



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FL 32207-8915

August 16, 2019

Regulatory Division
West Branch
Tampa Permits Section

PUBLIC NOTICE

Permit Application Number SAJ-2000-03874 (SP-CSH)

TO WHOM IT MAY CONCERN: The Jacksonville District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403) as described below:

APPLICANT: Manatee County
c/o Charlie Hunsicker
5502 33rd Avenue Drive West
Bradenton, Florida 34209

WATERWAY AND LOCATION: The project would affect waters of the United States associated with the Gulf of Mexico. The project site is located at Coquina Beach, Anna Maria Island, Manatee County, Florida.

Directions to the site are as follows: From I-75, take Exit 217 and head west on SR 70 / 53rd Ave. for approximately 11 miles. Turn right onto 75th St. W, then left on Cortez Road, cross over drawbridge to Anna Maria Island. Turn left onto Gulf Dr. to Coquina Beach (on right)

APPROXIMATE CENTRAL COORDINATES: Latitude 27.539866°N
Longitude 82.690666°W

PROJECT PURPOSE:

Basic: The basic project purpose is shoreline protection

Overall: The overall project purpose is to place compatible beach fill material on Coquina Beach, Anna Maria Island, improving recreational areas and increasing storm protection for the island.

EXISTING CONDITIONS: The wetland system consists of a saltwater system. There is no onsite vegetation. The existing area surrounding the project area consists of the Gulf of Mexico to the west and a dune system landward of the project area, followed by a public recreation area at Coquina Beach. The project area includes beach and

nearshore marine waters, which includes primarily unconsolidated sediment and areas of nearshore hardbottom. All nearshore hardbottom within the equilibrium toe of fill (ETOF) for the Coquina Beach Nourishment Project has been mitigated through construction of a nearshore artificial reef in 2011.

PROPOSED WORK: The applicant seeks authorization to construct an additional nourishment of the Coquina Beach project area on Anna Maria Island, Manatee County. The project includes placement of approximately 252,000-cubic-yards of compatible beach material within the previously permitted and constructed fill area, including approximately 1.6 miles of shoreline on Coquina Beach between R-33 and R-41+305. The constructed beach will include a berm elevation of +4 feet NAVD on a slope of 1 foot vertical to 15 feet horizontal. The sand will be dredged from any of three previously permitted borrow areas located on the Passage Key Inlet ebb tidal shoal, approximately 2,000 feet offshore of the north end of Anna Maria Island, in the Gulf of Mexico, Class III Waters.

AVOIDANCE AND MINIMIZATION INFORMATION: The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

Turbidity monitoring will ensure turbidity levels remain within permitted limits, and sediment QA/QC monitoring will ensure that only beach compatible sand is placed. Shorebird and sea turtle monitoring will be conducted per permit requirements.

COMPENSATORY MITIGATION: The applicant has provided the following explanation why compensatory mitigation should not be required:

The County previously constructed an artificial reef as mitigation for this project and biological monitoring is in place for hardbottom resources. The proposed project falls within the previously permitted Coquina Beach project limits, therefore no additional impacts are anticipated and no additional mitigation is proposed

CULTURAL RESOURCES: The Corps is not aware of any known historic properties within the permit area. By copy of this public notice, the Corps is providing information for review. Our final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer and those federally recognized tribes with concerns in Florida and the Permit Area.

ENDANGERED SPECIES: The Corps has determined that the proposed activity may affect nesting sea turtles, and may affect, but is not likely to adversely affect (MANLAA) manatee, piping plover and rufa red knot. Protection measures for nesting sea turtles, piping plovers, and red knots shall be incorporated into the project plans and specifications in compliance with the terms and conditions of the Statewide Programmatic Biological Opinion (SPBO) (USFWS, 2015) and Programmatic Piping

Plover Biological Opinion (P3BO) (USFWS, 2013). The Corps has determined MANLAA for swimming sea turtles and smalltooth sawfish, and determined that the Coquina Beach Nourishment project is authorized under the Gulf of Mexico Regional Biological Opinion (GRBO) (NMFS, 2003, as amended). The project will have no effect on any designated critical habitat, as there are no loggerhead or piping plover critical habitat units located in the project vicinity. The Corps will request initiation of formal consultation with the U.S. Fish and Wildlife Service/National Marine Fisheries Service pursuant to Section 7 of the Endangered Species Act by separate letter.

ESSENTIAL FISH HABITAT (EFH): This notice initiates consultation with the National Marine Fisheries Service on EFH as required by the Magnuson-Stevens Fishery Conservation and Management Act 1996. The proposal would impact up to approximately 523 acres of water column and non-vegetated substrate within three offshore borrow areas, utilized by various life stages of penaeid shrimp complex, reef fish, stone crab, spiny lobster, migratory/pelagic fish, snapper/grouper complex, and calico scallop. The previously permitted and constructed fill placement area includes water column, non-vegetated substrate, and ephemeral hardbottom. All hardbottom habitat located within the area of potential project impact (within the equilibrium toe of fill) was mitigated through construction of a 5.16 acre artificial reef in 2011. No additional impacts are anticipated and no new mitigation is proposed. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The jurisdictional line has not been verified by Corps personnel.

AUTHORIZATION FROM OTHER AGENCIES: Water Quality Certification may be required from the Florida Department of Environmental Protection and/or one of the state Water Management Districts.

COMMENTS regarding the potential authorization of the work proposed should be submitted in writing to the attention of the District Engineer through the Tampa Permits Section within 21 days from the date of this notice. For electronic mail (preferred) submit comments to Caitlin.S.Hoch@usace.army.mil. For standard mail submit comments to 10117 Princess Palm Avenue, Suite 120, Tampa, Florida 33610-8302. Please reference this permit number, SAJ- 2000-03874 (SP-CSH), on all submittals.

The decision whether to issue or deny this permit application will be based on the information received from this public notice and the evaluation of the probable impact to

the associated wetlands. This is based on an analysis of the applicant's avoidance and minimization efforts for the project, as well as the compensatory mitigation proposed.

QUESTIONS concerning this application should be directed to the project manager, Caitlin Hoch-Nussbaum by electronic mail at Caitlin.S.Hoch@usace.army.mil or by telephone at (813)355-0789.

