FPID #430029-2-21-01

ETDM No. 14230

Atlantic Isle at West of SR A1A
Bridge No. 874218
Project Development and Environment Study

Contamination Screening Evaluation Report

FDOT District Six
1000 NW 111th Avenue
Miami, Florida 33172

Atlantic Isle Bridge (Bridge No. 874218)
Atlantic Avenue, Sunny Isles Beach, FL
Miami-Dade County, FL

February 2023

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District Six, is conducting a Project Development and Environment (PD&E) Study (FM No. 430029-2-22-01) for Atlantic Isle Bridge (Bridge No. 874218). The Atlantic Isle Bridge is a historic bridge located on Atlantic Island just west of State Road (SR) A1A (Collins Avenue), within the City of Sunny Isles Beach in Miami-Dade County (MDC), Florida. Figure 1-1 presents the Project Location Map. The bridge was designated as a historic site on January 19, 1984, by the Dade County Preservation Board and redesignated by the City of Sunny Isles Beach on July 14, 2005. The bridge was designated as eligible for listing in the National Register of Historic Places (NRHP) by the State Historic Preservation Office (SHPO) in 2013.

As part of this PD&E, a Contamination Screening Evaluation Report (CSER) was completed. This CSER presents the findings of an investigation designed to identify, evaluate and provide recommendations for properties or businesses with known or potential contamination issues in accordance with Part 2, Chapter 20, of the FDOT PD&E Manual (effective July 1, 2020). A review of all available data, such as regulatory agency files, database reports, historic and current aerial photography, and a site reconnaissance was conducted for this PD&E Study. For all three alternatives, no potential contamination sites were identified within the Study Area or appropriate buffers recommended in the FDOT PD&E Manual, Part 2, Chapter 20 (effective July 1, 2020).

Based on a review of online databases and the results of the field review, there are no potential contamination sites located within the appropriate buffers recommended in the FDOT PD&E Manual, Part 2, Chapter 20 (Effective July 1, 2020). A survey for asbestos containing material (ACM) and metal-based coating (MBC), including lead-based paint (LBP), was conducted in 2018. No asbestos was discovered in any samples taken, and no samples for MBCs were taken as no suspected coatings were identified.

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos containing material
APLUS	Aerial Photo Look Up System
CFR	Code of Federal Regulation
CIP	Cast-in-place
CSER	Contamination Screening Evaluation Report
ETDM	Efficient Transportation Decision Making
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FLUCCS	Florida Land Use Cover and Forms Classification System
FMSF	Florida Master Site File
GIS	Geographic Information Systems
LBP	Lead-based paint
LCLU	Land Cover Land Use
MBC	Metal based coatings
MDC	Miami-Dade County
MPH	Miles per hour
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PD&E	Project Development and Environment
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-way
SHPO	State Historic Preservation Office
SR	State Road
SSA	Sole Source Aquifer
STCM	Storage Tank Contamination Monitoring
TSD	Treatment, Storage, Disposal
SU	Single unit
SFWMD	South Florida Water Management District
USEPA	United States Environmental Protection Agency

1.0 PROJECT SUMMARY

1.1 PROJECT BACKGROUND AND DESCRIPTION

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study (FM No. 430029-2-22-01) for Atlantic Isle Bridge (Bridge No. 874218). The Atlantic Isle Bridge is a historic bridge located on Atlantic Island just west of State Road (SR) A1A (Collins Avenue), within the City of Sunny Isles Beach in Miami-Dade County (MDC), Florida. **Figure 1-1** presents the Project Location Map. The bridge was designated as a historic site on January 19, 1984, by the Dade County Preservation Board and redesignated by the City of Sunny Isles Beach on July 14, 2005. The bridge was designated as eligible for listing in the National Register of Historic Places (NRHP) by the State Historic Preservation Office (SHPO) in 2013.

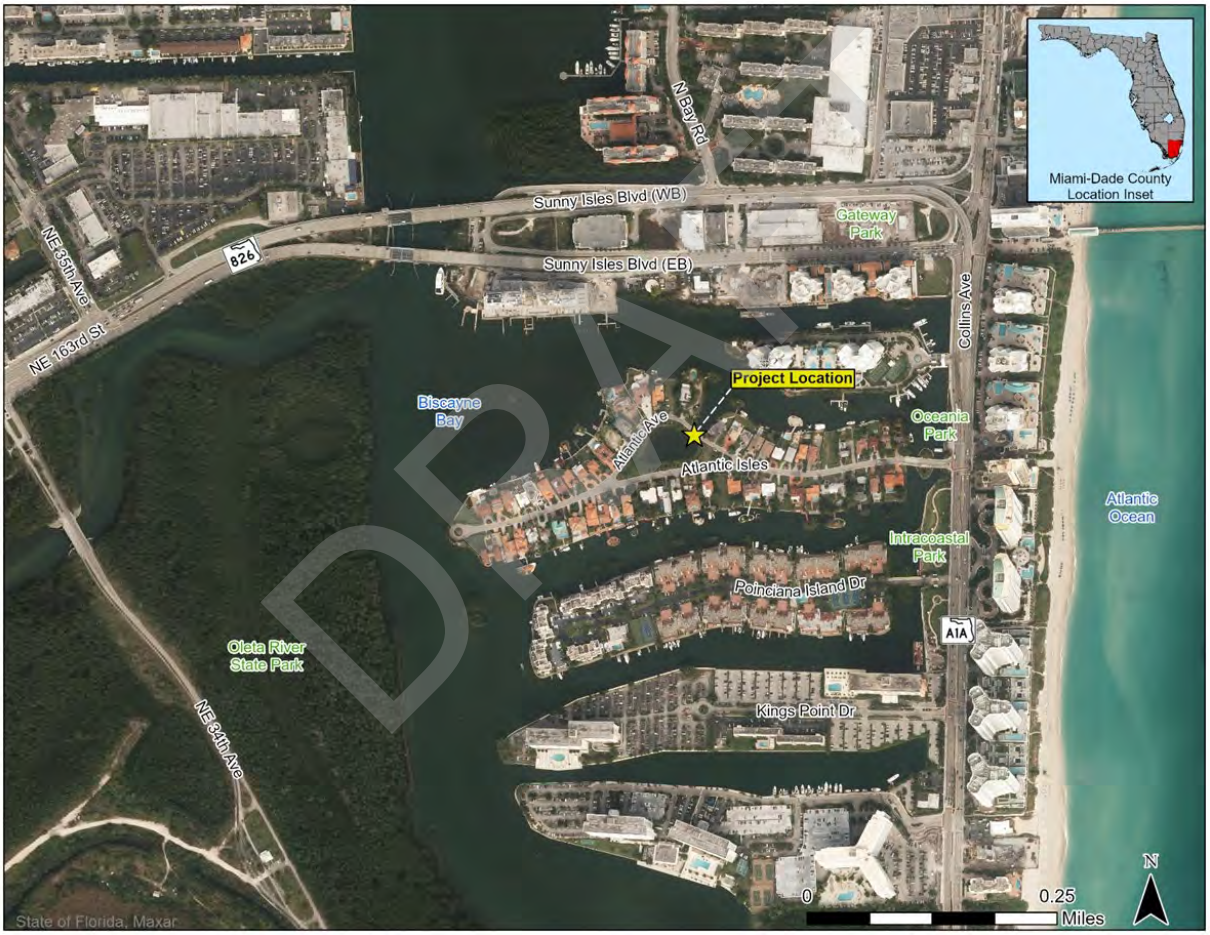


Figure 1-1 Project Location Map

The Atlantic Isle Bridge was constructed circa 1925 as a low-level, closed, spandrel, filled, cast-in-place (CIP) reinforced concrete arch. The façade of the arch is covered with a coquina or oolitic limestone (coral rock) rubble. The oolitic limestone was quarried in southern MDC, giving the bridge historic significance. Because of the bridge's age and exposure to the harsh marine environment, it has structural deficiencies. The bridge is also functionally obsolete and has substandard traffic barriers and roadway geometry. This

PD&E Study evaluates bridge alternatives that address the Atlantic Isle Bridge's structural deficiencies and functional obsolescence.

In September 2016, FDOT finalized the *Atlantic Isle Lagoon Bridge Proof of Concept Report*, which summarized a feasibility study to identify bridge rehabilitation alternatives that could preserve the service life of the bridge. The Proof of Concept Report documented the evaluation of several alternatives to rehabilitate the bridge, which included reusing the existing concrete arch, replacing the existing arch with a new CIP reinforced concrete arch, reconstructing the existing bridge with a new precast concrete structure, and preserving the existing bridge with minor repairs but without any bridge rehabilitation. Subsequently, FDOT prepared the *Atlantic Isle Bridge Rehabilitation Technical Memorandum* in May 2018 to address a rehabilitation option for the bridge. FDOT then prepared rehabilitation design plans based on the recommendation to reuse the existing concrete arch. The location of foundations was coordinated with the FDOT District 6 geotechnical and maintenance staff. Results from borings and excavations at the bridge approaches were not conclusive, and excavation of both approaches was required to complete the rehabilitation design plans. Because excavation of the bridge approaches could have an adverse effect on the bridge, FDOT discontinued the bridge rehabilitation design until further study of a range of alternatives could be analyzed for environmental effects. Subsequently, FDOT initiated this PD&E Study in September 2020 to fully evaluate impacts of all feasible alternatives. Prior to the initiation of this PD&E Study, an Advance Notification Package was distributed on October 23, 2019. The Efficient Transportation Decision Making (ETDM) Programming Screen (Project No. 14413) was completed in February 2020.

The Atlantic Isle Bridge is a one-way, low-level fixed bridge located along Atlantic Avenue on the north side of the Atlantic Isle Lagoon, approximately 0.25 miles west of SR A1A. The project study area (**Figure 1-2**) includes Atlantic Avenue and Atlantic Isles between the western and eastern intersections of the two roadways. The project study area is within the historic triangular landscape of the Atlantic Island Park [Florida Master Site File (FMSF) No. 8DA6433], which is both privately and publicly owned, and further includes an artificial lake, Lake of the Isles (8DA15824), which is historically known as Atlantic Isle Lagoon. Built circa 1925, Atlantic Isle Lagoon and Atlantic Island Park are also NRHP eligible.

The Atlantic Isle Bridge spans approximately 43 feet over a narrow channel between Atlantic Isle Lagoon and Biscayne Bay. Within the project study area, Atlantic Avenue is approximately 0.25 mile in length and 16 feet wide. The posted speed limit on Atlantic Avenue is 20 miles per hour (mph). It is a one-way, eastbound, undivided roadway that serves residential traffic and service vehicles. Atlantic Isles, on the south side of the Atlantic Isle Lagoon, is a two-way, 16-feet-wide, east-west residential roadway that intersects with each end of Atlantic Avenue. The posted speed limit on this roadway is 20 mph.

The typical section of the bridge is approximately 20 feet wide with one 10-foot-wide travel lane in the center of the bridge. The remaining 10 feet of the bridge section consists of a planter easement, curb, and barrier wall on each side. Bicyclists and pedestrians must share the 10-foot-wide travel lane with vehicles to cross the bridge as no sidewalks are provided on the existing facility. Approximately 14 residences along Atlantic Avenue use the bridge for access. The roadways on Atlantic Island are owned and operated by the City of Sunny Isles Beach; however, FDOT maintains the island bridges, including the Atlantic Isle Bridge.

Because of the continued deterioration of the bridge, the bridge has a posted weight restriction for single-unit (SU) and Class 1 trucks at 12 tons and 21 tons, respectively. The bridge is open to vehicular traffic that meets these weight restrictions. The Atlantic Avenue roadway typical section east and west of the bridge consists of 16 feet of pavement used by one-way traffic with curb and gutter on the outside.

The PD&E Study evaluates a range of alternatives to address the purpose and need for the project, including rehabilitation, replacement, and no-build options for the bridge. The No-Action Alternative is evaluated throughout the PD&E Study as a basis for comparison to the viable alternatives. The project goals include minimizing environmental impacts and effects to significant cultural resources, enhancing safety, and improving mobility. This PD&E Study analyzes the potential infrastructure improvements, including the proposed bridge structure, roadway approaches to the bridge, temporary roadway widening during construction, roadway connectivity to existing land uses, the stormwater management facilities, and pedestrian and bicycle accommodations.

Figure 1-2 Project Study Area

1.2 PURPOSE AND NEED

The purpose of the project is to address the structural and functional deficiencies of the existing bridge to provide a safe and usable route for the surrounding community and traveling public. According to a bridge inspection conducted on September 17, 2021, the Atlantic Isle Bridge has been determined to be 'Functionally Obsolete', with a Sufficiency Rating of 40.9 and a Health Index of 60.39. The Sufficiency Rating and Health Index values vary from 0 (worst) to 100 (best). Existing functional deficiencies observed during the bridge inspection include substandard traffic barriers, multi-directional cracks in the asphalt overlay, and missing oolitic limestone (coral rock) on some areas of the north face of the arch. The southwest corner along the underside edge and the south side of the arch have spalls and delamination with exposed steel and areas of corrosion stains throughout the length of the arch along the fallen coral rock. In addition, the arch underside has a core hole at the center of the mid-span and exhibits delamination at random locations.

The bridge also has weight restrictions and limitations with an existing Bridge Load Posting Sign for single SU and Class 1 Trucks at 12 Tons and 21 Tons, respectively. The load posting on the bridge poses an issue for the residents along Atlantic Avenue because garbage trucks, as well as trucks transporting concrete, building materials/demolition debris, and other urban goods, may be heavier than the bridge loading allows. As such, trucks are restricted to smaller loads when crossing the bridge and are forced to make several trips to transport freight, which adds unnecessary truck traffic to the surrounding roadway network. In some cases, fire trucks, emergency vehicles, delivery or moving vans, and construction vehicles

also exceed the posted bridge load limit. Overweight vehicles accessing the properties along Atlantic Avenue must complete a crossover requiring special procedures, such as the use of flagging staff to proceed. Given these conditions, the existing bridge does not meet the current transportation needs of the community.

2.0 ALTERNATIVES ANALYSIS

The alternatives analysis process included developing, evaluating, and screening potential alternatives based on the project's purpose and need and other evaluation criteria. The No-Action Alternative will be analyzed throughout the PD&E Study. Alternatives that did not meet the project's purpose and need were not considered viable and were eliminated from detailed consideration. Initial alternatives that were not eliminated were carried forward as viable alternatives (Build Alternatives). The Build Alternatives were further refined and presented for public input at the Alternatives Public Information Workshop (*pending*). Each of the Build Alternatives analyzed both the proposed bridge improvements as well as improvements to Atlantic Avenue. Refer to the project's Preliminary Engineering Report for further details on all alternatives considered.

The following evaluation criteria were used to screen the alternatives considered and to identify alternatives for detailed study:

- Reasonable expectation of serving community needs identified in the project purpose and need
- Degree to which each alternative meets the project purpose and need
- Consideration of future safety and operational problems
- Constructability
- Magnitude of adverse impacts to natural, social, cultural, and physical environmental resources after consideration of reasonable mitigation
- Right-of-way (ROW) impacts
- Cost feasibility based on construction, maintenance, and operational costs

2.1 VIABLE ALTERNATIVES

2.1.1 No-Action Alternative

The No-Action Alternative maintains the existing bridge and roadway approaches in their existing condition and includes no rehabilitation of the existing bridge superstructure or substructure. The No-Action Alternative involves minor maintenance repairs in an attempt to extend the functional use of the bridge as recommended by routine bridge inspections until future inspections require reduced loading capacity or bridge closure. In the existing condition, the bridge is functionally obsolete. The bridge rating is below a sufficiency rating of 50 making it eligible for replacement per Federal Highway Administration (FHWA) policy. The bridge is nearing the end of its service life and displays exposed rebar and multiple instances of cracking, delamination, and spalls, which vary in size and severity on the soffit and sides of the bridge. The exterior oolitic limestone-covered walls also show cracks up to 1 inch wide. The posted weight restrictions would be maintained in the No-Action Alternative and increased as needed based on future maintenance inspections. In the No-Action Alternative, emergency vehicles, larger delivery and moving vans, and heavy vehicles will continue to be prohibited to cross the bridge.

