storage and/or reported releases of hazardous substances and petroleum products on the site and on surrounding properties that may affect the site. The EDR search report is included in Appendix B of the May 2016 Limited Phase I ESA.

2.1 FEDERAL RECORDS

Based on distances from the site, the types of listings, and the assumed direction of groundwater flow, the sites listed below and in the May 2016 Limited Phase I ESA are sites that may have a negative impact on the site.

- Mario's Dry Cleaning Inc. (IW5-6175/File-5751/FDEP# 129) 5828 SE 71 St. South Miami, FL 33143, located approximately 250 feet to the east of the Metrorail at the South Miami Station was identified on the CERCLIS list. According to information presented in the EDR Report and the Miami-Dade County Department of Regulatory and Economic Resources (RER) Database, the facility is an active dry cleaning facility permitted by the RER. The facility was issued a Notice of Violation (NOV) by RER in 2011 for failing facility site inspections and in 2012 for a chlorinated solvent discharge. The facility, at the request of RER, submitted a Site Assessment Report (SAR) dated July 30, 2012 prepared by Hydrologic Associates USA Inc. (HAI) that documented the presence of chlorinated solvents in the groundwater at the facility. A SAR Addendum (SARA) dated January 29, 2014 prepared by HAI for the facility at the request of RER documented soil and groundwater chlorinated solvent impact. The January 2014 SARA also indicated that the groundwater flow in the vicinity of the facility is to the east, which would make the facility downgradient from The Underline/subject site. RER, in a memo dated March 18, 2014, requested additional site assessment to further delineate the soil and groundwater chlorinated solvent impact at the facility. The requested additional site assessment to delineate the impact is currently pending. As such Mario's Dry Cleaning Inc. is considered a REC at this time.



- McDonald Imperial Cleaners (FDEP # 13 8629041) 5840 S Dixie Hwy South Miami, Florida 33143 located approximately 200 feet southeast of the site was identified on the RCRA-SQG, FINDS, FL LUST, FL UST, FL DRYCLEANERS, FL PRIORITYCLEANERS, FL DWM CONTAM and ECHO lists. A Florida Department of Environmental Protection (FDEP) letter dated February 22, 2016 notified the property owner of available funding for a site assessment. The McDonald Imperial Cleaners site is considered a REC at this time due to a pending site assessment.
- South Miami Radiator CO. (IW5-319/File 298) 6400 South Dixie Hwy, South Miami, Florida located approximately 150 feet southeast of the site was identified on the RCRA-SQG, FINDS and ECHO lists. According to DERM records, South Miami Radiator CO. is required to monitor the groundwater quarterly for lead related to a June 1994 violation. According to a DERM memo dated July 24, 2015 a quarterly monitoring report is pending. The South Miami Radiator CO. site is considered a REC at this time due to the pending groundwater monitoring required to document to current lead concentrations.
- Florida Power & Light (FPL) (HWR-374/File-14971) 5235 Ponce De Leon Blvd Coral Gables Florida 33134 located approximately 150 feet northwest of the site was identified on the RCRA-CESQG, FINDS, Miami Dade Co. HWS and ECHO lists. The FPL site also has a listed address of 5301 Ponce De Leon Blvd Coral Gables Florida 33134. According to a quarterly status report dated August 11, 2015 prepared by SCS Engineers, the FPL site has documented Arsenic groundwater impact. A remedial system is currently in operation to address the groundwater impact. The FPL site is considered a REC at this time due to the Arsenic groundwater impact.
- Sunset Quickprint (IW5-573/File 536) 5833 Ponce De Leon Blvd, Coral Gables Florida, 33146 located approximately 100 feet northwest of the site was identified on the RCRA-CESQG, FINDS, FL Enforcement and ECHO lists. According to a DERM memo dated September 16, 2015, evidence of unauthorized industrial waste discharges to an on-site septic tank were observed by DERM personnel on March 5, 2015 during an inspection for the facility. The Sunset Quickprint site is considered a REC at this time due to the unauthorized discharge of industrial waste to an on-site septic tank.

- Supershine Car Wash, FDEP # 13 8842244; DERM UT-1777/F-8113) 9790 South Dixie Highway, Miami, Florida located approximately 60 feet east of the site was identified on the FL LUST list. According to a Pilot Test Plan dated January 29, 2016 prepared by PI Environmental, the facility prior to operating as car wash historically operated as a Fina Service Station retailing gasoline products with last fuel sales around 1984. The UST's and dispenser islands were removed in September 1994, and the underground piping was abandoned in place. A discharge notification form was filed in November 1988. DERM approved a SAR on October 17, 2011. The SAR and subsequent additional assessments documented groundwater petroleum hydrocarbon impact at the facility. The Supershine Car Wash site is considered a REC at this time due to the petroleum hydrocarbon groundwater impact.

2.2 STATE AND LOCAL RECORDS

Based on distances from the site, the types of listings, and the assumed direction of groundwater flow, the sites listed below and in the May 2016 Limited Phase I ESA are sites that may have a negative impact on the site.

- Union 76 -17th Ave (FDEP # 13 8503538) 2465 SW 17th Ave, Miami, Florida located approximately 70 feet northwest of the site was identified on the LUST, UST, CLEANUP SITES and DWM CONTAM Lists. The facility is currently operating as a Mobile Service Station. According to the EDR Report and an April 2004 SSAR report prepared by ENSR, petroleum hydrocarbon impact is present at the facility and remedial activities are ongoing. The former Union 76 -17th Ave site is considered a REC at this time due to the documented presence of petroleum hydrocarbon groundwater impact.
- Grove Automotive (FDEP # 8504781) 3198 S. Dixie Hwy Miami Florida and located approximately 100 feet south of the site was identified LUST, UST, Miami Dade IW, Enforcement, CLEANUP SITES and DWM CONTAM Lists. Grove Automotive is currently operating as a Chevron Service Station. According to the EDR report and DERM records, documented petroleum hydrocarbon impact is present at the facility and a RAP was approved by DERM in July 1993 to address groundwater impact. The former Grove Automotive site is considered a REC at this time due to the documented presence of petroleum hydrocarbon groundwater impact.
- 7 Eleven Store #3760 (FDEP # 8520524) 3498 S Dixie Hwy Miami Florida, located approximately 100 feet south of the site was identified on LUST, UST,

Enforcement, CLEANUP SITES and DWM CONTAM Lists. The 7 Eleven Store #3760 is currently operating as a Chevron Service Station. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the former 7 Eleven Store #3760 site and, as such, is considered a REC.

- DEEL Volvo (FDEP # 13 8504336) 3650 Bird Road, Miami Florida adjacent to the north of the site was identified on the LUST, UST, CLEANUP SITES and DWM CONTAM Lists. An FDEP letter dated January 14, 2016 notified the property owner of available funding for a site assessment for documented petroleum impact related to a July 1992 from discharge that is pending assessment. The DEEL Volvo site is considered a REC at this time due to the pending site assessment to characterize documented petroleum impact.
- Sunshine #245 (FDEP # 8504023) 3010 SW 37th Ave Miami Florida located approximately 300 feet northwest of the site was identified on the LUST, UST, AST, CLEANUP SITES and DWM CONTAM Lists. The Sunshine #245 facility is currently operating as a WESTAR Service Station. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the former Sunshine #245 site and as such is considered a REC.
- Culligan Water Conditioning (FDEP # 8622130) 3510 S Dixie Hwy Miami Florida located approximately 250 southeast was identified on the LUST, UST, CLEANUP SITES and DWM CONTAM Lists. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the Culligan Water Conditioning site and as such is considered a REC.
- 7 Eleven Store # 3759 (FDEP 8504440) 375 S Dixie Hwy Miami Florida located adjacent to the southeast of the site was identified on LUST, UST, Enforcement, CLEANUP SITES and DWM CONTAM Lists. The 7 Eleven Store # 3759 is currently operating as a Mobil Service Station. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the former 7 Eleven Store # 3759 site and as such is considered a REC.
- University of Miami – Physics (FDEP 8942886) 1535 Levante Ave Coral Gables Florida located approximately 400 feet northwest of the site was identified on the LUST, UST, UIC, AST, Miami Dade IW, Enforcement, Miami-Dade Co. AP CLEANUP SITES and DWM CONTAM Lists. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the University of Miami – Physics site and as such is considered a REC.