IMPACT ON NATURAL RESOURCES: Preliminary review of this application indicates that an Environmental Impact Statement will not be required. Coordination with U.S. Fish and Wildlife Service, Environmental Protection Agency (EPA), the National Marine Fisheries Services, and other Federal, State, and local agencies, environmental groups, and concerned citizens generally yields pertinent environmental information that is instrumental in determining the impact the proposed action will have on the natural resources of the area. By means of this notice, we are soliciting comments on the potential effects of the project on threatened or endangered species or their habitat

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act of the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

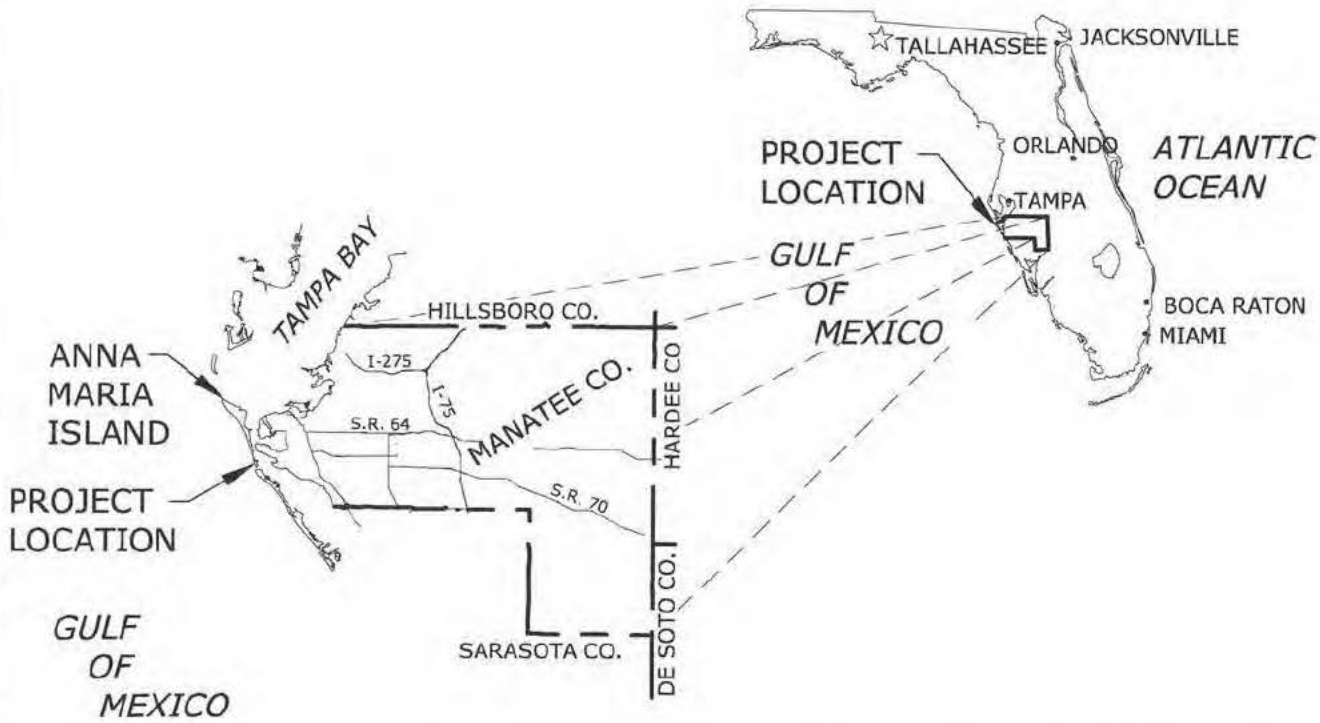
The US Army Corps of Engineers (Corps) is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act

comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COASTAL ZONE MANAGEMENT CONSISTENCY: In Florida, the State approval constitutes compliance with the approved Coastal Zone Management Plan. In Puerto Rico, a Coastal Zone Management Consistency Concurrence is required from the Puerto Rico Planning Board, in the Virgin Islands, the Department of Planning and Natural Resources permit constitutes compliance with the Coastal Zone Management Plan.

REQUEST FOR PUBLIC HEARING: Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.

COQUINA BEACH NOURISHMENT PROJECT MANATEE COUNTY, FLORIDA



SHEET INDEX

NO.	TITLE
1	COVER SHEET
2-4	PLAN VIEWS
5-8	FILL PROFILES
9	2013 AMI BORROW I AREA PLAN VIEW
10-14	2013 AMI BORROW I AREA CROSS SECTIONS
15	2013 AMI BORROW II AREA PLAN VIEW
16-18	2013 AMI BORROW II AREA CROSS SECTIONS
19	2008 AMI BORROW AREA PLAN VIEW
20-22	2008 AMI BORROW AREA CROSS SECTIONS



NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

MICHELLE REES PFEIFFER
STATE OF FLORIDA
7/19/19
DATE

MICHELLE REES PFEIFFER, R.E. NO. 76209

7/19/19

DATE

REVISIONS		
DATE	BY	DESCRIPTION

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
COVER SHEET

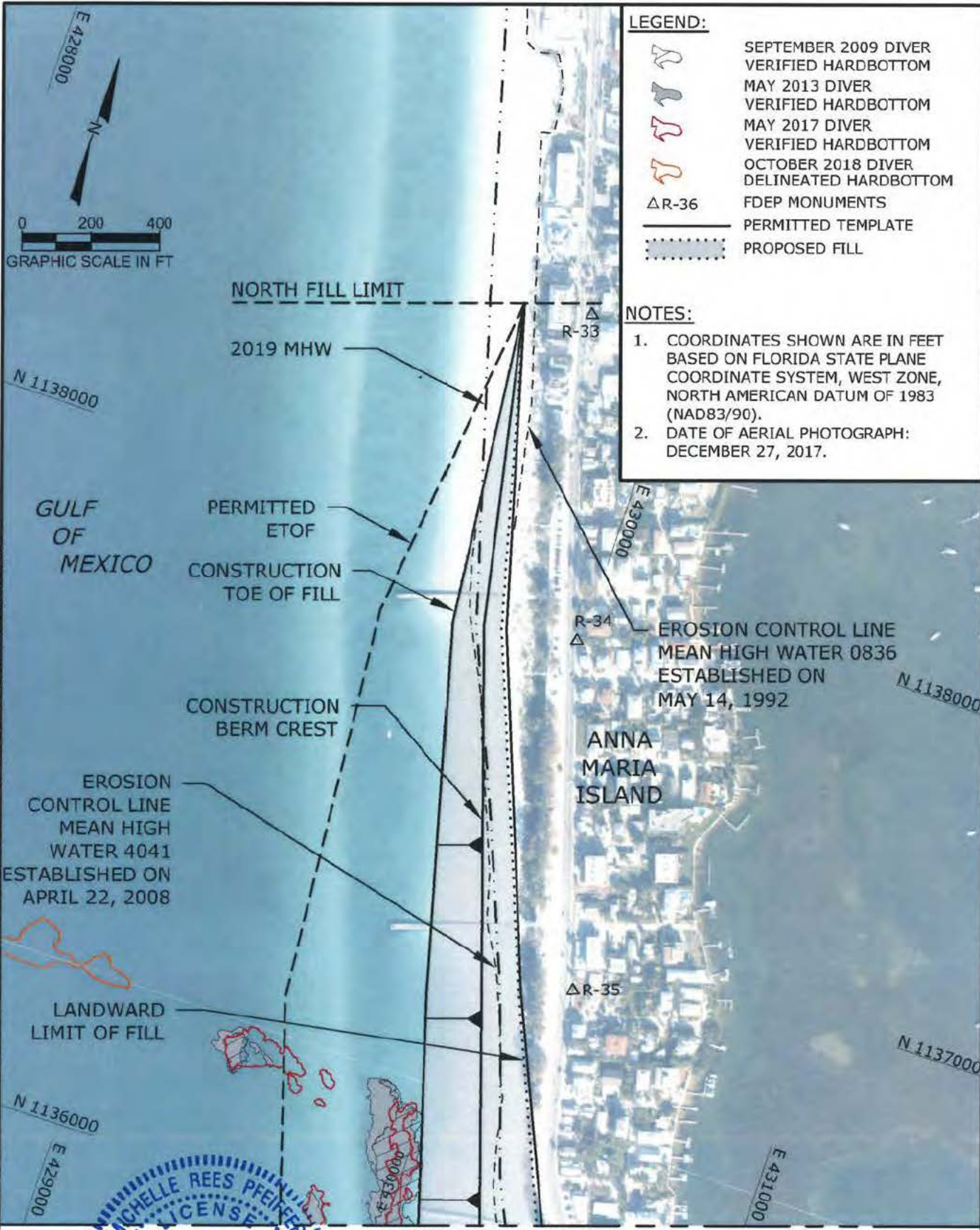
APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH: (561) 391-8102
FAX: (561) 391-0116
C.O.A. FL #0317
www.APTIM.com

DATE:
6/20/19






BY:
GK

COMM NO.:
1131002940

SHEET:
1



LEGEND:

-  SEPTEMBER 2009 DIVER VERIFIED HARDBOTTOM
-  MAY 2013 DIVER VERIFIED HARDBOTTOM
-  MAY 2017 DIVER VERIFIED HARDBOTTOM
-  OCTOBER 2018 DIVER DELINEATED HARDBOTTOM
-  FDEP MONUMENTS
-  PERMITTED TEMPLATE
-  PROPOSED FILL

NOTES:

1. COORDINATES SHOWN ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83/90).
2. DATE OF AERIAL PHOTOGRAPH: DECEMBER 27, 2017.

COQUINA BEACH NOURISHMENT PROJECT
 MANATEE COUNTY, FLORIDA
 PLAN VIEW

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
 PR. (861) 391-5102
 FAX (861) 391-9116
 C.O.A. FL. #0017
 2481 N.W. BOCARATON BOULEVARD
 BOCA RATON, FLORIDA 33431
 www.APTIM.com

DATE: 6/20/19
 BY: GK
 COMM NO.: 1131002940
 SHEET: 2

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 FOR REGULATORY REVIEW ONLY
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 MICHELLE REES PFEIFFER P.E. NO. 76209

7/19/19
 DATE

REVISIONS		
DATE	BY	DESCRIPTION

P:\Manatee\6312940585 - WA 1 - Coquina Beach Services\CAD\Permits\6-2940585P_Coquina_CS-PV.dwg - Jul 16, 2019 @ 11:21am - gary.kryshniak