The remaining service life of the bridge is unknown because of the age of the structure (approximately 95 years) and the bridge will continue to deteriorate even with routine maintenance. Similarly, the aesthetic appearance (oolitic limestone) will continue to deteriorate. The No-Action Alternative does not address the bridge structural and functional deficiencies. The No-Action Alternative remains as an alternative throughout the PD&E Study to provide a baseline for comparison to the Build Alternatives.

2.1.2 Build Alternative 1 - Bridge Rehabilitation Alternative

This alternative involves rehabilitation of the existing bridge superstructure, providing a new CIP reinforced concrete arch structure, and maintaining one-way travel on the bridge. The existing bridge typical section, roadway width, and vertical roadway geometry would be maintained. The proposed concrete arch would provide a new load-carrying structure within the limits of the existing bridge. The proposed arch would extend beyond the ends of the existing concrete arch by approximately 5 feet at each end of the bridge.

A geotechnical investigation was performed as part of this PD&E Study and documented in the project's *Preliminary Report of a Geotechnical Explorations – Structures (Revision 2)* dated March 10, 2021 (FDOT 2021). The investigation's primary objective was to determine the size and type of the existing foundations. The results of the investigation regarding the bridge foundations were inconclusive. The bridge has since been classified as an unknown foundations bridge. Because of the age, unknown size, and type of the existing bridge foundations, this alternative is anticipated to require the new arch structure to be supported on new deep foundations. The new foundations would be constructed near the existing bridge foundations and would likely consist of driven concrete or steel piles or reinforced concrete drilled shafts.

The rehabilitation alternative does not address the bridge's functional deficiencies (substandard traffic barriers) because that would require removal and replacement of the arch spandrel walls, which could compromise the integrity of the already deteriorating bridge. The existing roadway limerock base and pavement would be removed and replaced with a concrete riding surface provided by the new arch structure. With the bridge rehabilitation, one-way travel on the bridge would be maintained. The rehabilitated bridge typical section would remain as is, consisting of a single 10-foot-wide travel lane, 8-inch-wide curbs, 2.5-foot-wide planter easements, and 1-foot 10-inch-wide barriers on each side of the bridge. **Figure 2-1** presents the proposed typical section.

Although this alternative maintains the bridge in the existing alignment, the exterior limestone façade will continue to require repairs as the bridge exterior continues to deteriorate. Also note that construction activities to accomplish the rehabilitation pose risks to the existing bridge, including damage to the architectural façade and potential further damage to the structure.

Based on preliminary geotechnical analysis, deep foundations for the bridge rehabilitation would likely consist of driven concrete piles or reinforced concrete drilled shafts. Based on the Preferred Alternative for this PD&E Study, the bridge foundation type would be determined during the design phase and documented in a Bridge Development Report.

For the bridge rehabilitation, temporary closure of the bridge would be required during construction. **Appendix A** presents the preliminary concept plan for Build Alternative 1.

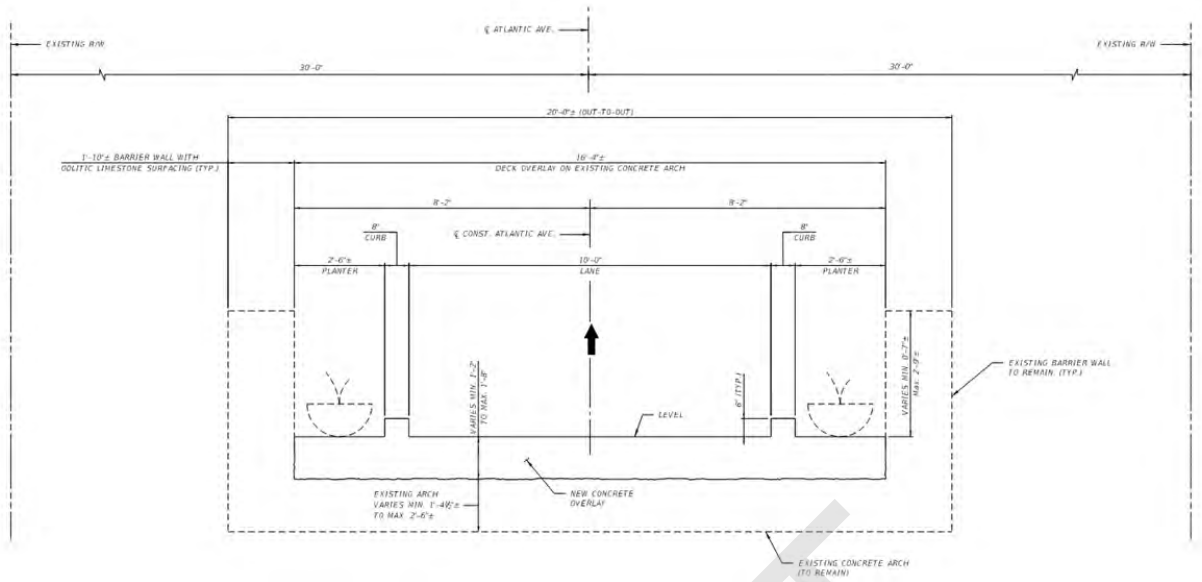


Figure 2-1 Bridge Rehabilitation Proposed Typical Section

2.1.3 Build Alternative 2 – Bridge Replacement

Build Alternative 2 consists of replacing the existing bridge with a new precast concrete or CIP structure. An arch structure is proposed to retain the aesthetic form of the existing historical bridge. The proposed typical section would accommodate one 10-foot-wide travel lane, one 8-foot-wide shared use path, two 3-foot-wide shoulders, one 36-inch-tall single slope traffic railing on the west (FDOT Standard Plan 521-427), one 42-inch-tall vertical traffic railing (FDOT Standard Plan 521-422), and architectural façade on both sides of the bridge for an overall width of 27 feet, 3 inches. **Figure 2-2** presents the proposed typical section for Build Alternative 2. A CIP replacement bridge would have similar aesthetics and form.

Limestone rock fill with roadway pavement will be placed on top of the new arch structure. New approach retaining walls will replace the existing retaining walls. A new rubble oolitic limestone façade would be placed along the exterior faces of the vertical shape barriers and retaining walls to mimic the existing structure. The limestone could be obtained from the original source used to construct the original bridge, or the limestone from the existing bridge could be reused and incorporated into the new bridge. New bridge approach slabs are anticipated and would be the standard length of 30 feet (FDOT Standard Plan 400-090) at both ends.

The replacement bridge substructure alternatives to support the new reinforced concrete arch include spread footings, steel pile, prestressed concrete piles, auger cast piles, and drilled shafts. Based on the available information to date, site conditions, and coordination with the project geotechnical engineer, drilled shafts are anticipated to be the foundation type for the proposed bridge. Because of the site constraints and subsurface soil conditions, permanent casing and rock socketing is anticipated for drilled shaft construction. Based on the Preferred Alternative for this PD&E Study, the bridge foundation type would be determined during the design phase and documented in a Bridge Development Report.

Appendix A includes the preliminary concept plan for Build Alternative 2.

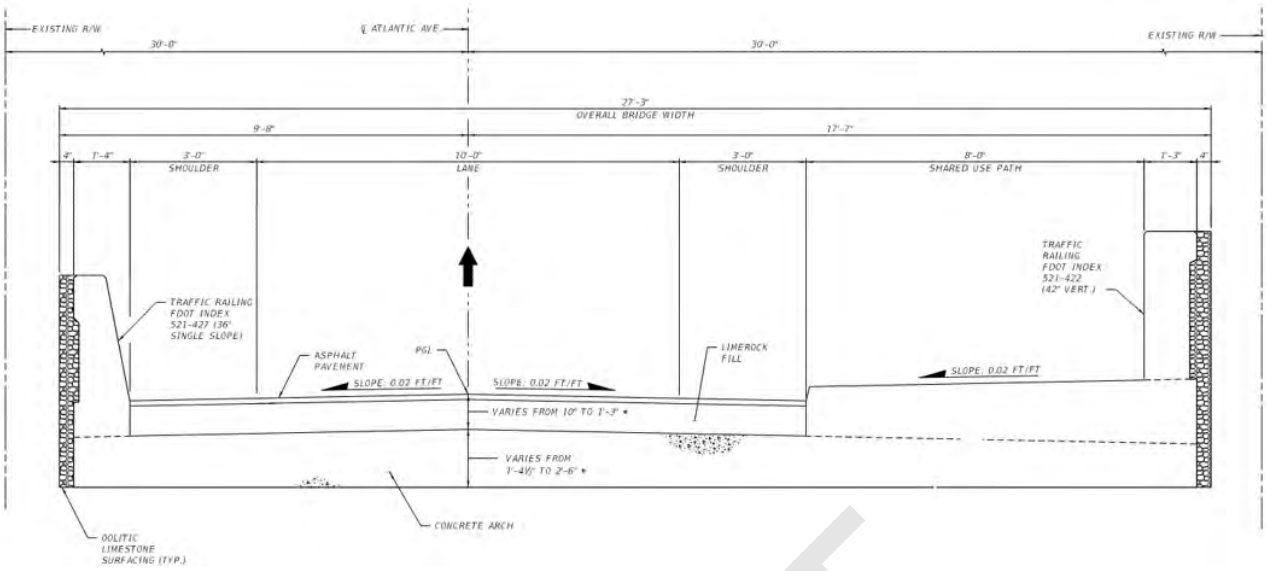


Figure 2-2 Bridge Replacement Typical Section

2.1.4 Maintenance of Traffic

Both Build Alternatives involve consideration of maintenance of traffic during construction. Temporary roadway widening for both Build Alternatives is required to maintain two-way access along Atlantic Avenue west of the bridge during construction. For these alternatives, a temporary roadway turnout is proposed west of the bridge to accommodate turn around traffic. The temporary turnout would require temporary walls for both Build Alternatives. Either gravity or sheet pile wall-types would be required. All wall options would require excavation of the soil or installation via driving or vibratory methods near the waterline of the Atlantic Isle Lagoon. For both alternatives, the wall is considered temporary and could be removed following completion of the bridge construction work and elimination of the temporary turnouts. **Figure 2-3** illustrates the potential roadway section through the gravity wall limits.

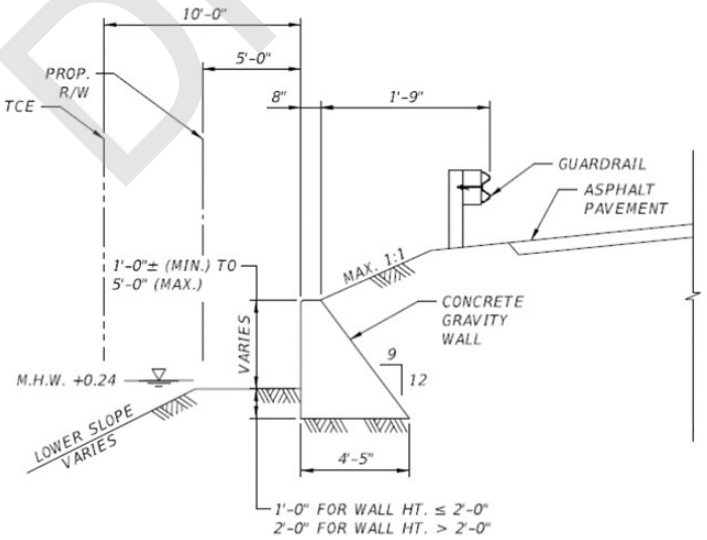


Figure 2-3 Roadway Section through Gravity Wall Limits

2.1.5 Right-of-Way Considerations

For both Build Alternatives, the proposed improvements would be constructed within the existing ROW. However, to accommodate temporary bi-directional access during construction, Atlantic Avenue would require widening and additional temporary ROW at the turnout locations would be needed (refer to the concept plans in **Appendix A**). Both Build Alternatives require minor widening of Atlantic Avenue, which is proposed on the south side of the roadway to avoid ROW acquisition from the residences to the north. Approximately 0.02 acre of temporary ROW is estimated to accommodate the maintenance of traffic for both Build Alternatives.

3.0 METHODOLOGY

A preliminary (Level I) evaluation of the study area was conducted to determine potential contamination issues within the proposed project limits from properties or operations located within the vicinity of the project. Based on guidance from the FDOT PD&E Manual, Part 2, Chapter 20 (July 1, 2020), the contamination study area would encompass the ROW and properties within 500 feet of the corridor, non-landfill solid waste sites within 1000 feet, and superfund sites within a 1/2 mile of the project. The evaluation consisted of the following tasks:

1. The identification of facilities permitted to handle, store, or generate hazardous substances and sites with documented hazardous substance discharges within 500 feet, non-landfill solid waste sites within 1000 feet and superfund sites within a 1/2 mile of the project corridor through the review of the Geographic Information Systems (GIS) databases of various federal, state and local enforcement agencies. The GIS layers reviewed include, but were not limited to: the United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) Regulated Facilities; USEPA Superfund Sites; Florida Department of Environmental Protection (FDEP) State Funded Hazardous Waste Cleanup Sites; FDEP Dry Cleaning Program Sites; FDEP Petroleum Contamination Monitoring Sites; FDEP Contamination Locator Map; FDEP Large Quantity Generators of Hazardous Waste; Brownfield Areas; FDEP Storage Tank Contamination Monitoring (STCM) sites; FDEP Solid Waste Facilities; FDEP Institutional Controls Registry; FDEP Treatment, Storage and Disposal (TSD) facilities of Hazardous Waste; FDEP Compliance and Enforcement Tracking; and Miami-Dade County (MDC) Department of Regulatory and Economic Resources Online Environmental Records System.

2. No potential contamination sites were identified through a review of GIS Databases. Therefore, no site history investigations of documentation available within federal, state and local enforcement agency online databases were conducted.

3. Historical aerials obtained from the FDOT Aerial Photo Look Up System (APLUS) database, including the years 1968, 1971, 1973, 1978, 1985, 1991, 1995, 1998, 2003, 2007, 2012, 2017 and 2022 were studied to evaluate the corridor's progression of development and to identify any potential contamination sites predating or unrecorded in available agency records. Copies of representative aerial photographs reviewed are presented in **Appendix B**.

4. During a field visit, in March 2021, residents of Atlantic Isle were interviewed regarding potential incidents or sources of contamination in the area. All residents responded that there are no known sources of potential contamination in the area.

5. This report provides the results of a Level I evaluation of the project area and defines the potential for contamination impacts. As no contaminated sites were identified for this project, A Level II investigation, which includes soil and groundwater sampling or other means to verify the type and extent of contamination present (that may have the potential to impact the project), will not be conducted during the Final Design phase.

4.0 LAND USE

The existing land uses within 500 feet of the project area were identified through review and interpretation of the latest South Florida Water Management District (SFWMD) Land Cover Land Use (LCLU) 2017-2019 GIS layer, updated September 14, 2022. (see **Figure 4-1**).

The majority of the land use surrounding the project area consists of medium and high-density residential land uses (1210, 1330, 1340). of roads and highways (8140) and transportation (8100). Surrounding the island of Atlantic Isle are water bodies categorized as streams and waterways (5120) and lakes (5200).