- University Car Care (FDEP # 8506412) 1492 S Dixie Hwy, Coral Gables Florida located approximately 150 feet southeast of the site was identified on LUST, UST, AST, CLEANUP SITES and DWM CONTAM Lists. The University Car Care facility is currently operating as a Shell Service Station. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the former University Car Care site and as such is considered a REC.
- 7 Eleven Store #3760 (FDEP# 8506411) 6790 SW 57th Ave South Miami Florida located approximately 75 feet northwest of the site was identified on LUST, UST, CLEANUP SITES and DWM CONTAM Lists. The 7 Eleven Store #3760 is currently operating as a Mobil Service Station. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the former 7 Eleven Store #3760 site and as such is considered a REC.
- Sunshine #107/Amoco Service Station (FDEP # 13 8505925) 6350 S Dixie Hwy South Miami, Florida located approximately 100 feet southeast of the site was identified on the LUST, UST, Miami Dade IW, Enforcement, DWM CONTAM, RCRA-SQG, FINDS and ECHO lists. The Sunshine #107/Amoco Service Station is currently operated as a Marathon Service Station. An FDEP letter dated September 28, 2015 notified the property owner of available funding for a site assessment for documented petroleum impact from August 1988 and September 1992 discharges that are pending assessment. The Sunshine #107/Amoco Service Station site is considered a REC at this time due to the pending site assessment to characterize documented petroleum impact.
- Sunshine # 252 (FDEP # 8505993) 8033 S Dixie Hwy, Miami, Florida located approximately 140 feet southeast of the site was identified on LUST, UST, Miami-Dade Co. HWS, Miami-Dade Co. SPILL, Enforcement, CLEANUP SITES and DWM CONTAM Lists. The Sunshine # 252 is currently operating as a Shell Service Station. According to the EDR report and FDEP records, petroleum hydrocarbon impact is present at the former Sunshine # 252 site and, as such, is considered a REC.
- Auto Perfection (FDEP 8504810) 9180 S Dixie Hwy Miami Florida located approximately 50 feet southeast of the site was identified on LUST, UST, Miami-Dade Co. AP, Miami-Dade IW, Enforcement and CLEANUP SITES, DWM CONTAM lists. According to the EDR report and FDEP records,

petroleum hydrocarbon impact is present at the Auto Perfection site and, as such, is considered a REC.

As requested in DERM's July 25, 2016 and September 28, 2016 memoranda and based on distances from the site, the types of listings, and the assumed direction of groundwater flow, the sites listed below are additional sites to the list provided in the May 2016 Limited Phase I ESA, that may have a negative impact on the site.

- City of Miami South Side Park (HWR-779) 140 SW 11 St. Miami, FL 33130 located approximately 139 feet to the west of the Metrorail was identified on the Miami Dade Enforcement database. An investigation in December 2013 identified the potential for the presence of solid waste at the South Side Park which is currently a community park with playground, basketball court and community center. Following site assessment activities, an engineering control was implemented in 2015/2016. Additional site assessment activities are in progress and as such the City of Miami South Site Park is considered a REC at this time.
- River Cleaners (IW5-4112/File 3799, FDEP-139100746) 99 SW 7St, Miami FL located approximately 190 feet to the east of the Metrorail was identified on the Drycleaners, LUST, UST and DWM CONTAM lists. Petroleum contamination discovered in January 1991 was remediated under state funded Petroleum Cleanup Program and was issued a Site Rehabilitation Completion Order in July 1994. Dry Cleaning solvent contamination at the River Cleaners facility is pending cleanup and became eligible for state funded cleanup under the Drycleaning Solvent Cleanup Program in January 1999. The River Cleaners facility is considered a REC at this time.
- Systems Go Dry Cleaners (IW5-5394/File 5001, FDEP-139700068) 2750 SW 26th Ave, Miami FL, located approximately 150 feet to the south east of the Metrorail was identified on the Drycleaners, Priority Cleaners, Cleanup Sites, DWM CONTAM, Resp. Party, Miami Dade IW and Miami Dade Co HWS lists. Dry Cleaning solvent contamination present at the Systems Go Dry Cleaners facility is pending cleanup under state funded Dry Cleaning Program. The Systems Go Dry Cleaners facility (currently closed) is considered a REC at this time.
- Redd's Dry Cleaners (IW5-3387/File 3134, FDEP 139502588) 5821 Ponce de Leon Blvd, Coral Gables FL, located approximately 115 feet to the north west of the Metrorail was identified on the Drycleaners, Priority Cleaners, Cleanup



Sites, DWM CONTAM, Resp. Party, Miami Dade IW and Miami Dade Co HWS lists. Dry Cleaning solvent contamination present at the Redd's Dry Cleaners facility is pending cleanup under state funded Dry Cleaning Program. The Redd's Dry Cleaners (currently closed) is considered a REC at this time.

3.0 HISTORICAL RECORDS REVIEW

As requested in DERM's July 2016 and September 2016 memoranda, Amec Foster Wheeler staff reviewed topographic, fire insurance maps, aerial photographs and historical use documents for sections of The Underline provided by EDR in January 2016 under Inquiry Number 4835529, to review the history of the previous uses of the surrounding areas in order to help further identify the likelihood of past uses that could have led to RECs in connection with the site. Due to the length of the 10-Mile Corridor Park and the extensive review that would be required, Amec Foster Wheeler requested in a correspondence dated September 26, 2016, that the review of historical fire insurance maps, historical aerials, historical topographic maps and historical use information be limited to twenty sections of the Park designated as Character Zones that are proposed for extensive recreational uses including basketball courts, skating fields, soccer field, butterfly gardens, seating areas and exercise gymnasium. **Figures 1 to 12** illustrate the locations of the Character Zones. The DERM approved Amec Foster Wheeler's request in their correspondence dated September 28, 2016. Amec Foster Wheeler grouped the twenty Character Zones into five areas for the historical records review. The five Character Zone areas are: Brickell to Vizcaya, Vizcaya to North Coconut Grove, North Coconut Grove to Douglas, Coral Gables to South Miami and South Miami to Dadeland North.

To further assess the land use history for the site and adjacent properties, Amec Foster Wheeler reviewed the following sources:

- Historic aerial photographs;
- Historical USGS topographical maps;
- Sanborn® Maps and;
- EDR's Local Street Directory (City Directory).

3.1 AERIAL PHOTOGRAPHS

Aerial photographs are photographs taken from an aerial platform with sufficient resolution to allow identification of development and activities of areas encompassing the site. Amec Foster Wheeler reviewed available aerial photographs of the site and surrounding area. **Tables 1.1 to 1.5** summarizes the information obtained from review of the aerial photographs for the five Character Zone areas: Brickell to Vizcaya, Vizcaya to North Coconut Grove, North Coconut Grove to Douglas, Coral Gables to South Miami and South Miami to Dadeland North. It should be noted that site features may not be discernable on the aerial photographs due to the scale or degree of clarity of a given photograph. Copies

of the aerial photographs sources provided EDR in January 2016 under Inquiry Number 4835529 reviewed by Amec Foster Wheeler are included in **Appendix B**.

Table 1.1: Aerial Photograph Search Results for Brickell to Vizcaya

Date	Scale	Property	Adjoining Properties
1940	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1951	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1961	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1968	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1973	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1978	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1985	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1991	1"=500'	The site is developed with a Metrorail located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1998	1"=500'	The site is developed with a Metrorail located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
1999	1"=500'	The site is developed with a Metrorail located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
2007	1"=500'	The site is developed with a Metrorail located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.
2010	1"=500'	The site is developed with a Metrorail located in a dense residential / commercial / industrial area.	Adjoining properties are baseball field, vacant lands, residential, commercial, industrial buildings and roads.

Table 1.2: Aerial Photograph Search Results for Vizcaya to North Coconut Grove

Date	Scale	Property	Adjoining Properties
1951	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1961	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and highway.
1968	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and highway.
1971	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and highway.
1978	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1985	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1991	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1998	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1999	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
2007	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
2010	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.