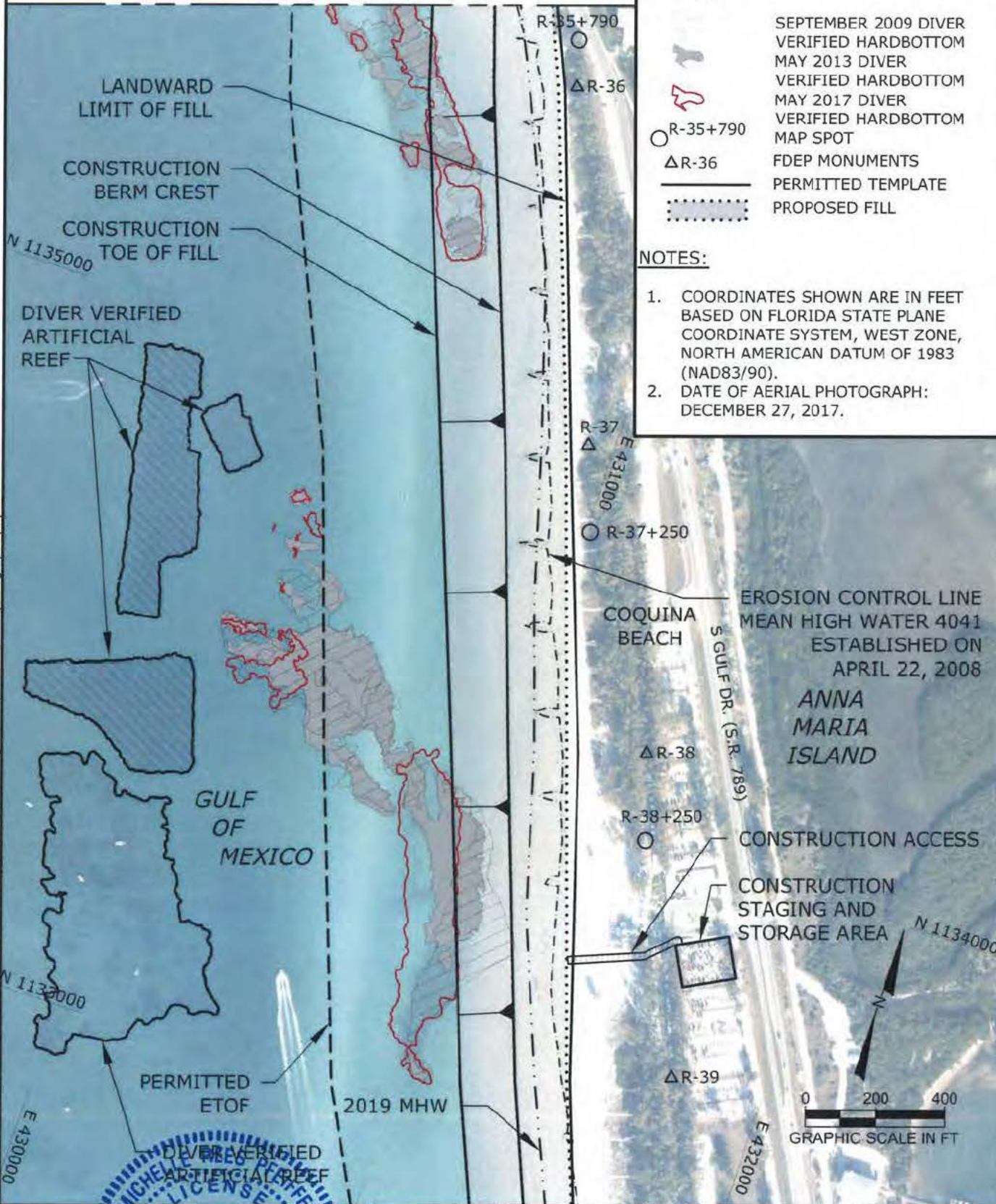
MATCHLINE SEE SHEET 2

LEGEND:

- SEPTEMBER 2009 DIVER VERIFIED HARDBOTTOM
- MAY 2013 DIVER VERIFIED HARDBOTTOM
- MAY 2017 DIVER VERIFIED HARDBOTTOM
- MAP SPOT
- FDEP MONUMENTS
- PERMITTED TEMPLATE
- PROPOSED FILL

NOTES:

1. COORDINATES SHOWN ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83/90).
2. DATE OF AERIAL PHOTOGRAPH: DECEMBER 27, 2017.



COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
PLAN VIEW

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
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BOCA RATON, FLORIDA 33431
www.APTIM.com

DATE: 6/20/19
BY: GK
COMM NO.: 1131002940
SHEET: 3

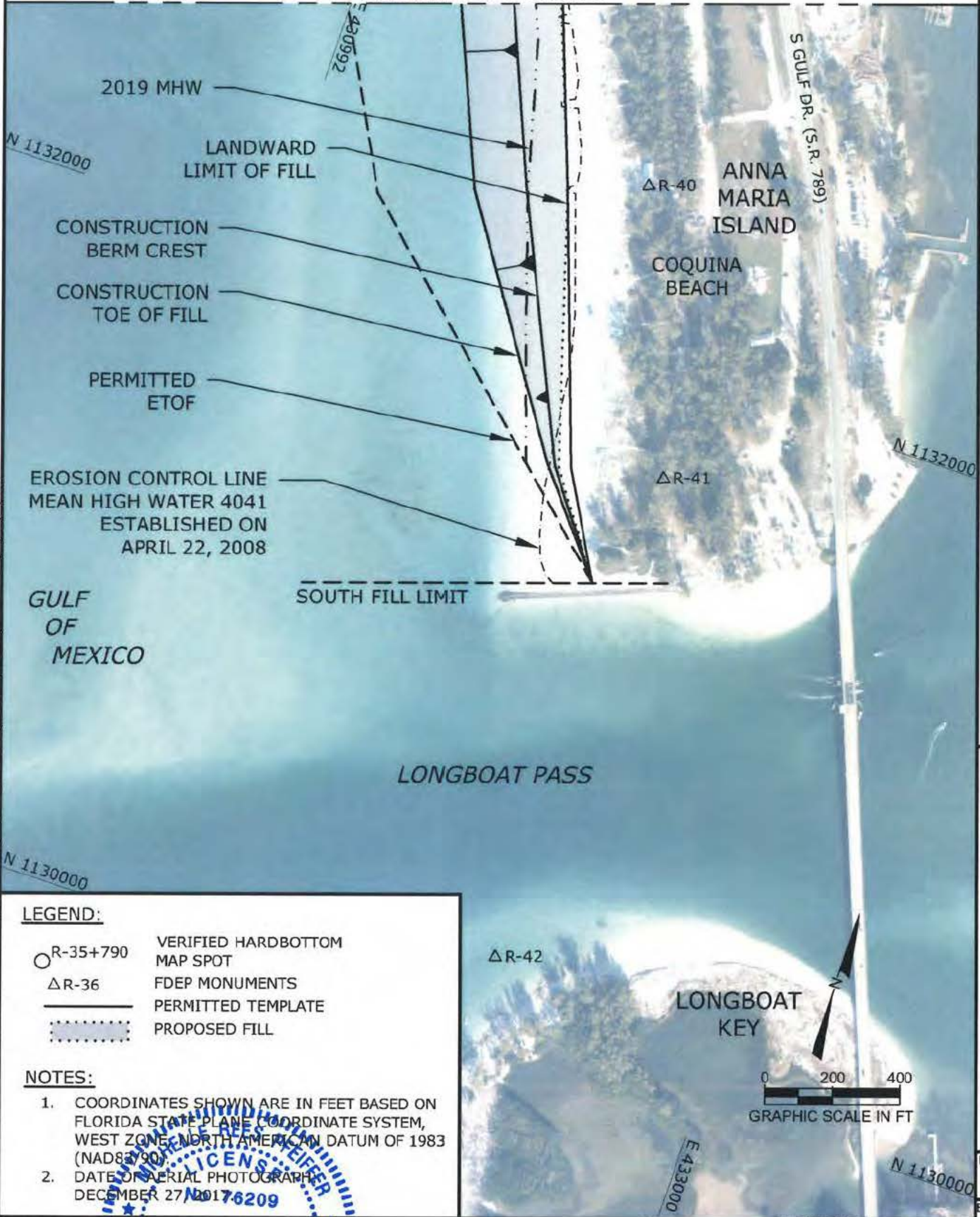
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FOR REGULATORY REVIEW ONLY