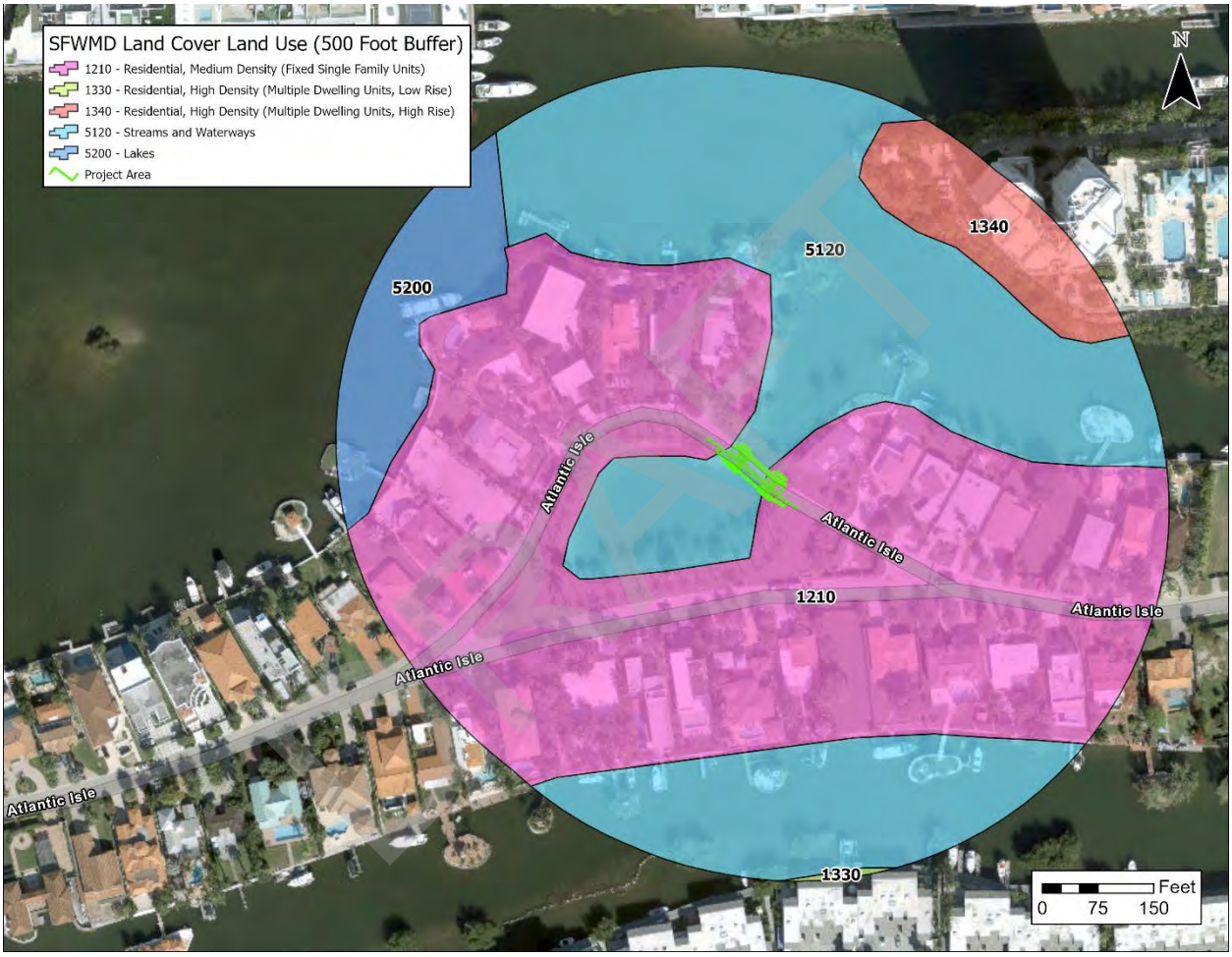


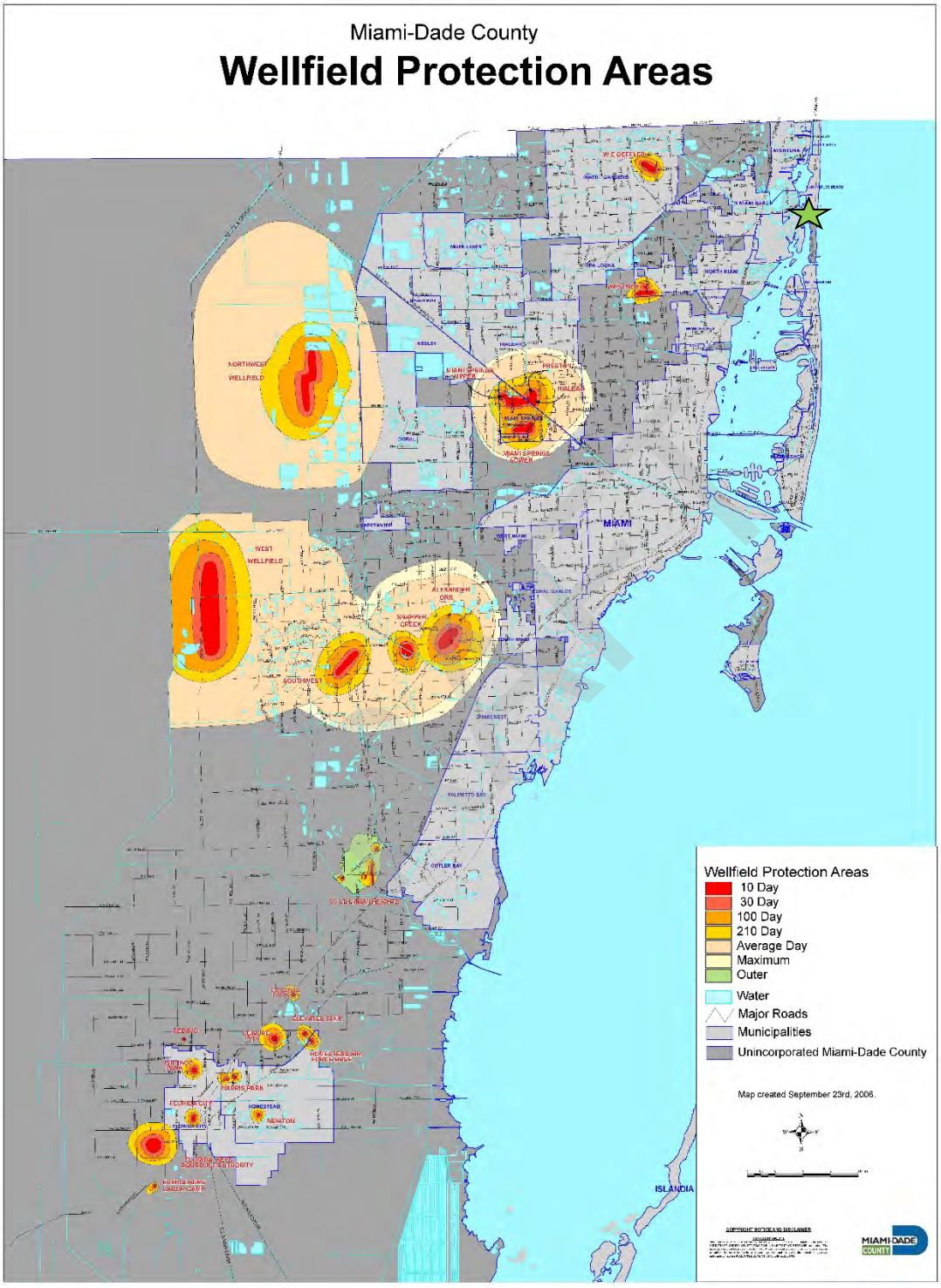
Figure 4-1 Land Use

5.0 REGIONAL HYDROGEOLOGY

This project is located within the Atlantic Ridge physiographic province of the southern Florida Peninsula. In this region, the Biscayne aquifer (surficial aquifer) is composed of highly permeable limestone and less-permeable sandstone and sand primarily from the Pleistocene age. The hydrologic units that comprise the aquifer include Caloosahatchee Marl (0-25 feet thick), Pamlico Sand (0-40 feet thick), Miami Oolite (0-40 feet thick), Key Largo Limestone (0-65 feet thick), Anastasia Formation (0-120 feet thick) and Fort Thompson Formation (0-150 feet thick). The northeastern areas of the aquifer are generally sandier, and the southwestern areas contain more limestone and calcareous sandstone.

The aquifer, which underlies all of MDC, is wedge-shaped, and is thinnest at its western edge (less than 10 feet thick). The aquifer slopes eastward to depths between 80 and 150 feet under Miami and approximately 180 feet along the coastline. The water table in Miami-Dade is very shallow and sits at a depth between 5 to 10 feet. In the general project area, the aquifer extends to an approximate depth of 100 to 120 feet below ground level and the water table sits at a depth of around 7 feet. The water table conditions fluctuate primarily in response to seasonal rainfall. Regional groundwater flow is generally southeastern toward the Atlantic Ocean. Localized differences in groundwater flow often occur near surface waters. Biscayne Bay, which surrounds Atlantic Isle, and a lagoon in the middle of Atlantic Isle with a connection to Biscayne Bay may draw groundwater, but the general flow of groundwater in the project area should be consistent with regional patterns.

The Biscayne Aquifer is classified by the State of Florida as a Sole Source Aquifer (SSA) and is therefore designated as the principal source of drinking water for MDC. Due to its shallow depth and high permeability, the aquifer is susceptible to contamination, and Miami-Dade has designated Wellfield Protection Areas based on characteristics of the aquifer. According to the MDC Wellfield Protection Areas Map, the project area is not located within the cone of influence of any current designated protection areas. The nearest wellfields are located approximately 6 miles northwest (W.E. Oeffler Wellfield) and approximately 6.25 miles southwest (Westside Wellfield) (see **Figure 5-1**). Stormwater runoff in the project area runs directly to Biscayne Bay/Intracoastal Waterway or the lagoon or is collected in curbside inlets before being discharged to Biscayne Bay. To prevent contaminated water from entering local waterways, wastewater generated by local properties is discharged to on-site septic systems.



★ = Project Location

Figure 5-1 Wellfield Protection Areas

6.0 HISTORICAL AERIAL REVIEW

Available historical aerial photography from 1968 to the present was reviewed to identify previous and current land uses which may have the potential to adversely impact the project. Although the project bridge was constructed in 1921, no aerials showing the full extent of Atlantic Isle prior to 1968 were available. However, Atlantic Isle has been residential since its original construction and has no other historical land use. Therefore, no contamination concerns prior to 1968 are likely to exist and review of aerials prior to 1968 would not reveal any unrecorded contamination. Aerial photographs were reviewed in maximum increments of 5 years except where data gaps occurred. **Table 6-1** contains a summary of the historical aerial review and **Appendix B** contains aerial photographs of the project study area.

Table 6-1 – Historical Aerial Review

Year	Project Area Land Use Description
1968	By 1968 Atlantic Isles had been constructed and the island is mostly residentially developed except for a few parcels that remain undeveloped and vacant.
1971	No significant changes from 1968.
1973	No significant changes from 1968.
1978	No significant changes from 1968.
1985	Two vacant parcels (one on the southwest side of the island and one on the northeast corner of the island) have been developed.
1991	A previously developed parcel on the southwest side of the island is now vacant.
1995	No significant changes from 1991.
1998	No significant changes from 1995.
2003	No significant changes from 1998.
2007	The undeveloped parcel from 1991 has been redeveloped.
2012	The Miami-Dade Water and Sewer Pump station has been constructed to the east of the lagoon.
2017	No significant changes from 2012.
2022	A previously developed parcel on the southeast side of the island is now vacant.
Data Gaps	Historical aerials were available for 1951 but did not show the full extent of Atlantic Isle. Data gaps over 5 years, where no historical aerials are available, exist for the following years: 1978 to 1985 and 1985 to 1991.

7.0 CONTAMINATION CONCERNS

Based on a review of online databases, there are no potential contamination sites located within the appropriate buffers recommended in the FDOT PD&E Manual, Part 2, Chapter 20 (Effective July 1, 2020).

Based on the age of the bridge (constructed 1921) there is potential for asbestos containing materials (ACM) or metal-based coatings (MBC), including lead-based paint (LBP) to be present. In accordance with the Asbestos Management Procedures in the Right of Way Procedures Manual, Topic No 575-000-000, a survey for ACM and MBC was conducted in 2018 to determine if any of these materials are present. The scope of the survey included identifying suspect ACM in the asphalt pavement, concrete curbs and superstructure fill over the arch. Non-suspect materials included rock and asphalt, and suspect ACM included the curb concrete, deck concrete, parapet mortar, parapet stucco décor and slope concrete. Samples of these suspect ACM were tested and none of the samples contained asbestos. Additionally, no coatings suspected of containing MBC (Chromium, Cadmium or Lead) were found so no samples were taken. The full survey report can be found in **Appendix C**.

8.0 RECOMMENDATIONS

The contractor should be notified that a survey was completed in 2018 as specified in the Occupational Safety and Health Administration (OSHA) regulations (CFR 1926.1101) and is available for review. Any materials or bridge components impacted during the project, not identified in the 2018 ACM Inspection Survey Report, should be assumed to contain asbestos until further testing determines otherwise. As the bridge was constructed prior to 1980, abatement plans for handling, management and removal of potential ACM and MBC, not identified in the 2018 report, will be prepared prior to demolition, modification or rehabilitation of the project bridge.

9.0 REFERENCES

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APPENDIX A
Concept Plans

CONTRACT PLANS COMPONENTS

STRUCTURES

STATE OF FLORIDA

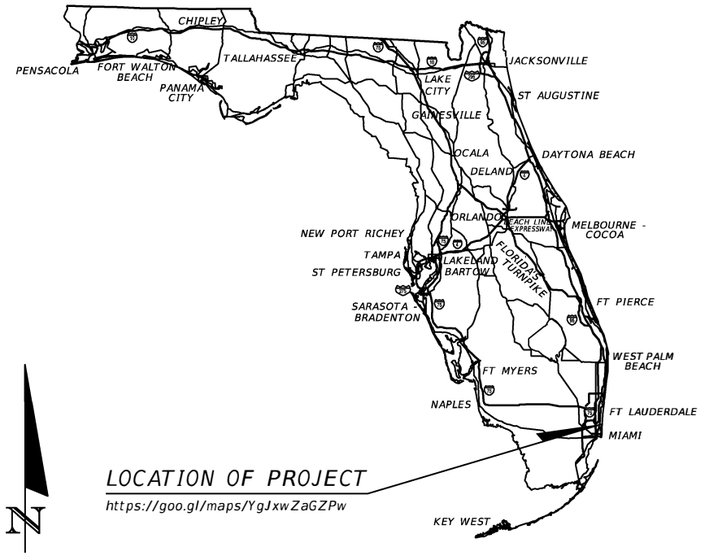
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430029-2-22-01

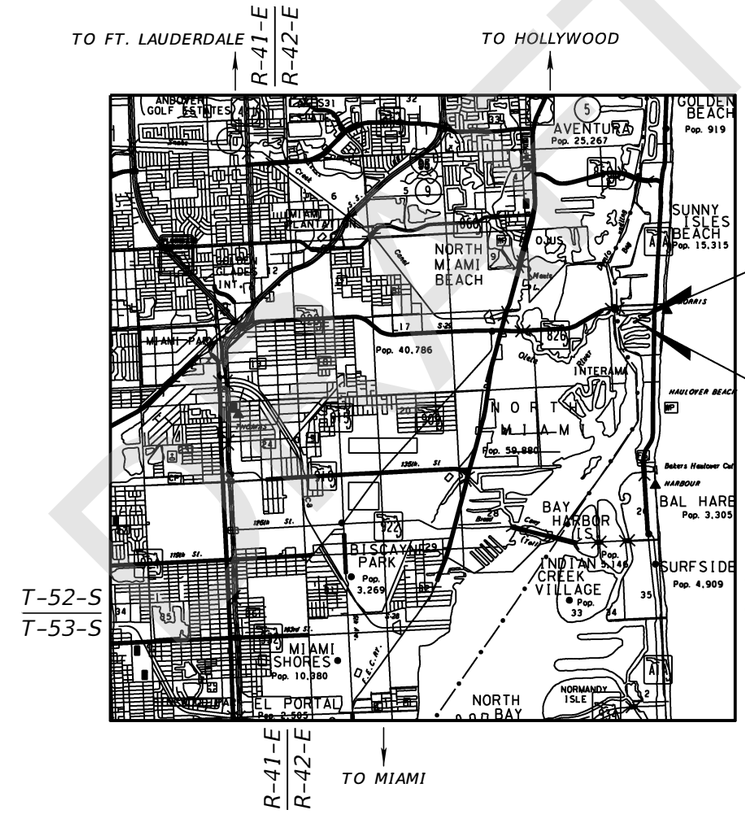
MIAMI-DADE COUNTY (87674)

ATLANTIC AVENUE BRIDGE REPLACEMENT



LOCATION OF PROJECT

https://goo.gl/maps/YgJxwZaGZPw



GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 22/23 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

APPLICABLE IRs: IR___-___-__

Standard Plans for Bridge Construction are included in the Structures Plans Component

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2022 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