Table 1.3: Aerial Photograph Search Results for North Coconut Grove to Douglas

Date	Scale	Property	Adjoining Properties
1951	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1952	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1961	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and highway.
1968	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and highway.
1971	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and highway.
1978	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1985	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1991	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1998	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
1999	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
2005	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.

Table 1.3: Aerial Photograph Search Results for North Coconut Grove to Douglas

Date	Scale	Property	Adjoining Properties
2006	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
2007	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.
2010	1"=500'	The site is developed with a Metrorail with two lines located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and highway.

Table 1.4: Aerial Photograph Search Results for Coral Gables to South Miami

Date	Scale	Property	Adjoining Properties
1938	1"=500'	The site is developed with a railway located in an undeveloped area.	Adjoining properties are vacant lands, and roads.
1952	1"=500'	The site is developed with a railway located in a sparsely developed area.	Adjoining properties are vacant lands, buildings and roads.
1961	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1968	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
1973	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
1978	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
1985	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.

Table 1.4: Aerial Photograph Search Results for Coral Gables to South Miami

Date	Scale	Property	Adjoining Properties
1991	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
1998	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
1999	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
2005	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
2006	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
2007	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.
2010	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, sports fields, residential, commercial, industrial buildings and roads.

Table 1.5: Aerial Photograph Search Results for South Miami to Dadeland North

Date	Scale	Property	Adjoining Properties
1938	1"=500'	The site is developed with a railway located in an undeveloped / agricultural lands.	Adjoining properties are undeveloped / agricultural lands, and roads.
1973	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1978	1"=500'	The site is developed with a railway located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.

Table 1.5: Aerial Photograph Search Results for South Miami to Dadeland North

Date	Scale	Property	Adjoining Properties
1985	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are vacant lands, residential, commercial, industrial buildings and roads.
1991	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.
1998	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.
1999	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.
2005	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.
2006	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.
2007	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.
2010	1"=500'	The site is developed with a Metrorail with two lines at the station located in a dense residential / commercial / industrial area.	Adjoining properties are residential, commercial, industrial buildings and roads.

Amec Foster Wheeler’s review of the historical aerial maps did not identify historical usage that is considered to be a REC in connection with the site. Copies of the aerial maps are included in **Appendix B**.

3.2 HISTORICAL TOPOGRAPHIC MAPS

Historical topographic maps were obtained from EDR for the five Character Zone areas: Brickell to Vizcaya, Vizcaya to North Coconut Grove, North Coconut Grove to Douglas, Coral Gables to South Miami and South Miami to Dadeland North and were reviewed to identify past site usage and to identify potential sources/source areas of contamination



and summarized below. Copies of the topographic maps provided by EDR in January 2016 under Inquiry Number 4835529 reviewed by Amec Foster Wheeler are located in **Appendix B**.

Table 2.1: Historical Topographic Map Search Results for Brickell to Vizcaya

Date	Scale	Property	Adjoining Properties
1949	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1962	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1969	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1988	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1990	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1994	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
2012	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.

Table 2.2: Historical Topographic Map Search Results for Vizcaya to North Coconut Grove

Date	Scale	Property	Adjoining Properties
1947	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1949	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1962	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1969	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1988	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1990	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1994	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.



Table 2.2: Historical Topographic Map Search Results for Vizcaya to North Coconut Grove

Date	Scale	Property	Adjoining Properties
2012	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.

Table 2.3: Historical Topographic Map Search Results for North Coconut Grove to Douglas

Date	Scale	Property	Adjoining Properties
1947	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1949	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1956	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1962	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1969	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1988	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1994	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
2012	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.

Table 2.4: Historical Topographic Map Search Results for Coral Gables to South Miami

Date	Scale	Property	Adjoining Properties
1950	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1956	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1969	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1988	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1994	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.



Table 2.4: Historical Topographic Map Search Results for Coral Gables to South Miami

Date	Scale	Property	Adjoining Properties
2012	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.

Table 2.5: Historical Topographic Map Search Results for South Miami to Dadeland North

Date	Scale	Property	Adjoining Properties
1950	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1956	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1969	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1988	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
1994	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.
2012	1:24000	Development information is not provided for the site.	Development information is not provided for adjoining properties.

Amec Foster Wheeler’s review of the historical topographic maps did not identify historical usage that is considered to be a REC in connection with the site. Copies of the topographic maps are included in **Appendix B**.



3.3 FIRE INSURANCE MAPS

EDR provided Sanborn fire insurance maps for various years from 1918 to 1987 available sections of the five Character Zone areas: Brickell to Vizcaya, Vizcaya to North Coconut Grove, North Coconut Grove to Douglas and Coral Gables to South Miami. Amec Foster Wheeler requested EDR to search for available Sanborn fire insurance maps for the Site from South Miami to Dadeland. EDR responded that Sanborn fire insurance map coverage is not available for this area. A copy of the EDR response is included in **Appendix B**. The available Sanborn maps were reviewed to identify past site usage and to identify potential sources/source areas of contamination. **Table 3.1 to 3.4** summarizes the information obtained from review of the available Sanborn fire insurance maps. Copies of the Sanborn fire insurance maps are included in **Appendix B**.

Table 3.1: Sanborn® Fire Insurance Map Search Results for Brickell to Vizcaya

Date	Scale	Property	Adjoining Properties
1918	1"=150'	The site is not on the Sanborn map.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1921	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1939	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1950	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1987	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as railway with elevated concrete structures.	Available Sanborn map for adjacent properties include: what appears to be small residential, apartments buildings, commercial and vacant properties, a school and park.

Table 3.2: Sanborn® Fire Insurance Map Search Results for Vizcaya to North Coconut Grove

Date	Scale	Property	Adjoining Properties
1918	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway (Flagler System).	Available Sanborn map for adjacent properties include: what appears to be commercial and vacant properties.



Table 3.2: Sanborn® Fire Insurance Map Search Results for Vizcaya to North Coconut Grove

Date	Scale	Property	Adjoining Properties
1921	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be commercial and vacant properties.
1924	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as railway.	Available Sanborn map does not show adjacent properties.
1938	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as railway.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1939	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as railway.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1946	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as railway.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.
1950	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as railway.	Available Sanborn map does not show adjacent properties.
1987	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as a Metro Rail.	Available Sanborn map for adjacent properties include: what appears to be small residential, commercial and vacant properties.

Table 3.3: Sanborn® Fire Insurance Map Search Results for North Coconut Grove to Douglas

Date	Scale	Property	Adjoining Properties
1920	1"=150'	The Site is not shown on the Sanborn map available.	Available Sanborn map for adjacent properties include: what appears to be commercial and vacant properties.
1938	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential properties, commercial properties such as concrete works, cabinet works, filling stations (located at the intersection of S. Dixie Hwy and McDonald's St, S Dixie Hwy and Bird Rd), General Public Utilities Company listed with power diesel engines, and several vacant properties.



Table 3.3: Sanborn® Fire Insurance Map Search Results for North Coconut Grove to Douglas

Date	Scale	Property	Adjoining Properties
1946	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential properties, commercial properties such as a concrete works, building materials warehouse, cabinet works, skating rink, filling stations (located at the intersection of S Dixie Hwy and SW 27 th Ave, S Dixie Hwy and Bird Rd), Ice Plant Company listed with power diesel engines, and several vacant properties.
1950	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential properties, commercial properties such as concrete works cabinet works, filling stations (located at the intersection of S Dixie Hwy and SW 27 th Ave, S. Dixie Hwy and McDonald's St, S Dixie Hwy and Bird Rd), Ice Plant Company listed with power diesel engines, and several vacant properties.
1987	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential properties, commercial properties such as auto sales and service, filling stations (located at the intersection of S Dixie Hwy and SW 27 th Ave, S. Dixie Hwy and McDonald's St, S Dixie Hwy and Bird Rd), Ice Plant Company listed with four fuel oil tanks, and several vacant properties.

Table 3.4: Sanborn® Fire Insurance Map Search Results for Coral Gables to South Miami

Date	Scale	Property	Adjoining Properties
1950	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be commercial and vacant properties.
1968	1"=150'	The Site is shown on the Sanborn map available for portions of the Site as F.E.C Railway.	Available Sanborn map for adjacent properties include: what appears to be small residential properties, commercial properties, buildings for University of Miami, a fire service station, a sewage treatment plant and a filling station located at the intersection of Ponce de Leon and Madruga Court.