MICHELLE REES, P.E. NO. 76209
DATE: 7/19/19

REVISIONS		
DATE	BY	DESCRIPTION

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MATCHLINE SEE SHEET 3



**COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
PLAN VIEW**

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
 2481 N. BOCA RATON BOULEVARD
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 PH: (561) 391-8102
 FAX: (561) 391-8116
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LEGEND:

- R-35+790 VERIFIED HARDBOTTOM MAP SPOT
- Δ R-36 FDEP MONUMENTS
- PERMITTED TEMPLATE
- PROPOSED FILL

NOTES:

- COORDINATES SHOWN ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83/90).
- DATE OF AERIAL PHOTOGRAPH: DECEMBER 27, 2017

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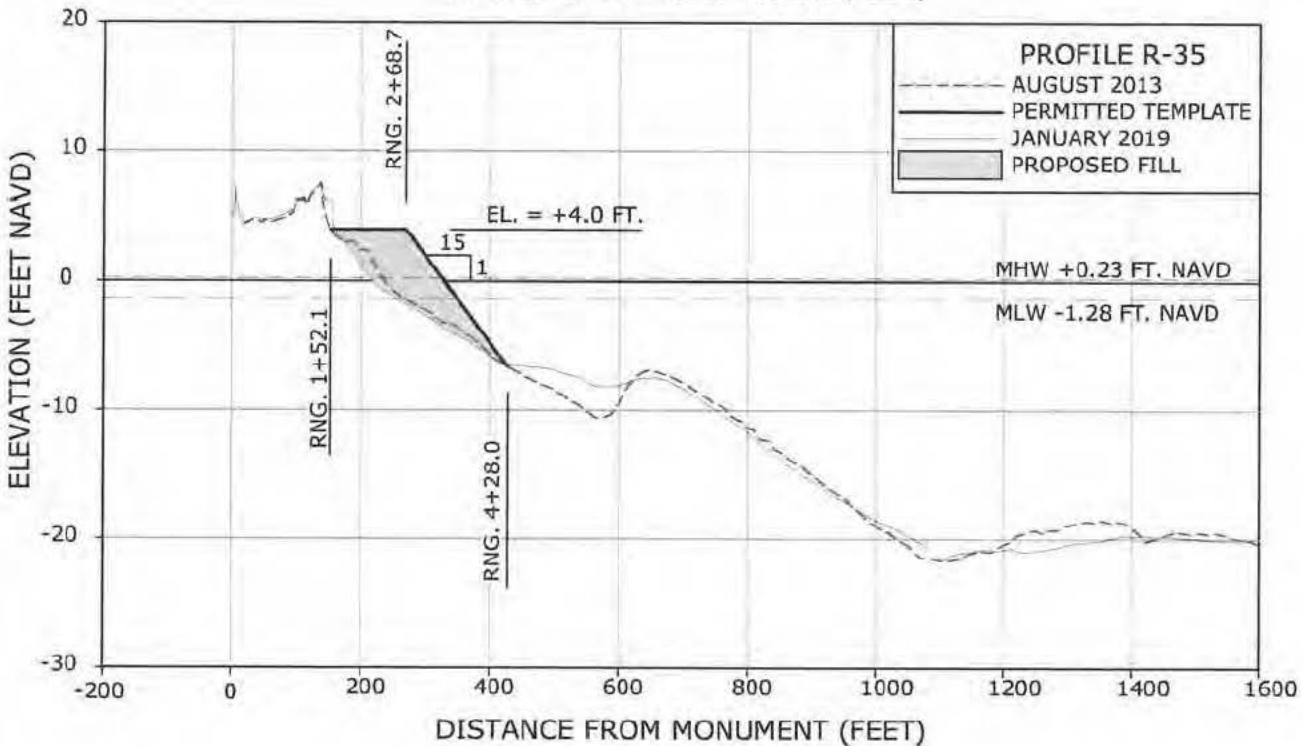
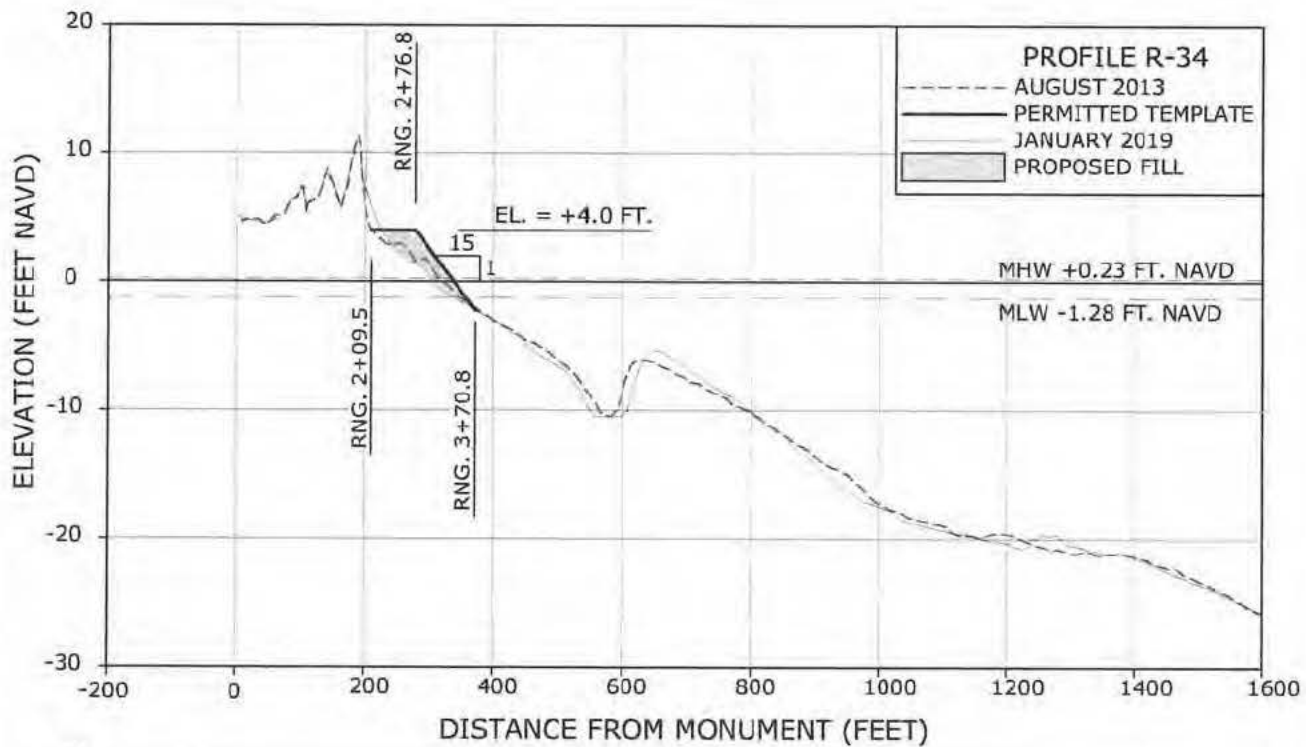
Michelle Rees Pfeiffer
 MICHELLE REES PFEIFFER P.E. 76209
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