INDEX OF ROADWAY PLANS

DRAFT CONCEPT
NOT FOR CONSTRUCTION
NOVEMBER 2023

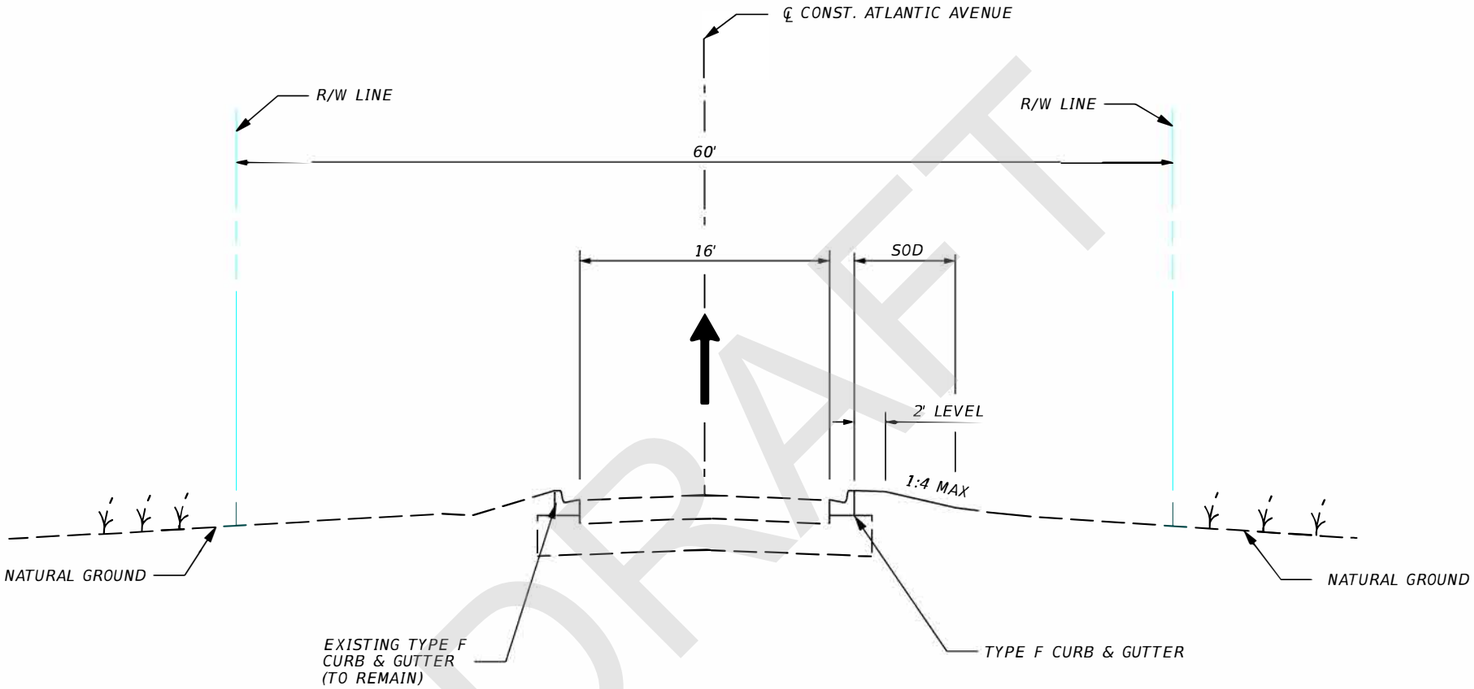
ROADWAY PLANS
ENGINEER OF RECORD:

ALEJANDRO M. MEITIN, P.E.
P.E. NO.: 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146
CONTRACT NO.: C9U43
VENDOR NO.: F 954081636

FDOT PROJECT MANAGER:

VICTORIA VOGT

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
		1



ROADWAY TYPICAL SECTION
ATLANTIC AVENUE
STA. 108+00 TO STA. 113+13.93
STA. 114+19.93 TO 115+80.00

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 605
K = 8.18% D = 51.1% T = 5.18% (24 HOUR)
DESIGN SPEED = 25 MPH
POSTED SPEED = 20 MPH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEJANDRO G. MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SR NO.	COUNTY	FINANCIAL PROJECT ID
	MIAMI-DADE	430029-2-22-01

TYPICAL SECTION

SHEET NO. 2

CURVE DATA EXISTING1
PI STA. = 108+14.96
Δ = 43° 18' 26" (LT)
D = 11° 06' 39"
T = 204.73
L = 389.77
R = 515.67
PC STA. = 106+10.23
PT STA. = 110+00.00

CURVE DATA EXISTING2
PI STA. = 110+42.45
Δ = 7° 24' 30" (RT)
D = 8° 44' 20"
T = 42.45
L = 84.77
R = 655.64
PC STA. = 110+00.00
PT STA. = 110+84.78

CURVE DATA EXISTING3
PI STA. = 111+30.30
Δ = 49° 50' 05" (RT)
D = 58° 27' 54"
T = 45.53
L = 85.24
R = 98.00
PC STA. = 110+84.78
PT STA. = 111+70.02

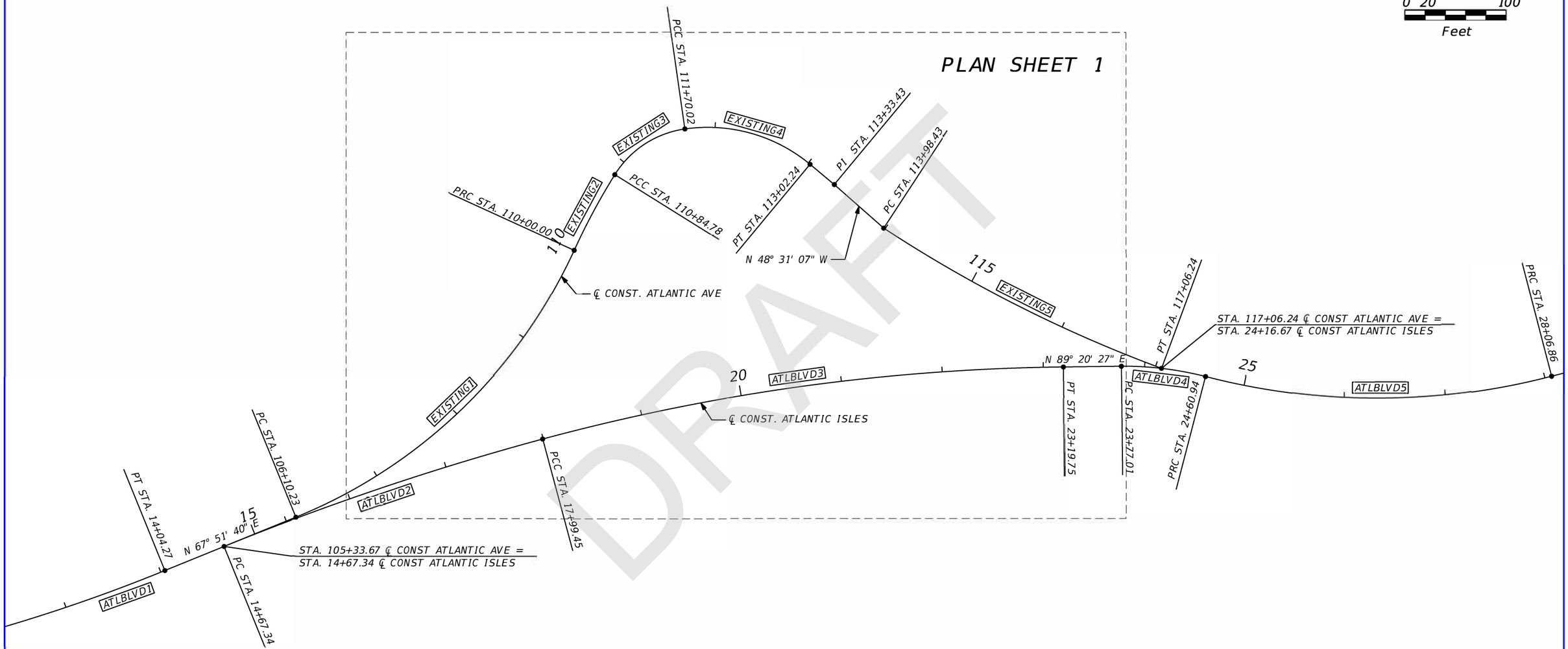
CURVE DATA EXISTING4
PI STA. = 112+40.28
Δ = 47° 56' 54" (RT)
D = 36° 15' 47"
T = 70.26
L = 132.22
R = 158.00
PC STA. = 111+70.02
PT STA. = 113+02.24

CURVE DATA EXISTING5
PI STA. = 115+52.99
Δ = 12° 52' 22" (LT)
D = 4° 10' 56"
T = 154.55
L = 307.80
R = 1,370.00
PC STA. = 113+98.43
PT STA. = 117+06.24

N

0 20 100
Feet

PLAN SHEET 1



CURVE DATA ATLBLVD1
PI STA. = 12+03.11
Δ = 13° 42' 48" (LT)
D = 3° 23' 32"
T = 203.11
L = 404.27
R = 1,689.10
PC STA. = 10+00.00
PT STA. = 14+04.27

CURVE DATA ATLBLVD2
PI STA. = 16+33.61
Δ = 7° 02' 19" (RT)
D = 2° 07' 10"
T = 166.26
L = 332.11
R = 2,703.38
PC STA. = 14+67.34
PT STA. = 17+99.45

CURVE DATA ATLBLVD3
PI STA. = 20+60.99
Δ = 14° 26' 28" (RT)
D = 2° 46' 32"
T = 261.53
L = 520.30
R = 2,064.31
PC STA. = 17+99.45
PT STA. = 23+19.75

CURVE DATA ATLBLVD4
PI STA. = 24+19.23
Δ = 15° 14' 20" (RT)
D = 18° 09' 21"
T = 42.22
L = 83.93
R = 315.58
PC STA. = 23+77.01
PT STA. = 24+60.94

CURVE DATA ATLBLVD5
PI STA. = 26+37.72
Δ = 29° 05' 57" (LT)
D = 8° 24' 44"
T = 176.77
L = 345.91
R = 681.10
PC STA. = 24+60.94
PT STA. = 28+06.86

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

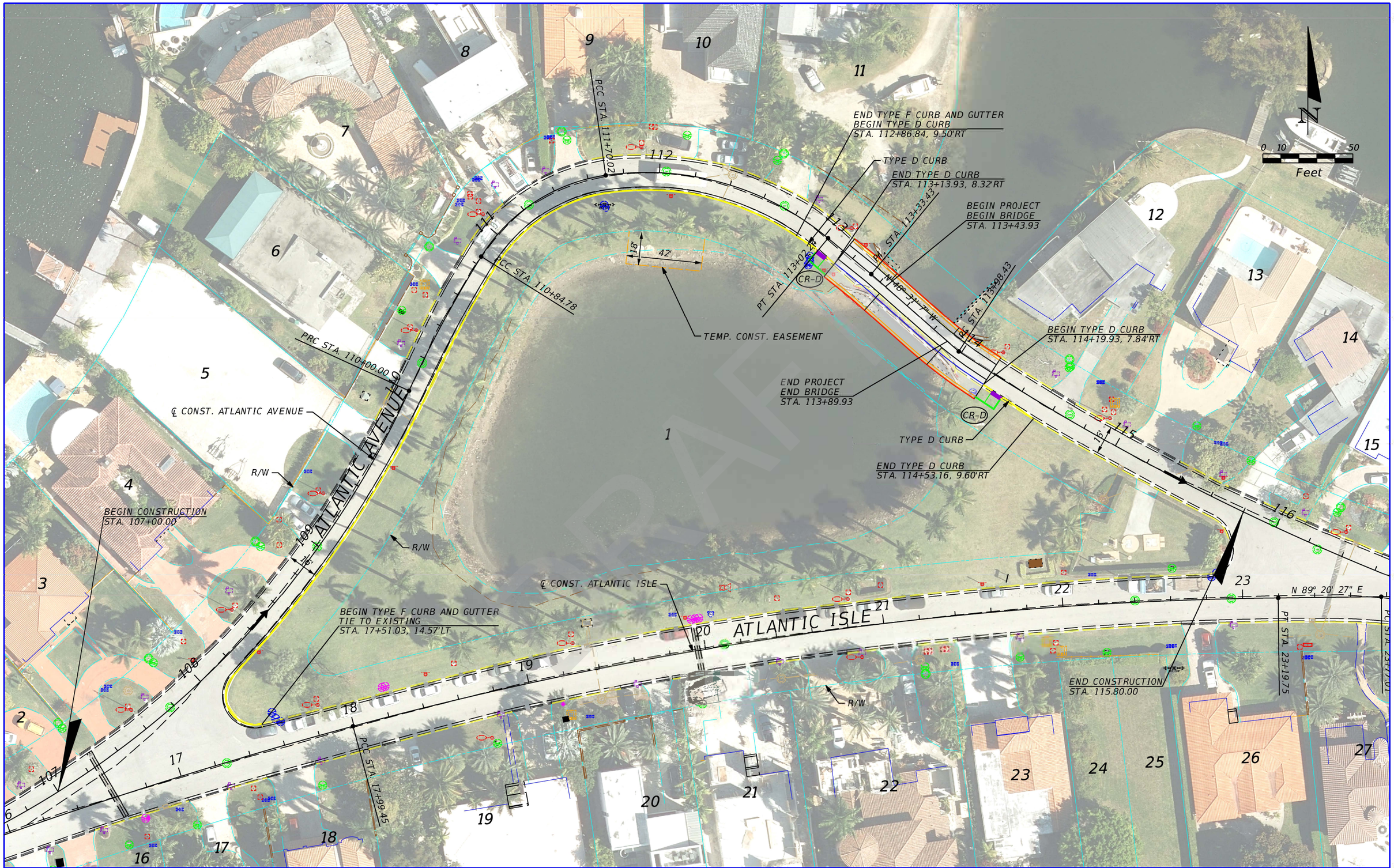
ALEX MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	MIAMI-DADE	430029-2-22-01

PROJECT LAYOUT

SHEET NO. 3



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEJANDRO G. MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

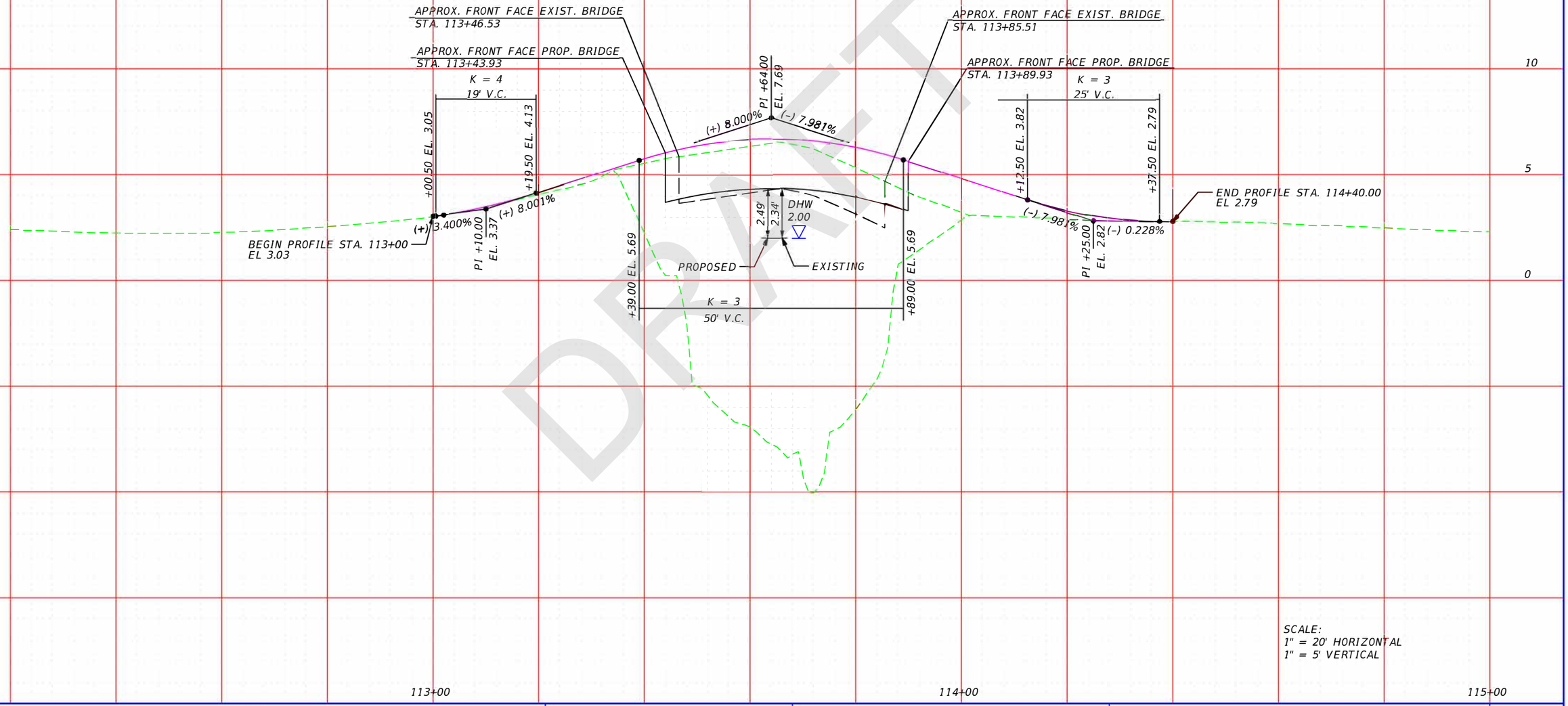
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SR NO.	COUNTY	FINANCIAL PROJECT ID
	MIAMI-DADE	430029-2-22-01