Amec Foster Wheeler's review of the Sanborn fire insurance maps identified historical usage that is considered to be a REC in connection with the site. Service stations at 3498 S Dixie Hwy, Miami (currently 7 Eleven # 37601) and 3198 S Dixie Hwy (currently Grove Automotive) were identified and are listed in previous sections.

3.4 LOCAL STREET DIRECTORY

Amec Foster Wheeler obtained City Directory Abstracts from EDR from 1923 to 2013 for the five Character Zone areas: Brickell to Vizcaya, Vizcaya to North Coconut Grove, North Coconut Grove to Douglas, Coral Gables to South Miami and South Miami to Dadeland North and surrounding properties. A complete list of the results is included in EDR's City Directory Abstract included in **Appendix B**. Amec Foster Wheeler reviewed the report as a screening tool to assist in evaluating potential contaminant sources resulting from past activities on or near the site. Due to the extensive list of residences and companies presented on the city directory please refer to **Appendix B** for the complete list of results. The Site was not in the City Directory Abstracts from 1923 to 2013. The adjoining properties are listed from 1923 to 2013 as commercial and residential properties. Amec Foster Wheeler's review of the local street directory records did not identify historical usage of the Site that would be considered a REC in connection with the site.

3.5 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Amec Foster Wheeler staff obtained historical use information on several adjoining properties in the process of researching the site, as described in the preceding sections. Based on our review, historical records identified some adjacent sites that have the likelihood of past uses that cause them to be considered as RECs in connection with the site. The identified historical sites have been listed in the previous sections.

4.0 FINDINGS

Amec Foster Wheeler staff has performed this Supplemental Phase I ESA for the site identified as The Underline within the Metrorail right-of-way extending from the SW 98th Street northeast to the Brickell Station at the northern end in Miami-Dade County, Florida.

The following RECs and other environmental concerns were identified during the completion of this Limited Phase I ESA (May 2016) and this Supplemental Phase I ESA:

- An area located approximately 570 feet north of the Vizcaya Station and approximately 70 feet to the east of the underline of the rail was observed to be filled with trash, debris or other solid waste during the site reconnaissance (May 2016 Limited Phase 1 ESA) and is considered a REC.
- Twenty-three adjacent and surrounding properties along the site within 500 feet on each side of the site with documented contaminants are considered RECs. **Figure 1** to **Figure 12** illustrates the adjacent and surrounding properties considered as RECs.



5.0 OPINION

Based on the opinion of the environmental professional, the site may be impacted by contamination from adjacent and surrounding properties and as requested by DERM, a Phase II ESA should be performed for further evaluation. It should be noted that the groundwater contamination concerns associated with the RECs may not be relevant for the proposed use of the subject property since no groundwater use or likely groundwater contact is anticipated. Soil vapor that may emanate from the likely concentrations of groundwater contaminants to open surface areas would likely be insignificant.

6.0 SAMPLING AND ANALYSIS PLAN

Based on the location of the listed RECs identified during the Limited Phase I ESA and Supplemental Phase I ESA, sections of the site may be impacted by contamination from adjacent and surrounding properties. As requested by DERM, Amec Foster Wheeler has developed a sampling and analysis plan based on the history of the Site and the identified RECs. As stated in previous sections groundwater contamination concerns associated with the RECs may not be relevant for the proposed use of the subject property since no groundwater use or likely groundwater contact is anticipated. As such the sampling and analysis plan does not include groundwater assessment.

The scope of work for screening for potential soil contamination includes the following tasks:

- Install one soil boring to a maximum depth of 2 feet below ground surface (bgs) at locations along the Site that are in the vicinity (within 500') of dry cleaner contaminated sites. Collect two soil samples from the 0-6" and 6"-2' bgs for laboratory analysis of VOCs by EPA Method 8260B, PAHs by EPA Method 8270C, TRPH by FL PRO, and 8 RCRA metals by EPA Method 6020B.
- Install one soil boring to a maximum depth of 2 feet bgs at locations along the Site that are in the vicinity (immediately adjacent) of petroleum contaminated sites. Collect two soil samples from the 0-6" and 6"-2' bgs for laboratory analysis of BTEX/MTBE by EPA Method 8260B, PAHs by EPA Method 8270C, TRPH by FL PRO, and 8 RCRA metals by EPA Method 6020B.
- Install one soil boring to a maximum depth of 2 feet bgs immediately adjacent to the former rail line or the current Metrorail tracks at approximately 2,000 feet intervals, along the Metrorail. The sampling locations have been adjusted to be more concentrated on the proposed character zones due to the proposed greater use and potential for exposure. Collect two soil samples from the 0-6" and 6"-2' bgs for laboratory analysis of PAHs by EPA Method 8270 and Pb EPA Method 6020B.
- An area located approximately 570 feet north of the Vizcaya Station and approximately 70 feet to the east of the underline of the rail was observed to be filled with trash, debris or other solid waste during the site reconnaissance (May 2016 Limited Phase I ESA). Install one soil boring to a maximum depth of 2 feet bgs in the vicinity of the solid waste area. Collect two soil samples from the 0-6" and 6"-2' bgs for laboratory analysis of VOCs by EPA Method 8260B, PAHs by EPA Method 8270C, TRPH by FL PRO, and 8 RCRA metals by EPA Method 6020B.
- Soil types will be classified using the Unified Soil Classification System.



As requested in DERM's July 2016 memo, Amec Foster Wheeler researched the National Pipeline Mapping System for the location of the Everglades Pipeline owned by Buckeye Partners LP to determine the proximity and potential impact of the Everglades Pipeline to the Site. In addition, Amec Foster Wheeler reviewed Buckeye Partners' system map for pipelines in Miami Dade County (**Figure 13**). The National Mapping Pipeline System and Buckeye Partners' system map did not identify any pipeline conveying hazardous liquid in the vicinity of the Site. As such, sampling and analysis to evaluate the impact of the Everglades Pipeline is not required. A figure illustrating the location of a pipeline conveying hazardous liquid from the National Mapping Pipeline System and the Site is included as **Figure 14**.

Figure 1 through **12** illustrates the locations of the proposed soil borings.



7.0 CONCLUSIONS

Amec Foster Wheeler staff has performed a Supplemental Phase I ESA for the sections (Character Zones) of the 10-mile long site identified as The Underline within the Metrorail right-of-way extending from the SW 98th Street northeast to the Brickell Station in Miami-Dade County, Florida. This assessment has revealed evidence of recognized environmental conditions in connection with the site. The RECs are primarily associated with contaminated groundwater, which may not be relevant based on the anticipated non groundwater use of the subject site. The listed RECs were used in the design of a Phase II sampling and analysis plan (included in this report) for the site.

Should additional surface, subsurface, chemical, or other data become available after the date of issue of this report, the findings, conclusions, and recommendations contained herein may need to be modified.



8.0 REFERENCES

ASTM International (ASTM), 2013, ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM International, West Conshohocken, Pennsylvania.

EDR Topographic Maps, Fire Insurance Maps, Aerial Photographs and Historical Use Documents, Inquiry Number 4835529, dated January 24, 2016, January 26, 2016, January 27, 2016 and January 28, 2016.

9.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

I/we declare that, to the best of my/our professional knowledge and belief, I/we meet the definition of environmental professional as defined in Title 40 of the Code of Federal Regulations (CFR), Part 312.0. I/we have the specific qualifications based on education, training, and experience to assess a site of the nature, history, and setting of the subject site. I/we have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.



Jonathan Bulley
Senior Engineer



Ricardo Fraxedas, P.E.
Chief Engineer



10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL(S)

Resumes for the individuals acting as representatives of Amec Foster Wheeler involved in preparing this report are included in **Appendix C**.