7/19/19
DATE

REVISIONS		
DATE	BY	DESCRIPTION

DATE: 5/3/19
 BY: GK
 COMM NO.: 1131002940
 SHEET: 4

P:\Manatee\6312940585 - WA 1 - Coquina Beach Services\CAD\Permits\6312940585P_Coquina_XS.dwg - Jul 17, 2019 @ 2:55pm - gary.krystyniak



NOTE:

1. MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) ELEVATIONS PUBLISHED IN NAVD 88, FROM LAND BOUNDARY INFORMATION SYSTEM (LABINS) BASED ON EPOCH 1983-2001 TIDE INTERPOLATION POINT IDENTIFICATION NUMBER 200904

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MICHELLE REES PERMITTEE No. 76209
STATE OF FLORIDA
7/19/19

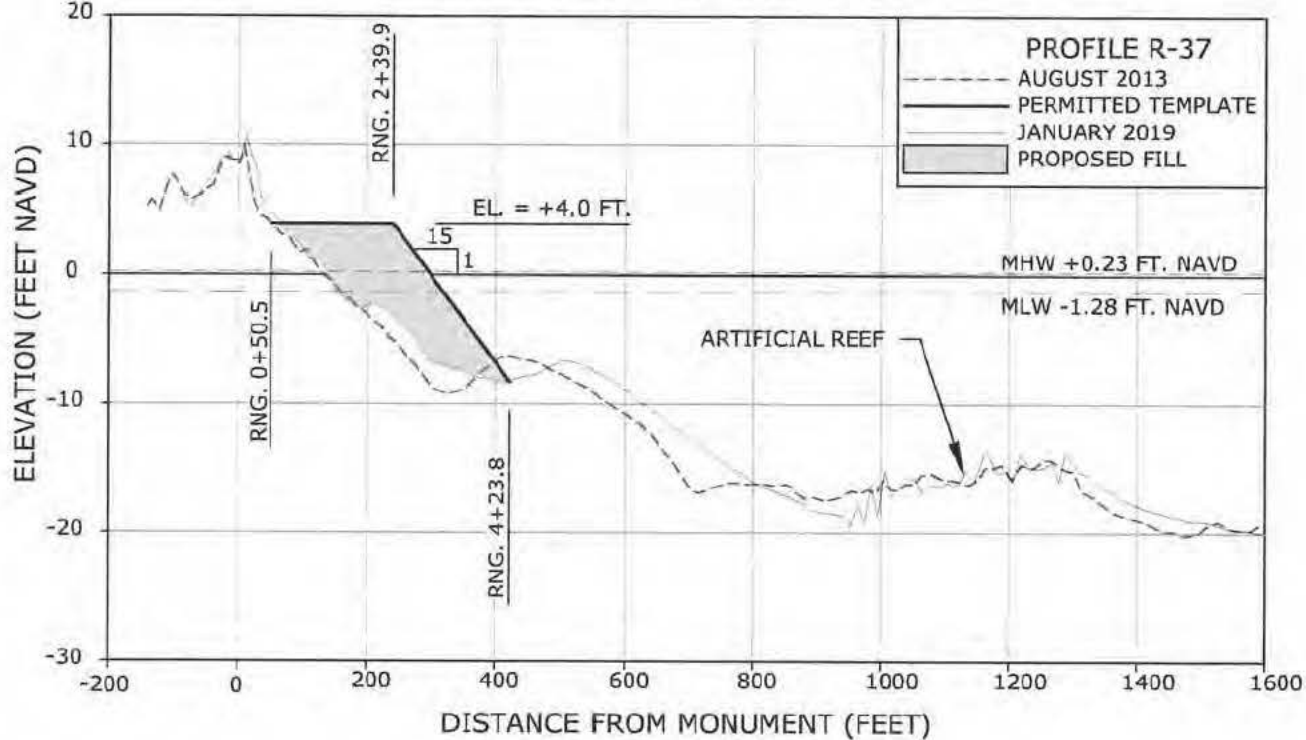
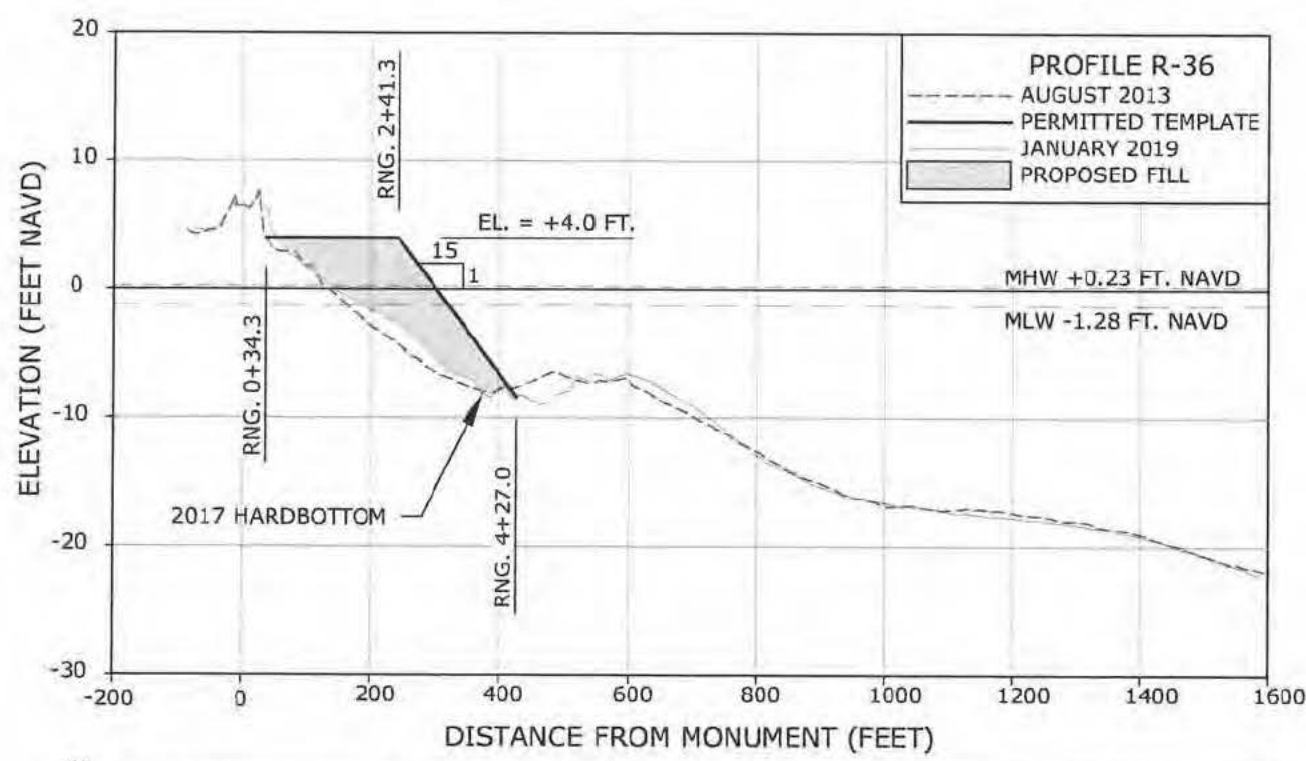
REVISIONS		
DATE	BY	DESCRIPTION