PLAN SHEET
BRIDGE REPLACEMENT (ALT 2)

SHEET NO. 4

BEGIN/END BRIDGE STATIONS SUBJECT TO CHANGE
BRIDGE SHOWN IS ONLY TO DETERMINE VERTICAL CLEARANCE AND DOES NOT REPRESENT THE ACTUAL BRIDGE APPEARANCE



SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL

DRAFT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEX MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NONE	MIAMI-DADE	430029-2-22-01

PROFILE SHEET
BRIDGE REPLACEMENT (ALT 2)

SHEET NO. 5

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED DURING DAYTIME ONLY FROM 8:00 AM TO 8:00 PM.
2. PCMS MESSAGES SHALL BE PLACED ACCORDING TO THE PLANS AND SHALL DISPLAY THE FOLLOWING MESSAGES:

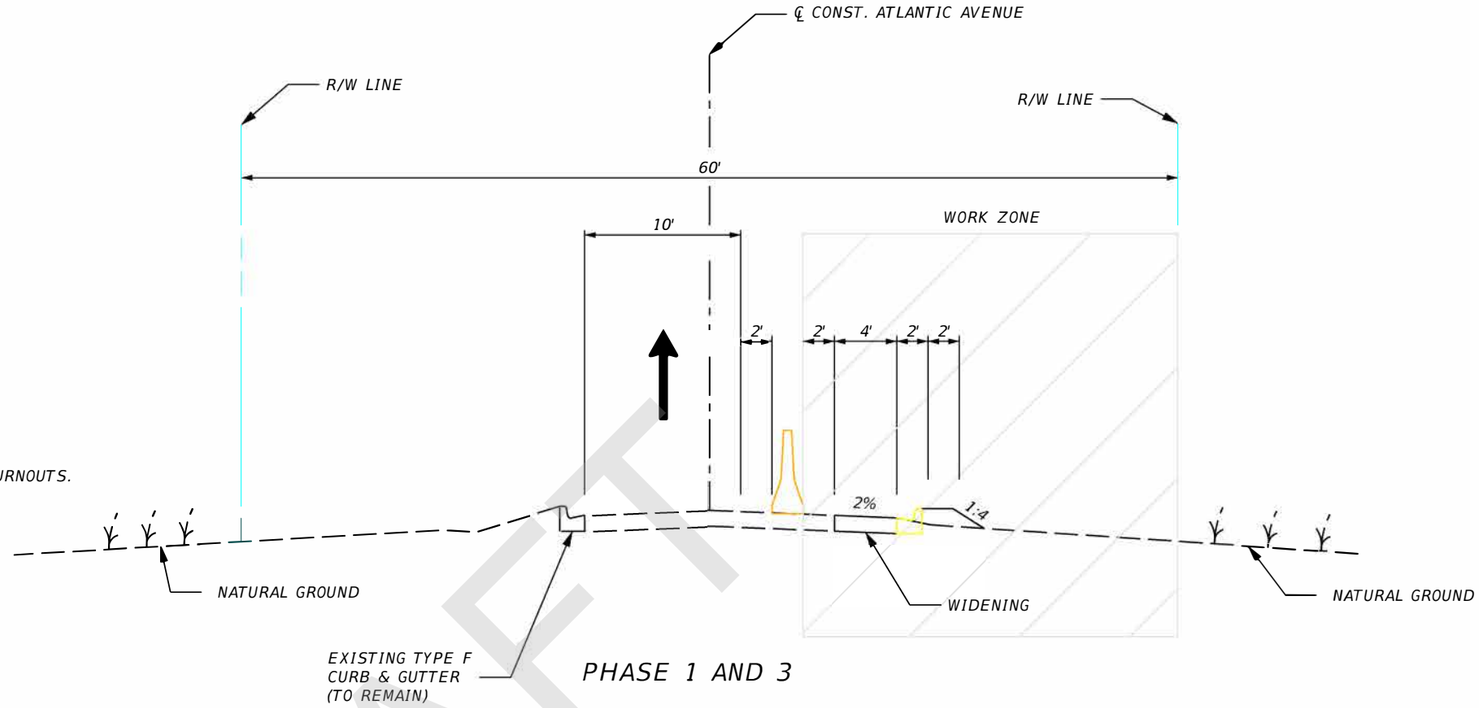
MESSAGE 1	MESSAGE 2
CONST STARTS MM/DD	BRIDGE CLOSED

3. REGULATORY SPEED SHALL BE 20 MPH FOR ALL PHASES OF TEMPORARY TRAFFIC CONTROL PLANS.

PHASE 1

THE INTENT OF THIS PHASE IS TO CONSTRUCT TEMPORARY WIDENING.

1. INSTALL TEMPORARY CONCRETE BARRIER WALL.
2. SHIFT TRAFFIC TO THE LEFT SIDE OF THE ROADWAY.
3. CONSTRUCT TEMPORARY DRAINAGE, TEMPORARY CURB & GUTTER, WIDENING AND TURNOUTS.
4. REMOVE TEMPORARY CONCRETE BARRIER WALL.
5. ALLOW FOR TWO-WAY TRAFFIC.



PHASE 1 AND 3

PHASE 2

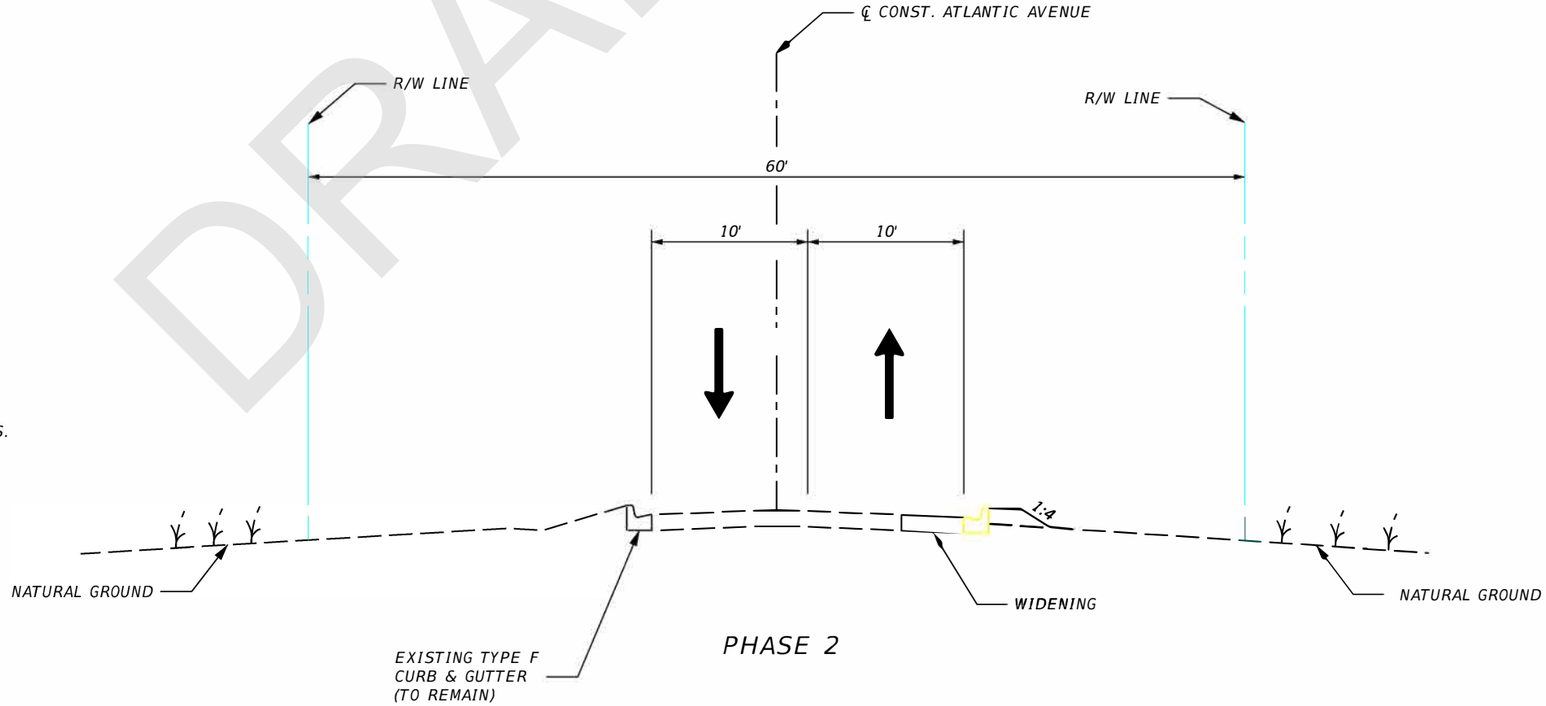
THE INTENT OF THIS PHASE IS TO DEMO AND CONSTRUCT THE NEW BRIDGE.

1. CLOSE THE BRIDGE TO TRAFFIC.
2. DEMOLISH EXISTING BRIDGE.
3. CONSTRUCT NEW BRIDGE.

PHASE 3

THE INTENT OF THIS PHASE IS TO REMOVE THE TEMPORARY WIDENING.

1. INSTALL TEMPORARY CONCRETE BARRIER WALL.
2. SHIFT TRAFFIC TO THE LEFT SIDE OF THE ROADWAY.
3. REMOVE TEMPORARY CURB & GUTTER, DRAINAGE, WIDENING AND TURNOUTS.
4. CONSTRUCT NEW CURB AND GUTTER.
5. REMOVE TEMPORARY CONCRETE BARRIER WALL.
6. ALLOW FOR TWO-WAY TRAFFIC.



PHASE 2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

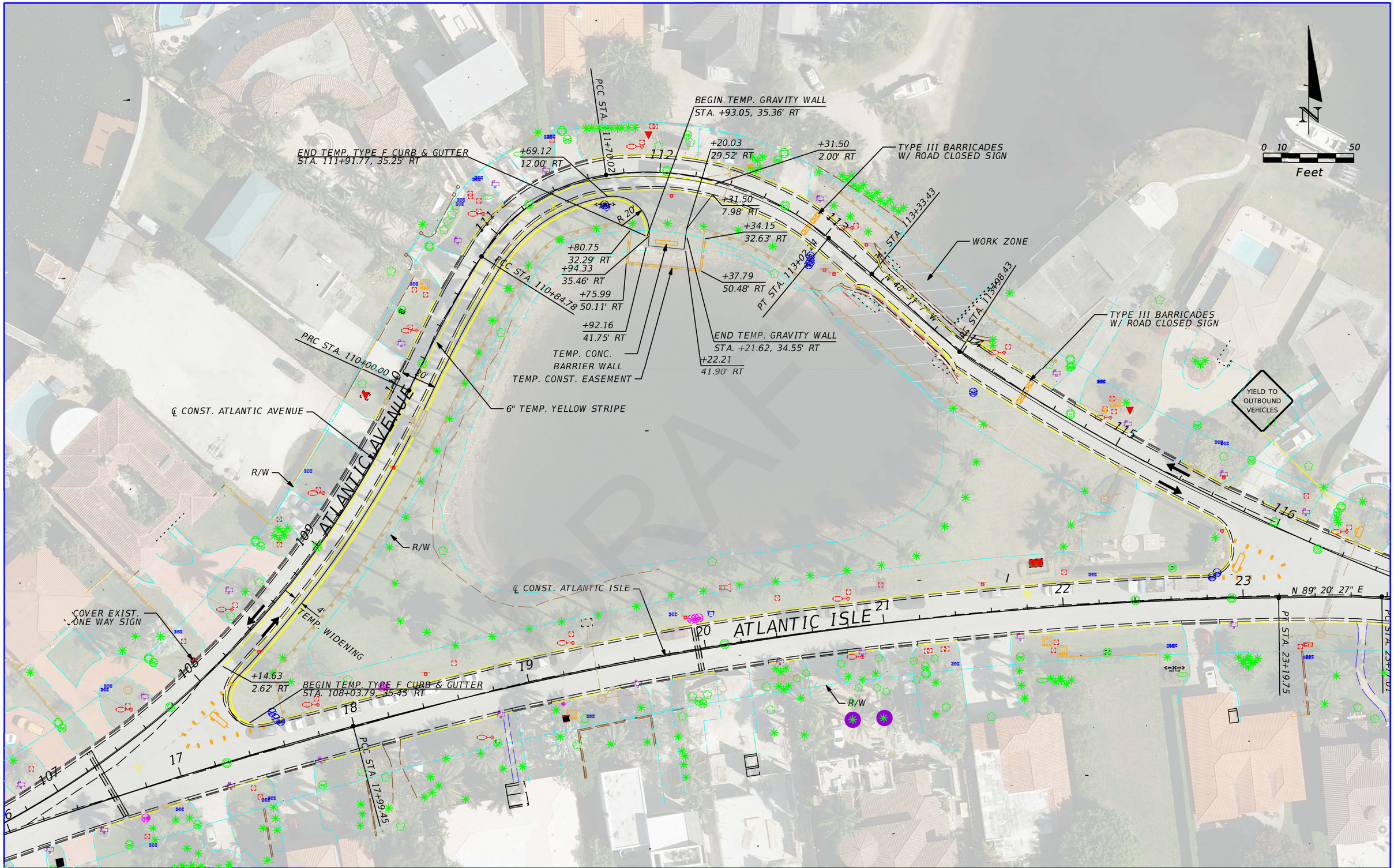
ALEJANDRO G. MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SR NO.	COUNTY	FINANCIAL PROJECT ID
	MIAMI-DADE	430029-2-22-01

TTCP TYPICAL SECTION ALT 1 AND ALT 2

SHEET NO. 6



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEX MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

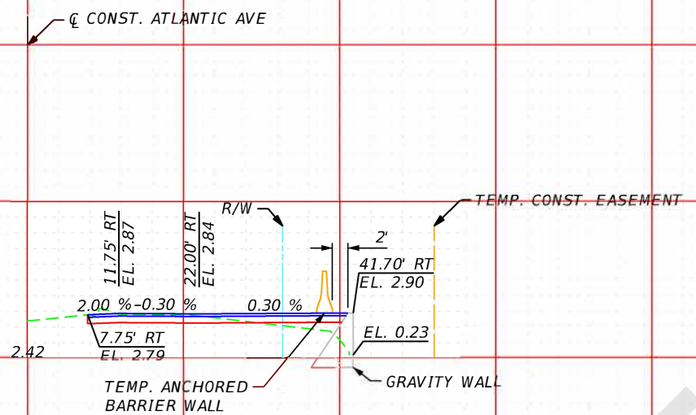
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	MIAMI-DADE	430029-2-22-01

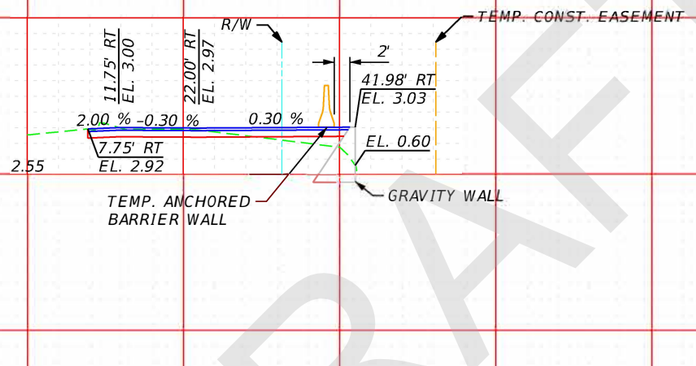
TRAFFIC CONTROL PLAN
BRIDGE REPLACEMENT (ALT 2)