The Underline, Miami FL - Supplemental Phase I & Sampling Plan
Amec Foster Wheeler
Project Number 6783-16-2797
February 20, 2017



FIGURES



Seating area overlooking water

River Cleaners

Picnic Area

RLS

DCS

Dog Park

RLS

Basketball

RLS

Plaza

Southside Park

Climbing Wall

PCS

LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park ● - Character Zone
- River Cleaner - Recognized Environmental Condition (REC)

--- MDT R.O.W



FIG-1

0 250 500 1,000 Feet





Nature Playground

RLS

RLS

LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park  - Character Zone
- River Cleaner  - Recognized Environmental Condition (REC)

 MDT R.O.W

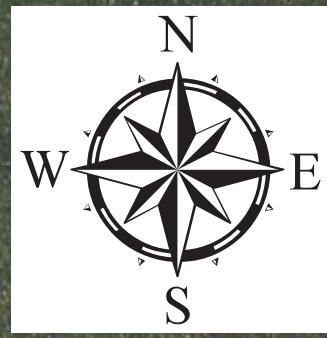


FIG-2





Dog Park or Butterfly Garden & Plaza

Solid Waste

SWS

RLS

LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- SWS - Solid Waste Sample
- Dog Park ● - Character Zone
- River Cleaner
- MDT R.O.W
- Recognized Environmental Condition (REC)

MDT R.O.W



FIG-3





Union
76-17th Ave

PCS

LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park ● - Character Zone
- River Cleaner - Recognized Environmental Condition (REC)

--- MDT R.O.W



FIG-4

0 250 500 1,000 Feet



LEGEND
 RLS - Rail Line Sample
 PCS - Petroleum Contamination Sample
 DCS - Dry Cleaner Sample
 Dog Park ● - Character Zone
 River Cleaner - Recognized Environmental Condition (REC)

--- MDT R.O.W

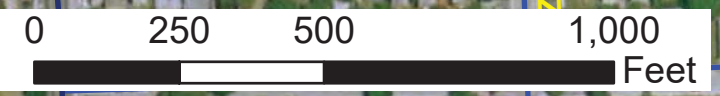


FIG-6



Florida Power & Light (FP&L)

Dog Park

Pop Up Retail, Plaza, Exercise Equipment

Wet Prairie Garden

Performance Area

Birding Area and Nature Trail

Sunset Quickprint

Redd's Dry Cleaners

University Care Care

LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park ● - Character Zone
- - Recognized Environmental Condition (REC)
- - River Cleaner

--- MDT R.O.W

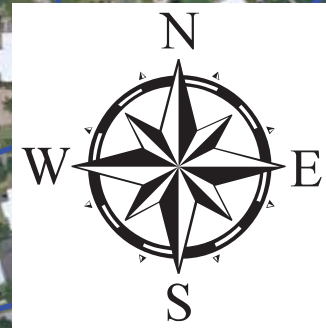
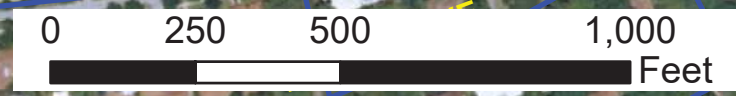


FIG-8





University of Miami-Physics

7 Eleven #3760

PCS

DCS

Mario's Dry Cleaning

McDonald's Imperial Cleaners

Plaza in front of S. Miami Hospital Garden

RLS

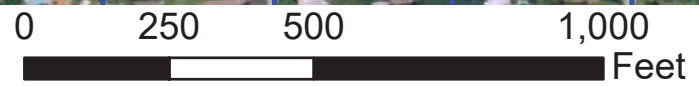
LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park ● - Character Zone
- River Cleaner - - Recognized Environmental Condition (REC)

- - - MDT R.O.W



FIG-9





Soccer Field, Basketball, Volleyball, Court and Exercise Equipment

RLS

Auto Perfection

PCS

LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park ● - Character Zone
- River Cleaner - Recognized Environmental Condition (REC)

--- MDT R.O.W



FIG-11





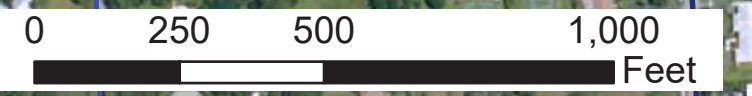
LEGEND

- RLS - Rail Line Sample
- PCS - Petroleum Contamination Sample
- DCS - Dry Cleaner Sample
- Dog Park ● - Character Zone
- - Recognized Environmental Condition (REC)

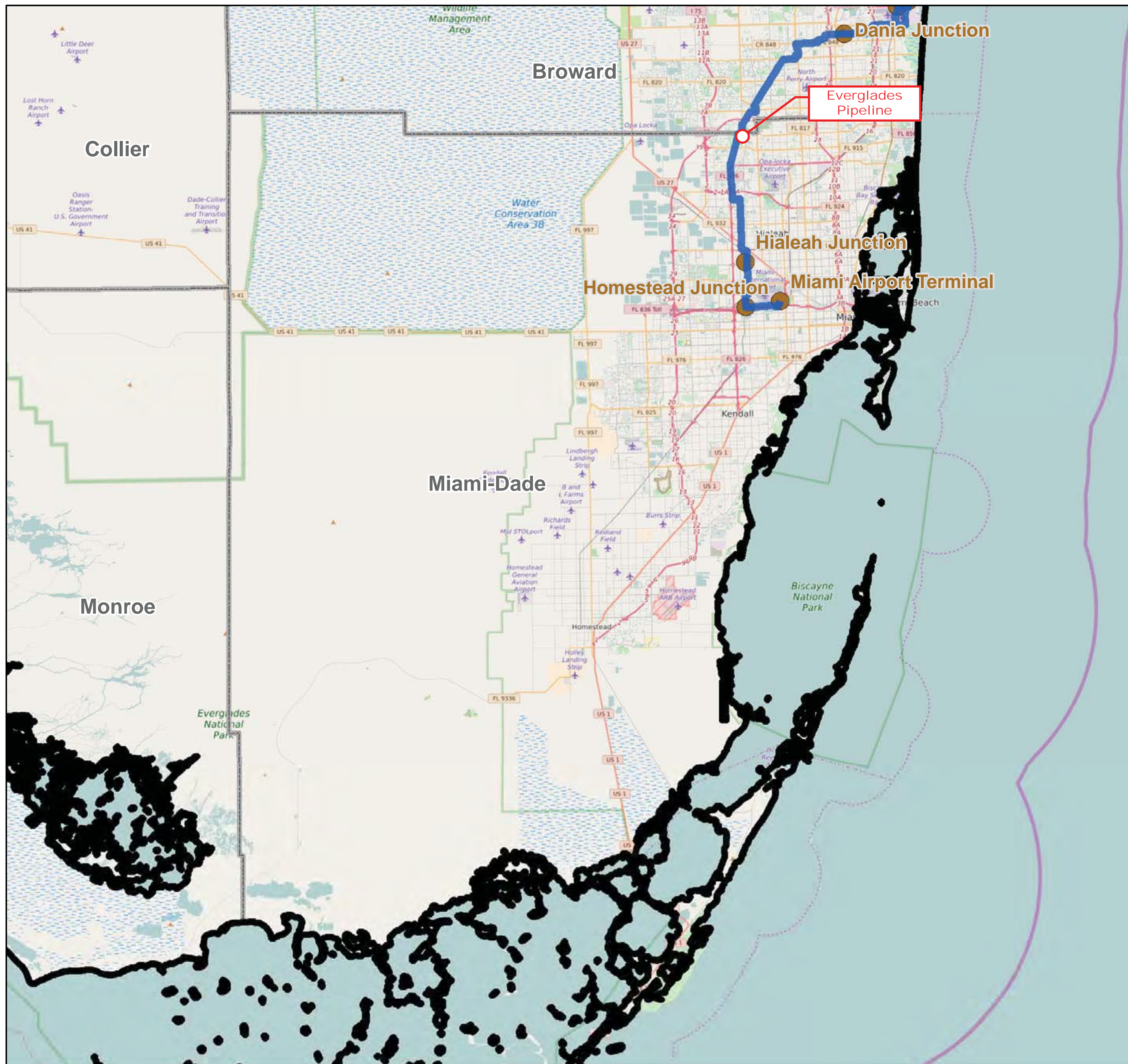
--- MDT R.O.W



FIG-12



County: Miami-Dade, Florida






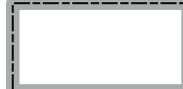
BUCKEYE PARTNERS, L.P.