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
CROSS SECTIONS

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
2481 N.W. BOCA RATON BOULEVARD
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FAX: (561) 391-9116
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DATE: 6/20/19
BY: GK
COMM NO.: 1131002940
SHEET: 5

P:\Manatee\16312940585 - WA 1 - Coquina Beach Services\CAD\Permits\16312940585P Coquina XS.dwg - Jul 17, 2019 @ 1:44pm - gary.krystyniak



NOTE:

- 1. MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) ELEVATIONS PUBLISHED IN NAVD 88, FROM LAND BOUNDARY INFORMATION SYSTEM (LABINS) BASED ON EPOCH 1983-2001 TIDE INTERPOLATION POINT IDENTIFICATION NUMBER 200904.

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Michelle Rees
MICHELLE REES, P.E. No. 76209

7/19/19

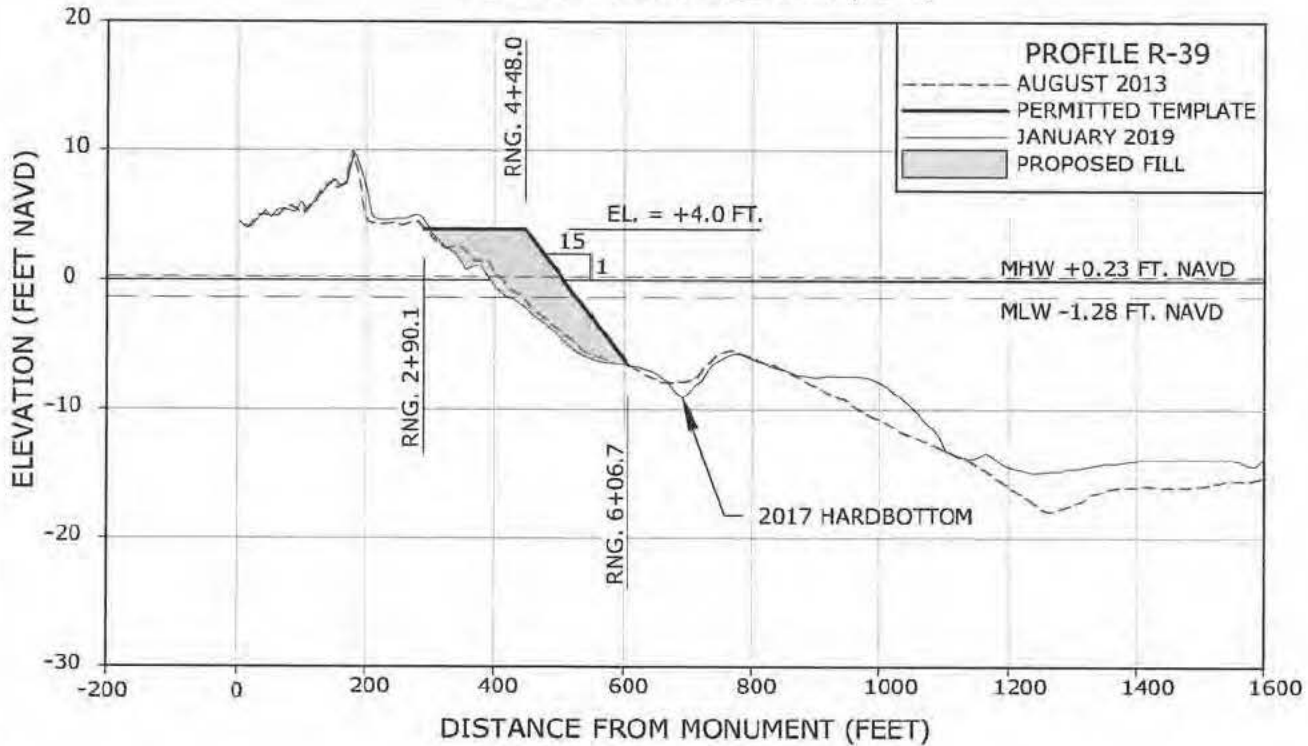
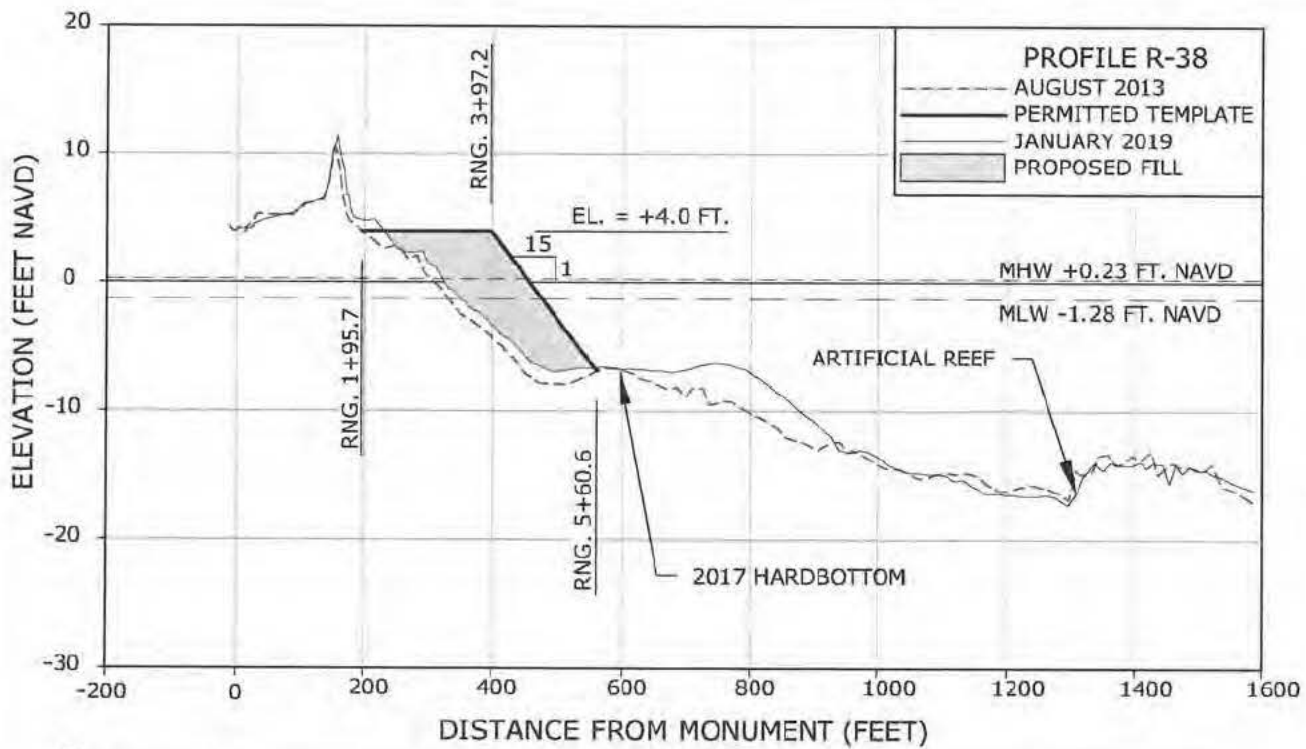
REVISIONS		
DATE	BY	DESCRIPTION