SHEET NO. 7

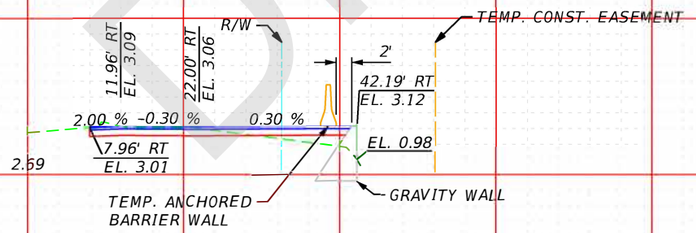
Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V



112+20.00



112+10.00



112+00.00

1" = 20' Horizontal
1" = 10' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

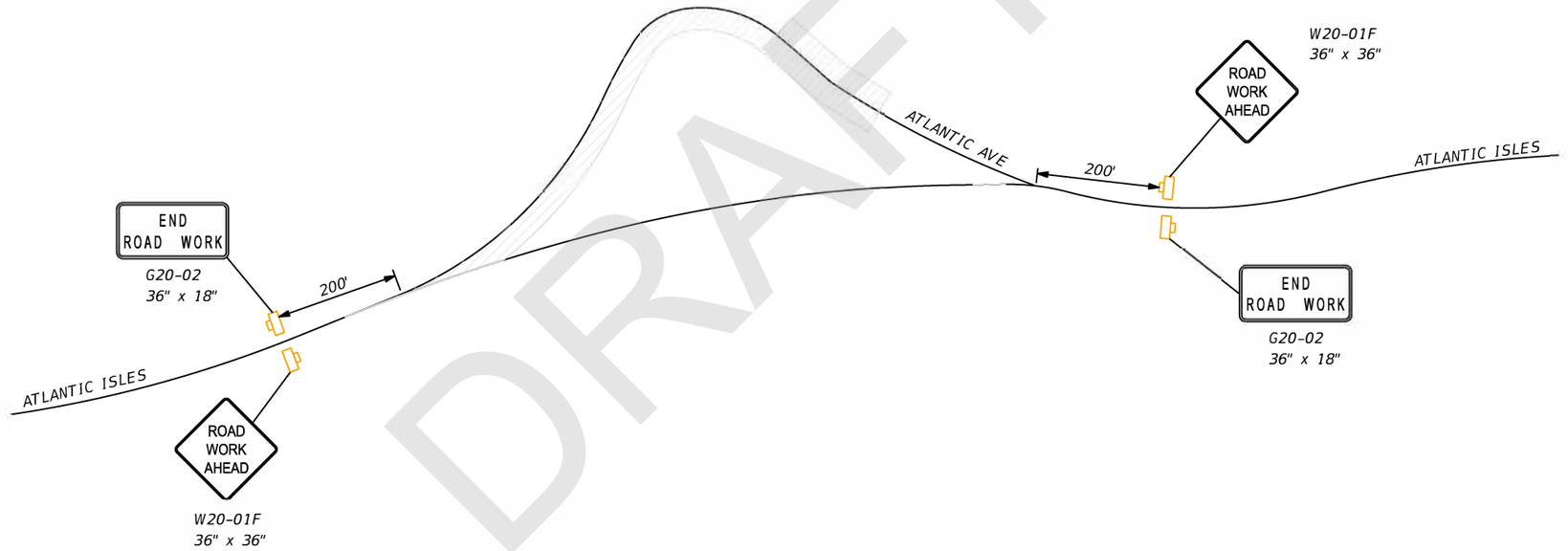
ALEX MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SR NO.	COUNTY	FINANCIAL PROJECT ID
N/A	MIAMI-DADE	430029-2-22-01

TTCP CROSS SECTIONS
BRIDGE REPLACEMENT (ALT 2)

SHEET NO. 8



WORK ZONE

WORK ZONE SIGN

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEJANDRO G. MEITIN, P.E.
P.E. LICENSE NUMBER 44744
JACOBS ENGINEERING GROUP, INC.
3150 SW 38TH AVE, SUITE 700
MIAMI, FL 33146

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SR NO.	COUNTY	FINANCIAL PROJECT ID
	MIAMI-DADE	430029-2-22-01

ADVANCE WARNING DETAIL BRIDGE REPLACEMENT (ALT 2)

SHEET NO. 9

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

INDEX OF STRUCTURE PLANS

SHEET NO.	SHEET DESCRIPTION
B1	KEY SHEET
B1-1	ALTERNATIVE 2 - BRIDGE REPLACEMENT PLAN & ELEVATION
B1-2	ALTERNATIVE 2 - BRIDGE REPLACEMENT TYPICAL SECTION
B1-3	ALTERNATIVE 2 - BRIDGE REPLACEMENT CONSTRUCTABILITY CONCEPT
B1-4	EXISTING BRIDGE PLAN AND ELEVATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430029-2-21-01
(FEDERAL FUNDS)

MIAMI-DADE COUNTY (87674)

STRUCTURE PLANS

GOVERNING STANDARDS & SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED FY 2023-24,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED FY 2023-24,
AS AMENDED BY CONTRACT DOCUMENTS.

APPLICABLE DESIGN STANDARDS MODIFICATIONS: MM-DD-YY
For Design Standards Modifications click on "Design Standards"
at the following Web site: http://www.dot.state.fl.us/rddesign/

STRUCTURE SHOP DRAWINGS
TO BE SUBMITTED TO:
HNTB CORPORATION
161 N.W. 6TH STREET, SUITE 1000
MIAMI, FL. 33136
P: (305) 551-8100 F: (305) 551-2800

PLANS PREPARED BY:

HNTB CORPORATION
161 N.W. 6TH STREET, SUITE 1000
MIAMI, FL. 33136
P: (305) 551-8100 F: (305) 551-2800

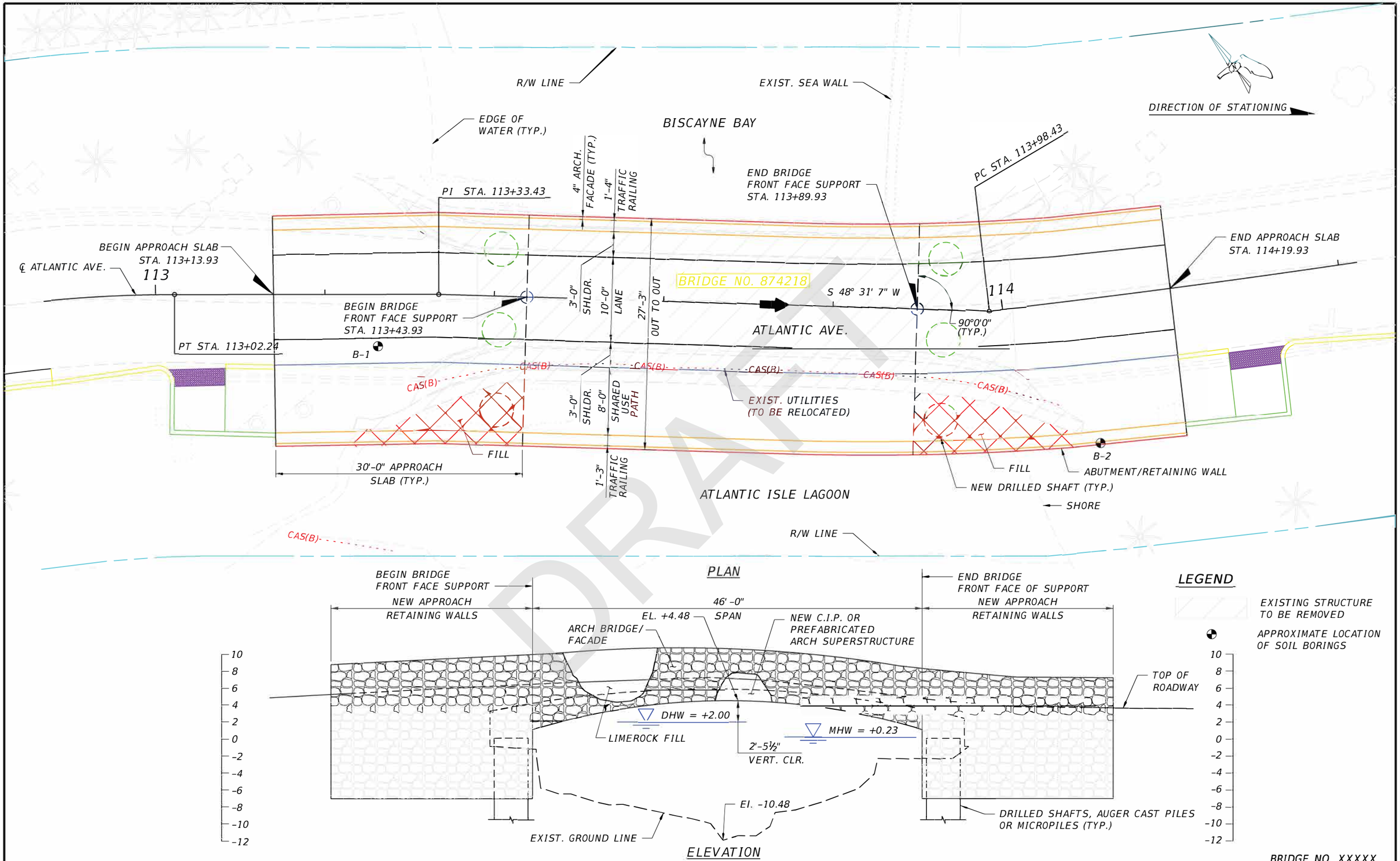
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

STRUCTURE PLANS
ENGINEER OF RECORD: FENG LIU

P.E. NO.: 65738

FDOT PROJECT MANAGER : VICTORIA VOGT

FISCAL YEAR	SHEET NO.
	B1



NOT FOR CONSTRUCTION PRELIMINARY AND SUBJECT TO CHANGE

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JACOBS ENGINEERING GROUP
200 W. FORSYTH STREET, SUITE 1520
JACKSONVILLE, FL 32202

DRAWN BY: XSD
CHECKED BY: JGL
DESIGNED BY: CAM
CHECKED BY: FL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
N/A	MIAMI-DADE	430029-2-21-02

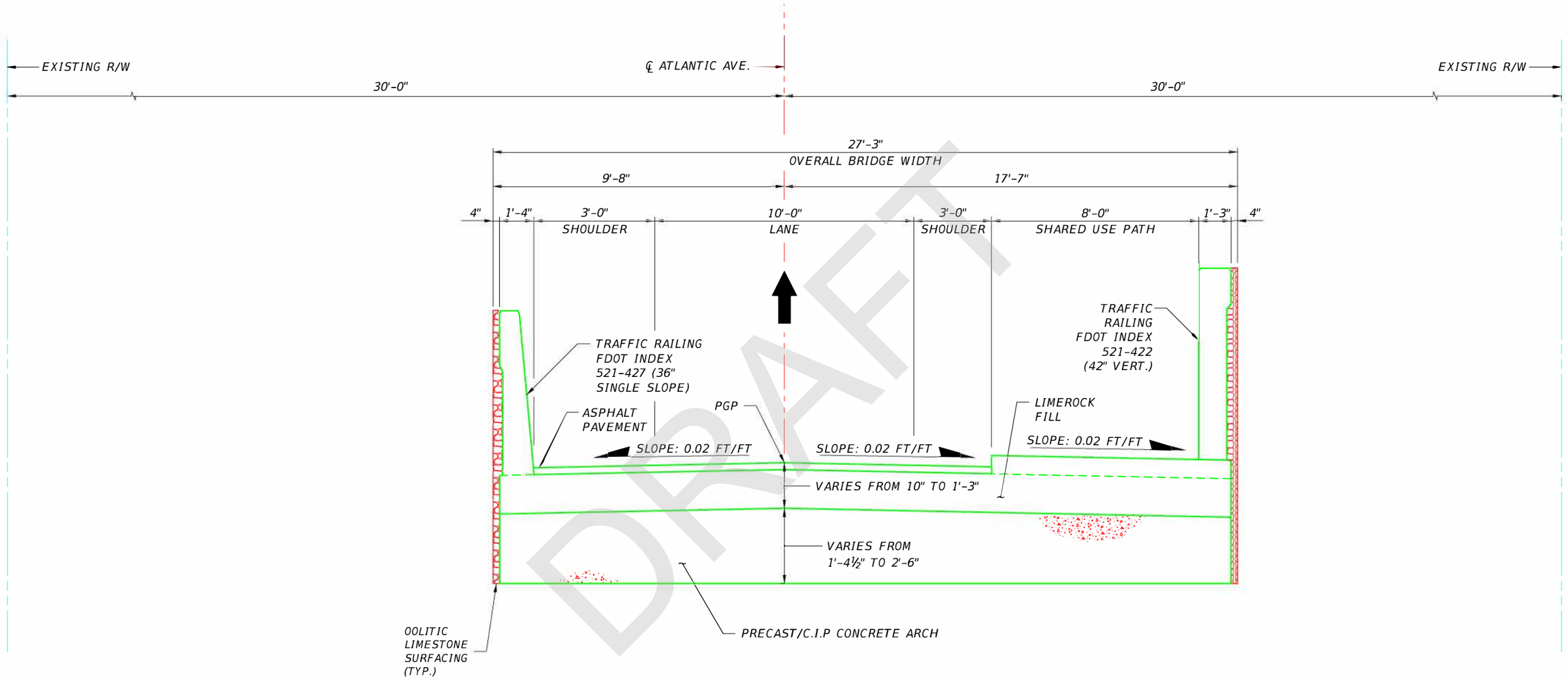
SHEET TITLE: ALTERNATIVE 2 - BRIDGE REPLACEMENT PLAN AND ELEVATION

REF. DWG. NO.

PROJECT NAME: ATLANTIC AVE. OVER OCEAN CANAL

SHEET NO. B1-1

egunders 1/17/2024 2:23:09 PM ...\B1PlanElev-Replacement-01.dgn



TYPICAL SECTION

BRIDGE NO. XXXXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JACOBS ENGINEERING GROUP
200 W. FORSYTH STREET, SUITE 1520
JACKSONVILLE, FL 32202

DRAWN BY: GNJ
CHECKED BY: XSD
DESIGNED BY: CAM
CHECKED BY: FL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
N/A	MIAMI-DADE	430029-2-22-02

SHEET TITLE: BRIDGE REPLACEMENT (ALT 2) TYPICAL SECTION
REF. DWG. NO.:
PROJECT NAME: ATLANTIC AVE. OVER OCEAN CANAL
SHEET NO.: B1-2

egunders 1/17/2024 2:40:41 PM ...\B1TypicalSection02.dgn

R/W LINE

BISCAYNE BAY

DIRECTION OF STATIONING

EDGE OF WATER (TYP.)

EXIST. MANGROVES

EXIST. SEA WALL

TEMPORARY SANDBAG (TYP.)

L=19', H=0'-8"

BRIDGE NO. XXXXXX

℄ ATLANTIC AVE.

113

PI STA. 113+33.43

PC STA. 113+98.43

114

PT STA. 113+02.24

S 48° 31' 07" W

B-1

L=32', H=8'

L=34', H=8'

NEW DRILLED SHAFT (TYP.)

CAS(B)

EXIST. UTILITIES (TO BE RELOCATED)

(1)

(1)

B-2

L=25', H=0'-8"

NEW FOUNDATION CAP

TEMPORARY SHEET PILE WALL (TYP.)

NEW FOUNDATION CAP

L=22', H=0'-8"

12"

Z / CORRUGATED SHAPE THICKNESS = 3/8"

ATLANTIC ISLE LAGOON

CAS(B)

R/W LINE

PLAN

BEGIN BRIDGE FRONT FACE SUPPORT

NEW APPROACH RETAINING WALLS

46'-0" SPAN

END BRIDGE FRONT FACE OF SUPPORT

NEW APPROACH RETAINING WALLS

ARCH BRIDGE/ FACADE

NEW C.I.P. OR PREFABRICATED ARCH SUPERSTRUCTURE

TOP OF ROADWAY

LIMEROCK FILL

MHW = +0.23

TEMPORARY SHEET PILES

EI. -10.48

DRILLED SHAFTS, AUGER OR MICROPILES (TYP.)