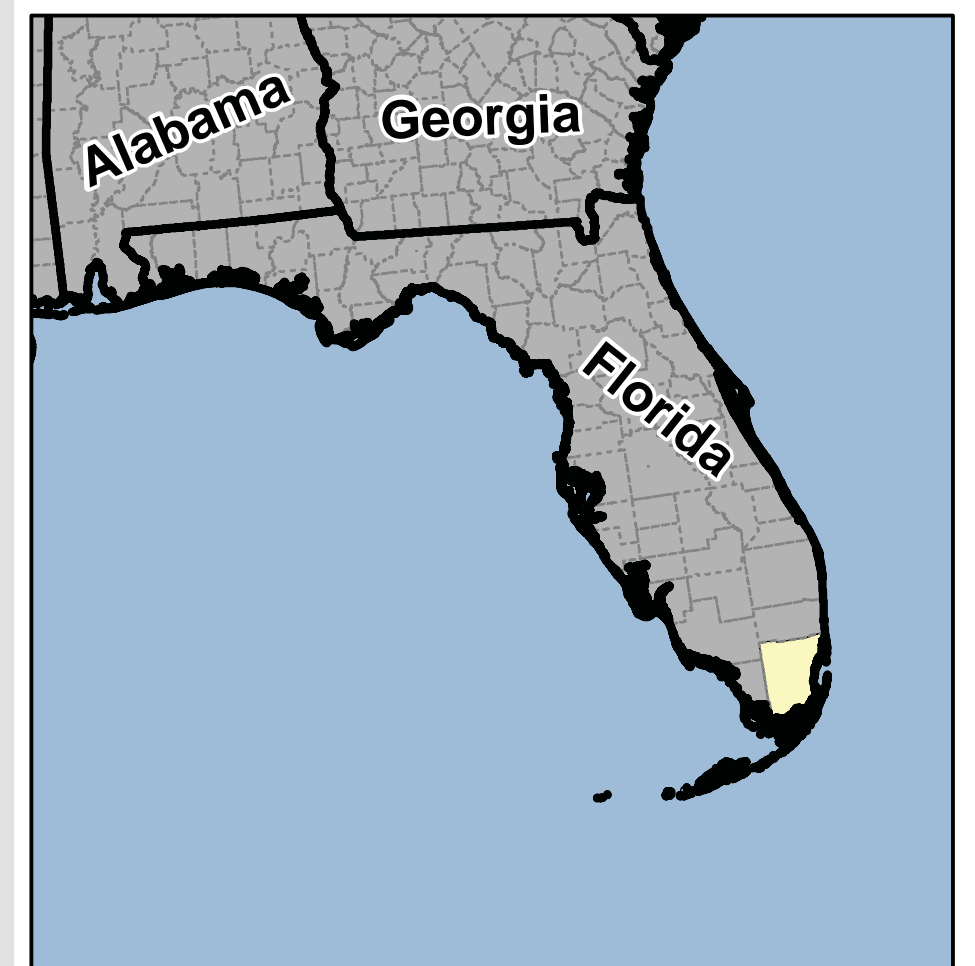


For more detailed pipeline information see the NPMS public viewer at: www.npms.phmsa.dot.gov

1 in = 5.15 miles

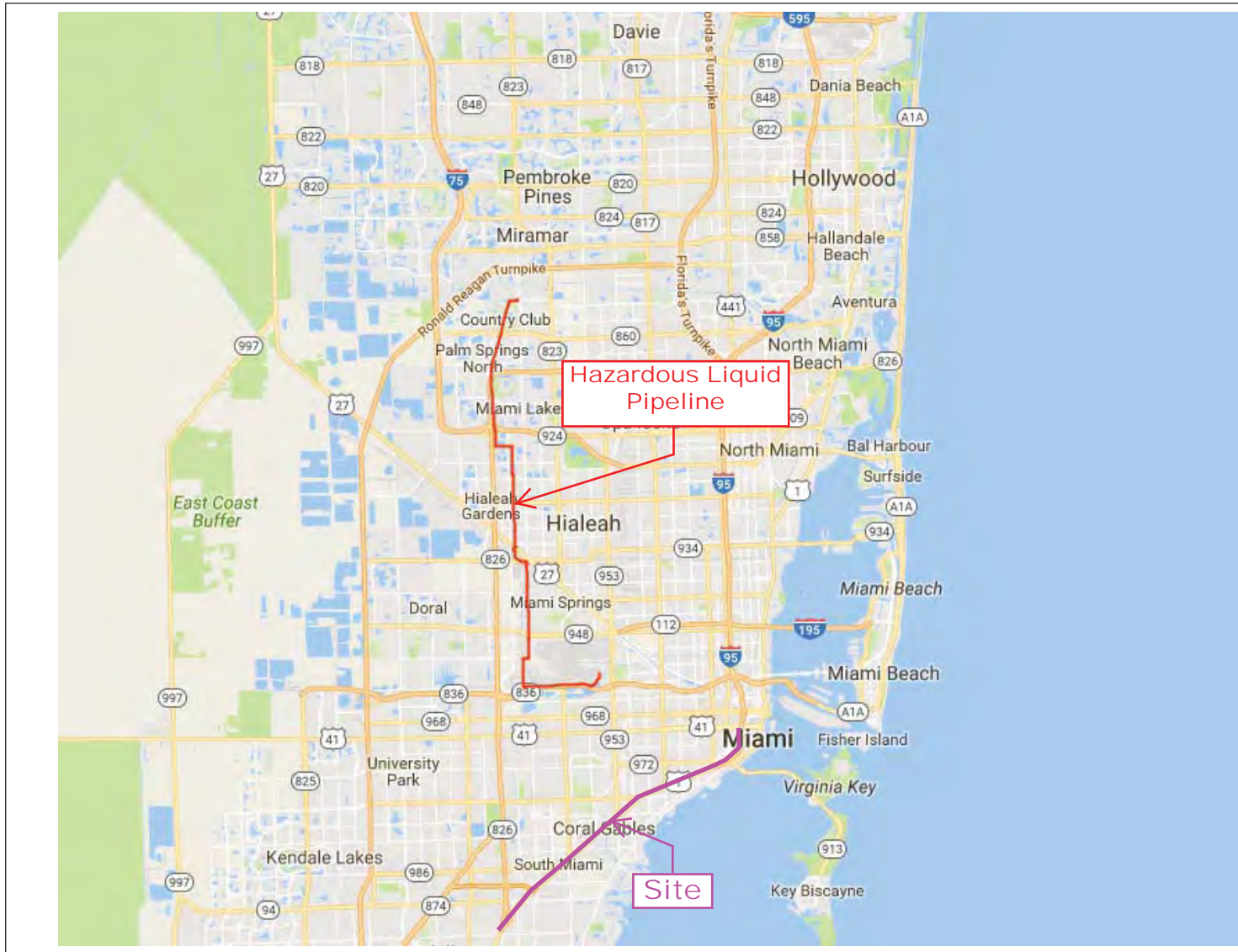
Legend

-  Buckeye Pipelines (1)
-  Buckeye Facilities (3)
-  State Boundaries
-  County Boundaries



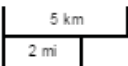
This map is not intended to be used to physically locate Buckeye's facilities. Facilities and other features are not to scale. Before conducting any excavation activities, you must first call your state One Call System to have all underground facilities physically located.





Legend

— Hazardous Liquid Pipelines



Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to npms@dot.gov.