EXIST. GROUNDLINE

10 8 6 4 2 0 -2 -4 -6 -8 -10 -12

ELEVATION

LEGEND

◔ = APPROXIMATE LOCATION OF SOIL BORINGS

NOTE:

1. EXISTING BRIDGE 874218 TO BE COMPLETELY REMOVED INCLUDING FOUNDATIONS.
2. TEMPORARY SHEET PILING SHOWN WILL BE REMOVED PRIOR TO CONSTRUCTION OF THE ARCH AND SUPERSTRUCTURE.

TEMPORARY SHEET PILE:			
LENGTH:	AT BEGIN BRIDGE	= 76 LF	51 SHEETS
	AT END BRIDGE	= 56 LF	37 SHEETS
	TOTAL	= 132 LF	88 SHEETS

H= HEIGHT ABOVE CANAL BOTTOM.

(1) DRILLED SHAFT WATERWARD OF EXISTING BRIDGE.

BRIDGE NO. 874218

NOT FOR CONSTRUCTION PRELIMINARY AND SUBJECT TO CHANGE

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JACOBS ENGINEERING GROUP
200 W. FORSYTH STREET, SUITE 1520
JACKSONVILLE, FL 32202

DRAWN BY: EAG
CHECKED BY: RLM
DESIGNED BY: BAG
CHECKED BY: RLM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

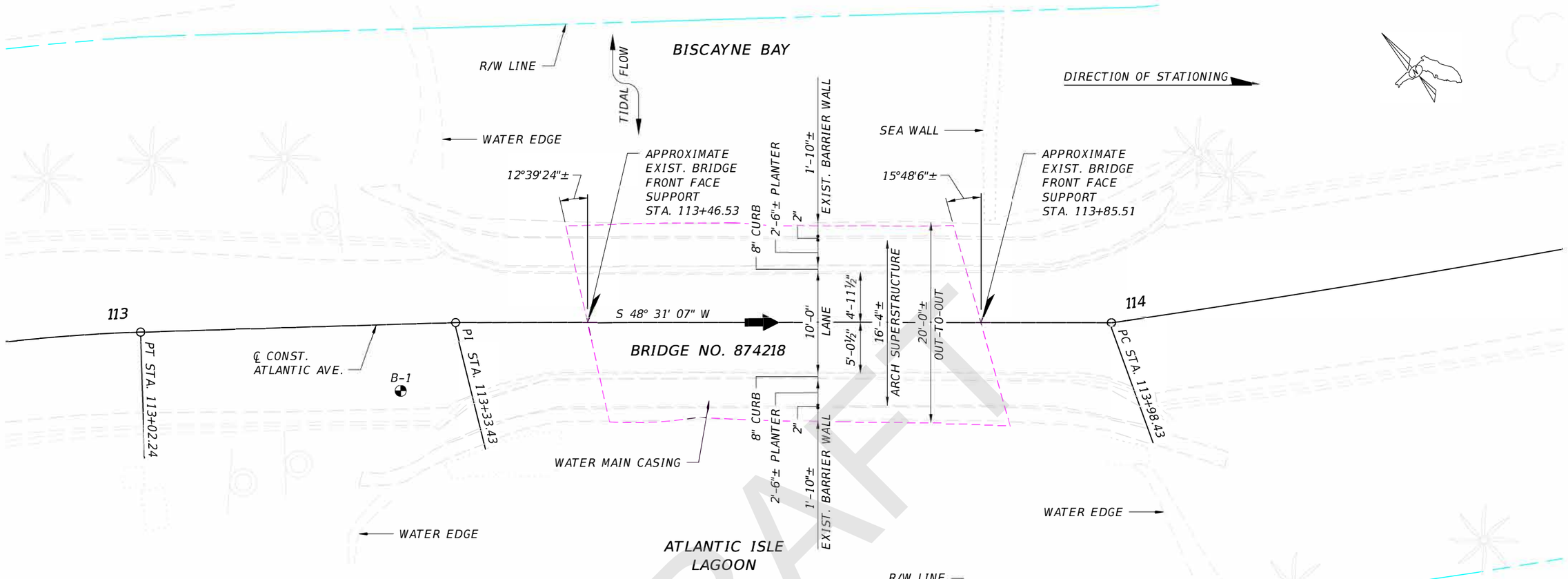
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
N/A	MIAMI-DADE	430029-2-21-02

SHEET TITLE: ALTERNATIVE 2 - BRIDGE REPLACEMENT CONSTRUCTABILITY CONCEPT

REF. DWG. NO.

PROJECT NAME: ATLANTIC AVE. OVER OCEAN CANAL

SHEET NO. B1-3



NOT FOR CONSTRUCTION PRELIMINARY AND SUBJECT TO CHANGE

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JACOBS ENGINEERING GROUP
200 W. FORSYTH STREET, SUITE 1520
JACKSONVILLE, FL 32202

DRAWN BY: EAG
CHECKED BY: RLM
DESIGNED BY: BAG
CHECKED BY: RLM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
N/A	MIAMI-DADE	430029-2-21-02

SHEET TITLE: EXISTING BRIDGE PLAN AND ELEVATION

REF. DWG. NO.

PROJECT NAME: ATLANTIC AVE. OVER OCEAN CANAL

SHEET NO. B1-4

BRANCHTD 4/10/2023 1:48:37 PM C:\Users\branchtd\Downloads\CADD\CADD\VERIFIED_SeanK\STR\B1PlanElev-Exist-01.DGN

APPENDIX B
Historical Aerials

1971

1973

1978

1985

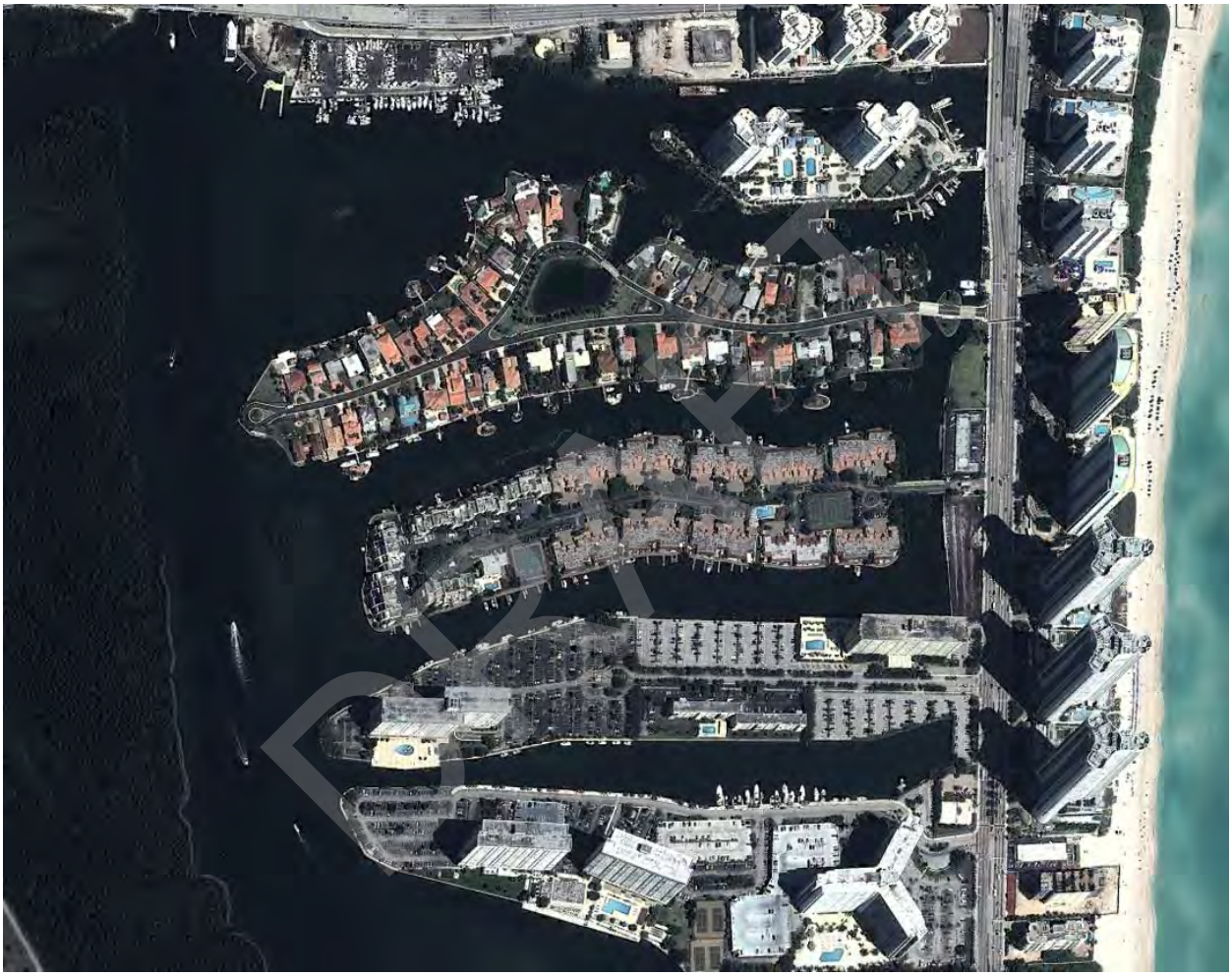
1991

1995

1998

2003

2007



2012

2017

2022

APPENDIX C
Asbestos and Heavy Metal Survey Report

GPI

Engineering, Surveying, Permitting, Environmental Analysis and Construction Services

Ms. Geidy Coello, E.I.
Florida Department of Transportation
District Six Structures Maintenance Office
1000 NW 111th Avenue
Miami, FL 33172-5800

August 24, 2018

Re: FDOT/GPI Contract C-9T64; FPN 410265-2-62-01, TWO #6, Revision 1
District-wide Asbestos and Lead Abatement Supervision and Inspections
FPN 430029-1-52-01, Atlantic Isle Avenue over Atlantic Isle Lagoon
Bridge No. 874218, Miami-Dade County

Dear Ms. Coello,

GPI and our subconsultant, EcoAdvisors (ECO), have performed an inspection for asbestos-containing materials (ACM) and existing coatings for heavy metals (Lead (Pb), Chromium (Cr) and Cadmium (Cd)) prior to scheduled demolition of approach slab and removal of superstructure (above arch) for Bridge No. 874218, Atlantic Isle Avenue over Atlantic Isle Lagoon.

Asbestos - Laboratory analysis did not detect asbestos in any of the materials sampled and therefore, special plan notes are not required. The full asbestos report is attached. A summary of ECO's recommendations are as follows:

- Notify the Contractor as specified in the OSHA asbestos regulations 29 CFR 1926.1101 the asbestos survey was completed and available for review.

- Assume material found, including underground cementitious pipes or coating on underground pipes, during the project and not identified in this report is asbestos-containing until testing determines otherwise.

Heavy Metals - Coatings suspected of containing heavy metals were not found on components of the structure which will be disturbed during the project and therefore, samples were not taken or tested. Special plan notes pertaining to heavy metals in existing coatings are not needed. GPI recommends notifying the Contractor this heavy metals survey was completed.

Please let me know if you have any questions.

Sincerely,

F. D. Rea

Frank D. Rea

Enclosures

Eco Advisors, LLC
Engineering a Sustainable Future

3931 RCA Blvd, Suite 3114
Palm Beach Gardens, FL 33410
561.627.1810
www.ecoadvisors.net

INSPECTION FOR ASBESTOS-CONTAINING MATERIALS

Financial Project No. 430029-1-52-01
Miami-Dade County, Florida

FDOT Bridge 874218 Atlantic Isle Avenue over Atlantic Isle Lagoon

Prepared for:
Florida Department of Transportation District VI
District Wide Contract C-9T64
c/o Greenman-Pedersen, Inc. (GPI)

TWO 6

John Crowe
Vice President
Greenman-Pedersen, Inc.
1000 N. Ashley Blvd, Suite 100
Tampa, FL 33602

Prepared by:
Eco Advisors, LLC
ZA444

Contact: Karen M. Meyer, FLAC
Telephone: (561) 627-1810

August 2018

TABLE OF CONTENTS

Appendices:

1 Introduction

This report presents the results of Eco Advisors, LLC (Eco Advisors) inspection for asbestos-containing materials (ACM) at FDOT Bridge 874218 (Atlantic Isle Avenue over Atlantic Isle Lagoon), Miami-Dade County, Florida as requested by the Florida Department of Transportation (FDOT). Donathan Buck, an EPA Accredited Asbestos Inspector, conducted the inspection on July 26, 2018 prior to the scheduled demolition of approach slab and removal of superstructure over arch structure.

Bridges 874218

Construction:	Asphalt, Concrete, Shell Rock
Approximate Length:	70 ft

2 Scope of Work

The scope of work for this project was as follows:

- Review documents
  - Reviewed Request Form and description of the project.
  - Reviewed the FDOT Financial Project plans provided, ITS/Structural plans.
  - Information provided to Eco Advisors to identify suspect asbestos-containing materials or homogeneous materials, especially in inaccessible areas of the structures, for representative sampling purposes; and the financial project scope of work.

- Conduct a targeted inspection to locate, identify, assess, and quantify suspect ACM
  - Performed by an EPA accredited inspector working under the direction of a Florida Licensed Asbestos Consultant (**Appendix A**).
  - Our scope of work includes areas affected by the removal of asphalt pavement, concrete curbs and superstructure fill over the arch structure.
  - Visually inspected to determine suspect ACM located on, under, and over bridge structures such as bridge joints and seams; beam or deck bearing pads found between the support structure and deck rails, strings, or cross members; bearing pads; and troweled or sprayed-on coatings (Class V Finish) on exposed bridge structural elements. Please refer to sections 3.1 through 3.2 for all suspect and non-suspect materials that were observed.

- Sampling and analysis of identified suspect materials for asbestos content.
  - Contracted with a laboratory, fully accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk sample asbestos analysis utilizing Polarized Light Microscopy (PLM)
  - Homogeneous material area determined the number of samples. Homogeneous materials are similar in color and texture, and date of construction.
  - Every attempt was made to collect random and representative samples in quantities that met or exceeded the EPA AHERA Rule, per OSHA Construction Industry Standards, 29 CFR 1926.1101 Asbestos, and FDOT Procedures.

- Random and representative sampling relied on FDOT information and accessibility. There are usually sufficient accessible bridge surfaces and rails to randomly sample representative finish materials. However, due to the hidden nature of many bridge components, some intermediate structures and the associated suspect materials are inaccessible. General information provided by FDOT and derived from historical bridge construction and renovation records indicates that bridge components are typically manufactured using the same construction methods and from like materials; so, materials such as bearing pad materials, felt papers, and other suspect materials are considered homogeneous. Bridge inspections performed by FDOT on an annual or biannual basis define the existing conditions of each individual bridge and bridge component, indicating maintenance or renovation performed on the structure.

3 Inspection

The following identifies materials not suspected of containing asbestos (3.1) and those suspected of containing asbestos (3.2).

3.1 Non-suspect materials

- Rock
- Asphalt

3.2 Suspect asbestos-containing materials

Homogeneous Material (HM) #	Type/Description	Accessible (A) Inaccessible (I)
218-01	Curb Concrete	A
218-02	Deck Concrete	A
218-03	Parapet Mortar	A
218-04	Parapet Stucco Décor	A
218-05	Slope Concrete	A

4 Results

Table 1, included as **Appendix B**, tabulates the Inspection and Sampling results; the homogeneous material number, type/description included in Section 3.2, the asbestos content, the condition, and the quantity of ACMs; as well as materials not suspected of containing asbestos. Photographs of sampled materials are available within **Appendix C**. Plan with sample locations is included as **Appendix D**. The Laboratory Analytical report is included as **Appendix E**.

None of the materials sampled contained asbestos.

5 Recommendations

- Notify the Contractor as specified in the OSHA asbestos regulations 29 CFR 1926.1101 that this asbestos survey was completed and available for review.

- Assume materials/components found during the project and not observed/identified in this report are asbestos-containing until testing determines otherwise. If excavation is scheduled, carefully dig as old or abandoned Transite utility pipes may be present.

6 Plan Notes

No note required.

7 Regulatory Information

7.1 EPA NESHAP – Asbestos (40 CFR Part 61)

NESHAP asbestos regulations apply to all bascule bridge control house, bridge structure, bridge and approach wall projects, including bridge widenings, where an existing bridge is planned to be either partially or fully demolished.

Alternatives for renovations, demolitions, removal, and disposal of materials that contain greater than 1% asbestos (ACM) depend on the category of ACM: Category I non-friable ACM, Category II non-friable ACM, and Regulated (friable or potentially friable) ACM. Friable materials containing less than 10% asbestos content by PLM analysis are ACM unless analysis by the point count method determines less than 1% asbestos.

- Category I Non-Friable ACM is packing, gaskets, resilient floor coverings and roofing products that contain more than one percent asbestos.

- Category II Non-Friable ACM is any non-friable material, excluding Category I Non-Friable ACM or Regulated ACM (friable) that contains more than one percent asbestos.

- Regulated ACM (RACM) is:
  - All friable ACM;
  - Category I Non-Friable ACM that will or has been subject to sanding, grinding cutting or abrading;
  - Category II Non-Friable ACM that has become friable; and Category II Non-Friable ACM with a high probability of being or has become crumbled, pulverized, or reduced to powder by forces expected to act on the material in the course of demolition or renovation.

- The Owner or Demolition Contractor must complete a Notice of Asbestos Renovation or Demolition. Refer to Section 7.3.

7.2 OSHA – Asbestos (29 CFR Part 1910.1001 and Part 1926.1101)

Regulates asbestos exposure in all work, including but not limited to: demolition or salvage of structures where asbestos is present, construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof that contains asbestos

- Applies to all assumed or asbestos-containing materials EXCEPT asbestos-containing asphalt roof coatings, cements, and mastics

- Coverage under this standard is dependent on the nature of the work operation involving asbestos exposure and not the asbestos content within the material, including but not limited to methods of compliance, record keeping, and waste disposal, regardless of the asbestos content or levels of exposure.
  - Materials containing less than 1% asbestos require compliance with 1926.1101(g) (1) (2) (3) as an Unclassified Work Activity.
  - Repair, Maintenance and /or Disturbance of ACM is a Class III work activity.

7.3 Florida Department of Environmental Protection (FDEP)

The Florida Department of Environmental Protection (FDEP) has the responsibility under Sections 403.061 and 376.60, F.S., to oversee the safe management and removal of asbestos-containing materials within Florida. This responsibility is implemented under Chapter 62-257, F. A. C., and Section 62-204.800, F. A. C., which adopts 40 CFR, Part 61.

- FDEP or delegated local government agencies may charge a notification fee for asbestos removal or demolition project.

- Send FDEP notification form to the Miami Dade County Division of Environmental Resources Management, 701 N.W. 1st Court, Suite 400, Miami, FL 33136.

8 Document Content

Consultation provided as stated in Eco Advisors, LLC Scope of Services. If local knowledge indicates error, omissions, or inaccuracy, notify the consultant. The information contained in this report reflects the conditions present on the date of inspection. The knowledge of the consultant, Eco Advisors, LLC, is current information and research. The status of said information, research, and technology could change in the future, thus affecting the services provided.

9 Document Use

The document and all Appendices provided by the consultant, Eco Advisors, LLC, are for the exclusive use of Greenman-Pedersen, Inc. (GPI), FDOT, and parties authorized by FDOT. The use of this document or any part of this document by others or third parties is not authorized without the prior written consent of Eco Advisors.

APPENDIX A

CERTIFICATIONS AND SIGNATURES

Project Name:	TWO 6 Asbestos Inspection
FDOT Bridge	874218 Atlantic Isle Avenue over Atlantic Isle Lagoon

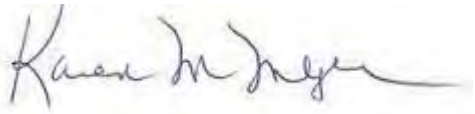
SURVEY DATA:

Consultant:	Eco Advisors, LLC
Address:	3931 RCA Boulevard, Suite 3114 Palm Beach Gardens, Florida 33410
Inspector:	Donathan Buck
EPA Certification:	72717588
Signature:	

ANALYTICAL DATA:

Name:	EMSL Analytical, Inc. 1860 Old Okeechobee Road, Unit 101 West Palm Beach, FL 33409
Analyst:	Cole Wardlow
Requirements:	This laboratory meets the applicable requirements of 40 CFR Part 763, Section 763.90 and utilizes EPA Method 600/R-93/116

FLORIDA CONSULTANT DATA:

Name:	Eco Advisors, LLC
Address:	3931 RCA Boulevard, Suite 3114 Palm Beach Gardens, Florida 33410
Florida Business License No.:	ZA444
Consultant:	Karen M Meyer, CIH
Florida Consultant License No.	AX0000033
Signature:	 8/10/18

APPENDIX B

TABLE 1

ASBESTOS INSPECTION & SAMPLING RESULTS

Table 1
Asbestos Inspection & Sampling Results

Material Type/ Description	Category	Amount of ACM	Condition F/PF/NF	HM # (Section 3.2)
BRIDGE 874218 **Atlantic Isle Avenue over Atlantic Isle Lagoon**				
Curb Concrete	NAD	N/A	NF	218-01
Curb Concrete	NAD	N/A	NF	218-01
Deck Concrete	NAD	N/A	NF	218-02
Deck Concrete	NAD	N/A	NF	218-02
Parapet Mortar	NAD	N/A	NF	218-03
Parapet Mortar	NAD	N/A	NF	218-03
Parapet Stucco Décor	NAD	N/A	NF	218-04
Parapet Stucco Décor	NAD	N/A	NF	218-04
Parapet Stucco Décor	NAD	N/A	NF	218-04
Slope Concrete	NAD	N/A	NF	218-05
Slope Concrete	NAD	N/A	NF	218-05

[1] Category: Asbestos content {Chrysotile (Chrys) or Amosite], No Asbestos Detected (NAD), Assumed ACM, Not suspect (NS), Not Applicable (N/A)
[2] Condition: Friable (F), Potentially Friable (PF), or Non-Friable (NF)
[3]HM#: Homogeneous Material designation, similar in color, texture, and date of construction, refer to Section 3.2

APPENDIX C

SITE PHOTOGRAPHS

Bridge 874218

HM218-01 Sample 218-01

HM218-01 Sample 218-02

HM218-02 Sample 218-03

HM218-02 Sample 218-04

HM218-03 Sample 218-05

Eco Advisors, LLC
Engineering a Sustainable Future

Client :	**FDOT c/o GPI, Inc.**
Location:	**BRIDGE # 874218**
Date of photos:	**July 26, 2018**

HM218-03 Sample 218-06

HM218-04 Sample 218-07

HM218-04 Sample 218-08

HM218-04 Sample 218-09

Looking South

Looking West

Eco Advisors, LLC
Engineering a Sustainable Future

Client :	**FDOT c/o GPI, Inc.**
Location:	**BRIDGE # 874218**
Date of photos:	**July 26, 2018**

South Side of the Bridge

HM 218-05 SE Slope

Looking East

Eco Advisors, LLC

Engineering a Sustainable Future

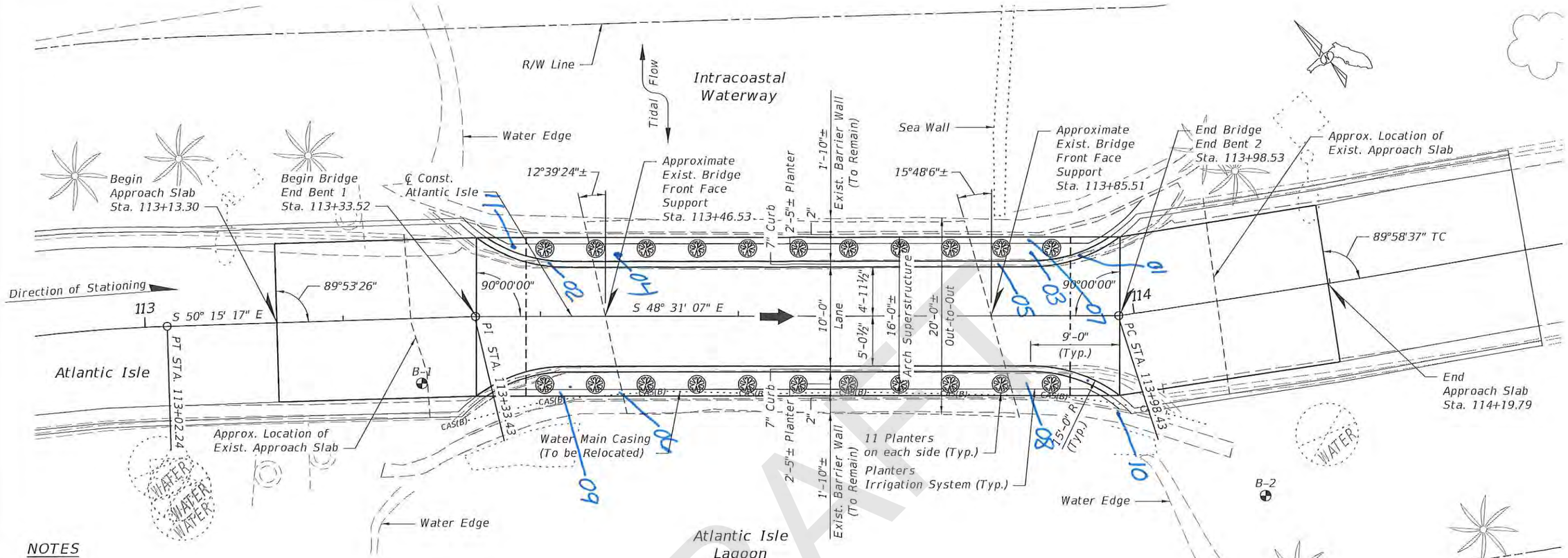
Client :	**FDOT c/o GPI, Inc.**
Location:	**BRIDGE # 874218**
Date of photos:	**July 26, 2018**

Eco Advisors, LLC

Engineering a Sustainable Future

APPENDIX D

PLAN WITH ACM SAMPLE LOCATIONS



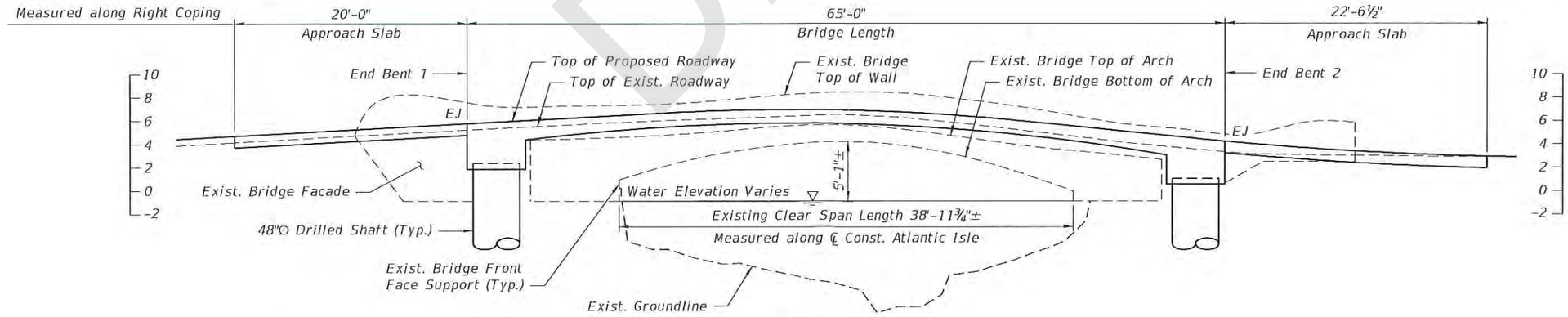
PLAN

NOTES

1. For General Notes refer to Sheet No. B1-1.
2. For geometric data and removal of existing details, refer to Sheet No. B1-3.
3. The proposed bridge limits shown are based on partial coring information including end of existing abutments and approach slab limits. Contractor shall determine the existing abutment location (begin and end) and approach slab limits and submit the information to the Engineer for verification, 45 days prior to commencing foundation installation activities.

LEGEND

⊕ = Approximate Location of Soil Borings



ELEVATION

Bridge No. 874218

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

LUIS M. VARGAS, P.E.
P.E. LICENSE NUMBER 46962
BOLTON PEREZ & ASSOCIATES
7205 CORPORATE CENTER DRIVE, SUITE 201
MIAMI, FLORIDA 33126
CERTIFICATE OF AUTHORIZATION NO. 7904

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SSC	LMV	LMV	VPF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ATLANTIC ISLE	MIAMI-DADE	430029-1-52-01

SHEET TITLE: PLAN AND ELEVATION (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: ATLANTIC ISLE BRIDGE REHABILITATION

SHEET NO.: B1-2

60% BRIDGE PLANS

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

ssagrera 5/9/2018 10:33:22 AM P:_design projects\17.09.01 FDOT 6 DW Rehabilitation\Engineering\Structures\TWO # 1\4300291320 1\struct\B1PlanElev01.DGN

APPENDIX E

ANALYTICAL REPORTS

EMSL Analytical, Inc.

1860 Old Okeechobee Road Unit 101 West Palm Beach, FL 33409

Tel/Fax: (561) 801-7262 / (561) 801-7297

http://www.EMSL.com / WestPalmBeachLab@emsl.com

EMSL Order:	571800051
Customer ID:	ECOA26
Customer PO:	
Project ID:	

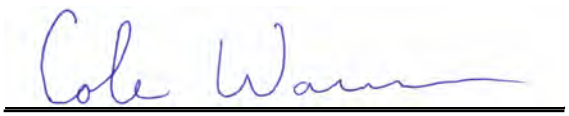
Attention:	Rachael Rossmeissl-Stone	**Phone:**	(561) 627-1810
	Eco Advisors, LLC	**Fax:**	
	3931 RCA Boulevard	**Received Date:**	07/27/2018 3:10 PM
	Suite 3114	**Analysis Date:**	07/31/2018
	Palm Beach Gardens, FL 33410	**Collected Date:**	
Project:	Two 6-Bridge No. 874218		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
218-01 *571800051-0001*	Curb Concrete	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-02 *571800051-0002*	Curb Concrete	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-03 *571800051-0003*	Deck Concrete	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-04 *571800051-0004*	Deck Concrete	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-05 *571800051-0005*	Parapet Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-06 *571800051-0006*	Parapet Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-07 *571800051-0007*	Parapet Stucco Décor	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-08 *571800051-0008*	Parapet Stucco Décor	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-09 *571800051-0009*	Parapet Stucco Décor	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-10 *571800051-0010*	Slope Concrete	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
218-11 *571800051-0011*	Slope Concrete	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Cole Wardlow (11)



EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. West Palm Beach, FL NVLAP Lab Code 600206-0

Initial report from: 07/31/2018 14:51:47

OrderID: 571800051

EMSL Analytical, Inc.
1860 Old Okeechobee Road, U

West Palm Beach, FL 33409
PHONE: (561) 801-7262
FAX: (561) 801-7297

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 571800051

Company: Eco Advisors, LLC	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note Instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 3931 RCA Boulevard Suite 3114	
City: Palm Beach Gardens **State/Province:** FL	**Zip/Postal Code:** 33410 **Country:** US
Report To (Name): Rachael Rossmeissl-Stone	**Telephone #:** 561-627-1810
Email Address: RRStone@ecoadvisors.net	**Fax #:** **Purchase Order:**
Project Name/Number: TWO 6 - Bridge No. 874218	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: FL	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☑ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PLM - Bulk (reporting limit)	TEM – Bulk
☑ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

☑ Check For Positive Stop – Clearly Identify Homogenous Group **Date Sampled:** 7/26/18

Samplers Name: Donathan Beck **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
		See Attached	

Client Sample # (s): 218-01 - 218-11 **Total # of Samples:** 11

Relinquished (Client): **Date:** 7/27/18 **Time:** 15:06

Received (Lab): **Date:** 7/27/18 **Time:** 3:10 PM

Comments/Special Instructions:

OrderID: 571800051

571800051

Site ID 874218

Sample Number	Material	F/P/N	Location	HA
218-01	Curb concrete	N	E end N. side	218-01
02	↓	↓	W. end N. side	↓
03	Deck concrete	N	E end N. side	218-02
04	↓	↓	W. end S. side	↓
05	Parapet mortar	N	E end N. side	218-03
06	↓	↓	W. end S. side	↓
07	Parapet Stucco Decor	P	E end N. side	218-04
08	↓	↓	E end S side	↓
09	↓	↓	W. end S. side	↓
10	Slope concrete	N	E end S. side	218-05
11	↓	↓	W end N. side	↓

Inspector Signature & Date 7/26/18