Projection: Geographic

Datum: NAD83

Map produced by the Public Viewer application at www.npms.phmsa.dot.gov

Date Printed: Feb 17, 2017



Source: National Pipeline Mapping System

FIG-14

The Underline, Miami FL - Supplemental Phase I & Sampling Plan
Amec Foster Wheeler
Project Number 6783-16-2797
February 20, 2017



APPENDIX A
DERM MEMORANDA
(JULY 25, 2016 AND SEPTEMBER 28, 2016)

Memorandum



Date: July 25, 2016

To: Mark A. Heinicke, Senior Park Planner
Miami-Dade Parks, Recreation & Open Spaces

From: Wilbur Mayorga, P.E., Chief
Environmental Monitoring & Restoration Division, DERM

Subject: Limited Phase 1 Environmental Site Assessment, The Underline – 10 Mile Corridor Park, Metrorail Right-of-Way, Miami River to Dadeland South Station, Miami, Florida, HWR-861

The Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM) has reviewed the above-referenced documents received May 23, 2016 and offers the following comments:

1. Prior to the construction of the Metrorail in 1984, the subject property appears to have been a railroad and there appears to have been numerous commercial buildings and activities on either side of the railroad. As a result, the Phase 1 report shall include a review of the historical fire insurance maps, historical aerials, historical topographic maps and historical use information for the entire length of the subject property and the surrounding areas. Also, user provided information shall be gathered in relation to the conditions observed and discovered during the construction of the Metrorail to determine what areas may be discovered as contaminated but were not reported.
2. The report referenced above identified several recognized environmental conditions (RECs); however, specific recommendations for further assessment were not provided. A specific sampling plan to address the RECs is required as follows:
 - a. Dry Cleaner Contaminated Sites - at least one soil boring (0-6" and 6"-24" intervals) shall be proposed on the subject property in the vicinity of any dry cleaner contaminated sites within 500' of the property. For those facilities with an assessed (defined or undefined) chlorinated solvent plume, provide documentation of the plume boundaries not extending onto the subject property.
 - b. Petroleum Contaminated Sites - at least one soil boring (0-6" and 6"-24" intervals) shall be proposed on the subject property in the vicinity of any petroleum contaminated sites immediately adjacent to the property. For those facilities with an assessed (defined or undefined) petroleum plume, provide documentation of the plume boundaries not extending onto the subject property.
 - c. The following facilities with documented contamination were missing from the report and shall be addressed according to the comments 2.a. and 2.b. above:
 - i. Southside Park - 140 SW 11 St., HWR-779
 - ii. River Cleaners – 99 SW 7 St., IW5-4112/File 3799, FDEP-139700746
 - iii. Systems Go Dry Cleaners – 2750 SW 26 Ave., IW5-5394/File 5001, FDEP-139700068
 - iv. Redd's Dry Cleaners – 5821 Ponce De Leon Blvd, IW5-3387/File 3134, FDEP 139502588

- v. Dadeland Cleaners – 8697 South Dixie Highway, IW5-3632/File 3360, FDEP-139600768
- d. A screening sampling plan for the applicable chemicals of concern focused on the 0-6” and 6”-24” intervals shall be provided for the following situations. Incremental and/or composite sampling techniques may be proposed as applicable.
 - vi. The subject property is a former railroad. Assessment shall be conducted along the centerline of the former rail line or immediately adjacent if under the current Metrorail tracks and at staggered intervals perpendicular to the former rail line. The sampling locations shall be adjusted to coincide with commercial/industrial spurs. Based on the proposed “Character Zones” this required assessment should be more concentrated in these zones due to their proposed greater use and potential exposure.
 - vii. For all areas of the property historically and currently adjacent to major roadways assess for Pb and PAHs. Based on the proposed “Character Zones” this required assessment should be more concentrated in these zones due to their proposed greater use and potential exposure.
 - viii. Historical commercial/industrial facilities or areas of contamination discovered in response to comment 1 above.
 - ix. Include a depiction of the location and layout of the Everglades Pipeline on the subject property and a sampling plan to determine whether the pipeline has impacted the subject property.
 - x. Other commercial/industrial sites documented in the records search of the report which are adjacent to the subject property but are not known to be contaminated sites.
3. Please clarify the southern boundary of The Underline at the Dadeland South Metrorail Station or SW 98 St. since the report included RECs south of the Dadeland South Metrorail Station.
4. Where applicable, rail line tracks, ties and ballast shall be completely removed and disposed of properly.
5. Based on the results of the assessment additional soil and groundwater assessment may be required.

A Supplemental Phase 1 Environmental Site Assessment Report including the requested information and a sampling plan shall be submitted within 60 days.

If you have any questions concerning the above, please contact Rebecca Varley (varleb@miamidade.gov) of the Environmental Monitoring & Restoration Division at (305) 372-6700.

RSV

ec: Ricardo Fraxedas, P.E., Amec, (ricardo.fraxedas@amecfw.com)
Arsenio Milian, P.E., MSA, (amilian@milianswain.com)
Alejandro Zizold (PROS), (Alejandro.Zizold@miamidade.gov)
Marietta Gutierrez (PROS) (Marietta.Gutierrez@miamidade.gov)

Memorandum



Date: September 28, 2016

To: Mark A. Heinicke, Senior Park Planner
Miami-Dade Parks, Recreation & Open Spaces

From: Wilbur Mayorga, P.E., Chief
Environmental Monitoring & Restoration Division, DERM

Subject: Limited Phase 1 Environmental Site Assessment, The Underline – 10 Mile Corridor Park, Metrorail Right-of-Way, Miami River to Dadeland South Station, Miami, Florida, HWR-861
Response to DERM Comments (July 25, 2016) dated September 19, 2016
Follow Up email dated September 26, 2016 (attached)

The Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM) has reviewed the above-referenced documents received September 19, 2016 and September 26, 2016 and offers the following comments:

1. The request to limit the requested historical research to the Park's designated "Character Zones" referenced is approved. However, if at any time the areas not designated as Character Zones are modified to become Character Zones, the historical research information shall be provided for those additional areas. The extents of the Zones on The Underline website are attached for reference.
2. The southern terminus of The Underline is acknowledged as SW 98 St, not the Dadeland South Metrorail station.
3. DERM acknowledges the assertion that all railroad tracks, ties and ballast were removed by Miami-Dade Transit during the construction of the Metrorail.

A Supplemental Phase 1 Environmental Site Assessment Report including the requested information and a sampling plan shall be submitted within 60 days.

If you have any questions concerning the above, please contact Rebecca Varley (varleb@miamidade.gov) of the Environmental Monitoring & Restoration Division at (305) 372-6700.

RSV

ec: Ricardo Fraxedas, P.E., Amec, (ricardo.fraxedas@amecfw.com)
Arsenio Milian, P.E., MSA, (amilian@milianswain.com)
Alejandro Zizold (PROS), (Alejandro.Zizold@miamidade.gov)
Marietta Gutierrez (PROS) (Marietta.Gutierrez@miamidade.gov)

Varley, Becky (RER)

From: Fraxedas, Ricardo <ricardo.fraxedas@amecfw.com>
Sent: Monday, September 26, 2016 4:26 PM
To: Varley, Becky (RER); Bulley, Jonathan A; Arsenio Milian
Cc: amilian@milianswain.com; Mayorga, Wilbur (RER); Slapp, Kevin (RER)
Subject: RE: The Underline - 10 Mile Corridor Park

Hi Becky

Below, please find information requested per your email:

1. No construction activities that may provide exposure pathways to construction workers for potential soil or groundwater impacts (if any are present) are planned for the areas outside of the character zones. In addition, no extensive recreational activities that may expose the public to potential soil or groundwater impact (if any are present) are planned for the non-character zone areas. The non-character zone areas are proposed to be passive bike and walking paths.
2. At this time the locations and extents of the character zones are not intended to change and are planned to remain as currently proposed. No groundwater use or contact with groundwater is necessary or proposed anywhere on the project. If any irrigation is required for character zone landscaping, municipal water supplies will be used.

Best regards,

Ricardo Fraxedas

Chief Engineer, Environment & Infrastructure, Amec Foster Wheeler
5845 NW 158 Street Miami Lakes, FL USA 33014
T +1 305 826 5588 D +1 305 818 8448 M +1 305 525 0079
ricardo.fraxedas@amecfw.com amecfw.com

From: Varley, Becky (RER) [mailto:Becky.Varley@miamidade.gov]
Sent: Friday, September 23, 2016 9:36 AM
To: Bulley, Jonathan A <Jonathan.Bulley@amecfw.com>
Cc: Fraxedas, Ricardo <ricardo.fraxedas@amecfw.com>; amilian@milianswain.com; Mayorga, Wilbur (RER) <Wilbur.Mayorga@miamidade.gov>; Slapp, Kevin (RER) <Kevin.Slapp@miamidade.gov>
Subject: RE: The Underline - 10 Mile Corridor Park

Good Morning,

DERM is reviewing the referenced submittal dated September 16, 2016 and requires the following information prior to completing our review :

1. Please provide details of those areas not within the character zones that substantiate your request not to perform the historical analyses outside of the character zones. What is the specific design plan for the areas not within a zone (i.e., passive bike/walking path versus any other type of activity)?
2. Regarding the planning process, provide details on whether the location and extent of the character zones are subject to change or whether the zones will remain as currently proposed.

If you have any questions, Please let me know.

Thanks!

Rebecca S. Varley, Hydrogeologist 3
Department of Regulatory and Economic Resources
Division of Environmental Resources Management (DERM)
701 NW 1st Court 4th Floor Miami, Florida 33136
305-372-6824 Phone 305-372-6982 Fax

From: Bulley, Jonathan A [<mailto:Jonathan.Bulley@amecfw.com>]
Sent: Friday, September 16, 2016 6:12 PM
To: Varley, Becky (RER)
Cc: Fraxedas, Ricardo; amilian@milianswain.com
Subject: The Underline - 10 Mile Corridor Park

Becky

Attached for your review, please find a response to the Division of Environmental Resources Management July 25, 2016 memorandum regarding the Limited Phase I Environmental Site Assessment report prepared for The Underline - 10 Mile Corridor Park in Miami.

Thanks

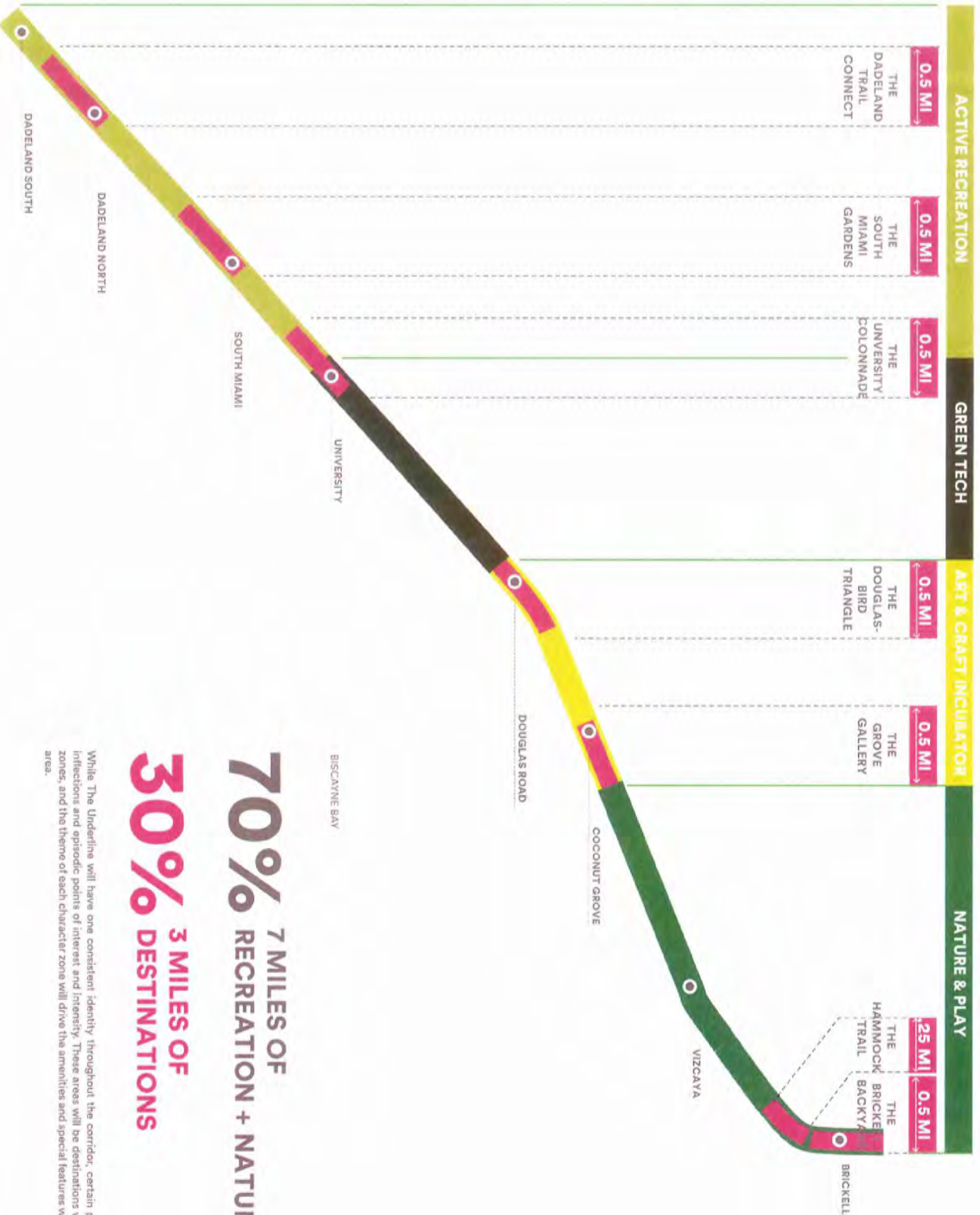
Jonathan A. Bulley
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CHARACTER ZONES
AREAS OF INTENSITY WITHIN EACH LARGER ZONE



70% 7 MILES OF RECREATION + NATURE
30% 3 MILES OF DESTINATIONS

While The Underline will have one consistent identity throughout the corridor, certain portions will have specific inflections and episodic points of interest and intensity. These areas will be destinations within the larger character zones, and the theme of each character zone will drive the amenities and special features within each higher-intensity area.

NOT TO SCALE ①

The Underline, Miami FL - Supplemental Phase I & Sampling Plan
Amec Foster Wheeler
Project Number 6783-16-2797
February 20, 2017



APPENDIX B
EDR MAPS AND HISTORICAL USE DOCUMENT
(CD ATTACHED)

The Underline, Miami FL - Supplemental Phase I & Sampling Plan
Amec Foster Wheeler
Project Number 6783-16-2797
February 20, 2017



APPENDIX C

RESUMES



Jonathan A. Bulley

Senior Engineer

Education

Master of Environmental Engineering, Environmental Engineering, Florida International University, 2004

Bachelor of Science, Agricultural Science, Kwame Nkrumah University of Science and Technology, 1998

Professional qualifications/registration(s)

Professional Engineer - Environmental, MI, 6201058528, 2011

Professional summary

Mr. Jonathan Bulley is a Senior Engineer with Amec Foster Wheeler with over 10 years of experience performing environmental site assessments, developing remedial strategies, evaluating the fate and transport of all phases of petroleum hydrocarbon impacts, determining appropriate engineering and institutional controls for site closure, managing installations, operations and maintenance for remedial systems, preparing technical reports, budget tracking, client communication, and regulatory negotiations. Mr. Bulley has performed extensive environmental site assessments including evaluations of soil and groundwater quality data, site hydrology, geochemistry and remediation of contaminated soil and groundwater for many projects in Florida. Mr. Bulley's extensive experience includes developing site assessment scopes, preparing site assessment reports (SAR) remedial action plans (RAPs), remedial system operation and maintenance (O&M) reports, permitting, remedial design specifications and plans.

Mr. Bulley's experience includes assistance with the oversight for removal of fuel systems, source removal of hydrocarbon impacted soil and installations for site remediation involving recovery of free-phase petroleum product by both active (drawdown) and passive (in-well skimming) techniques, treatment of groundwater by removal and elimination of dissolved petroleum hydrocarbons by SVE/DPE and AS techniques and treatment of extracted vapors by catalytic oxidation.

Phase I Environmental Site Assessments

Mr. Bulley has performed more than 100 Phase I Environmental Site Assessments in South Florida. His education and level of experience meets the definition of Environmental Professional as defined in 40 CFR 312 and ASTM 1527-05. Projects include large agricultural parcels, planned residential and commercial developments, federal, state, and county government acquisitions, wetland mitigation sites, industrial facilities, machine shops, landfills, and small commercial parcels.

Clients include the Miami Dade County Public Schools, Miami Dade County Government, Florida Department of Environmental Protection, national clients with portfolio work, developers, contractors, and most lending institutions in south Florida.