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
CROSS SECTIONS

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
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2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.APTIM.com

DATE: 6/20/19
BY: GK
COMM NO.: 1131002940
SHEET: 6

P:\Manatee\6312940585 - WA 1 - Coquina Beach Services\CAD\Permits\6312940585P Coquina XS.dwg - Jul 16, 2019 @ 11:29am - gary.krysylniak



NOTE:

1. MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) ELEVATIONS PUBLISHED IN NAVD 88, FROM LAND BOUNDARY INFORMATION SYSTEM (LABINS) BASED ON EPOCH 1983-2001 TIDE INTERPOLATION POINT IDENTIFICATION NUMBER 200904

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MICHELLE REES PERMIT # 16209
7/19/19

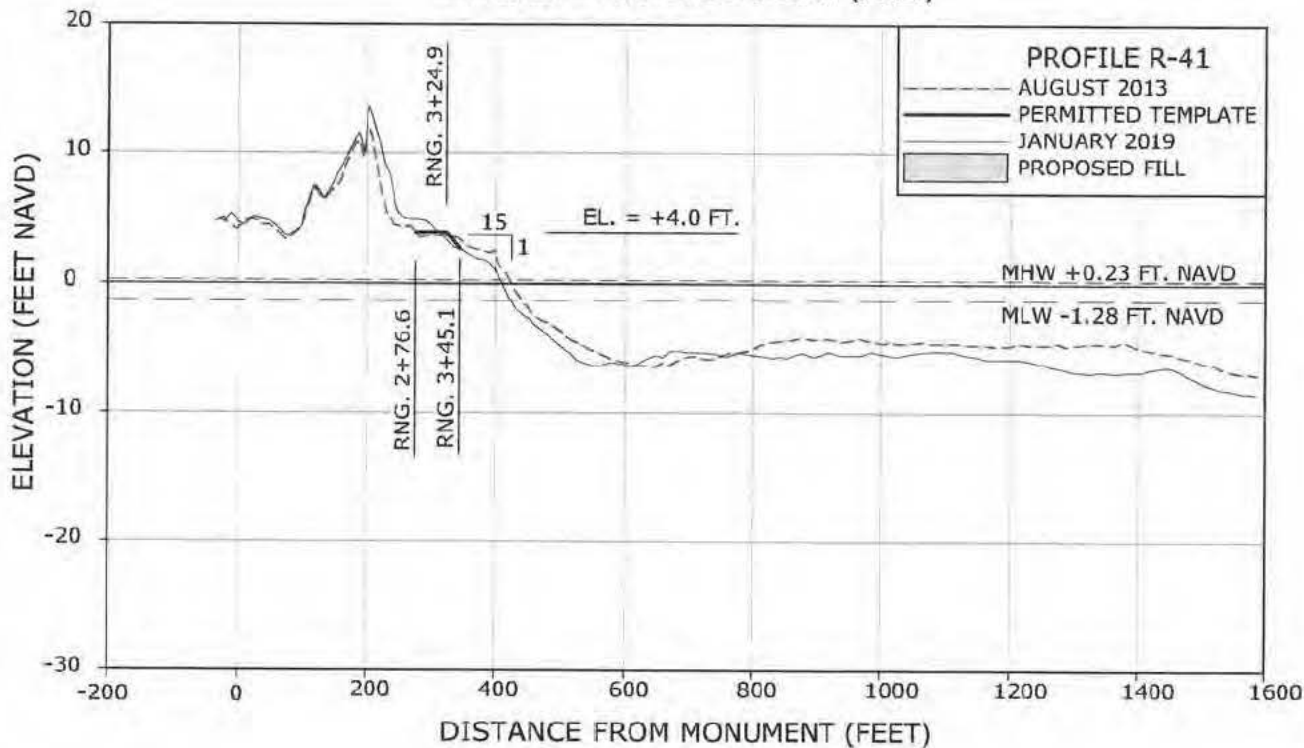
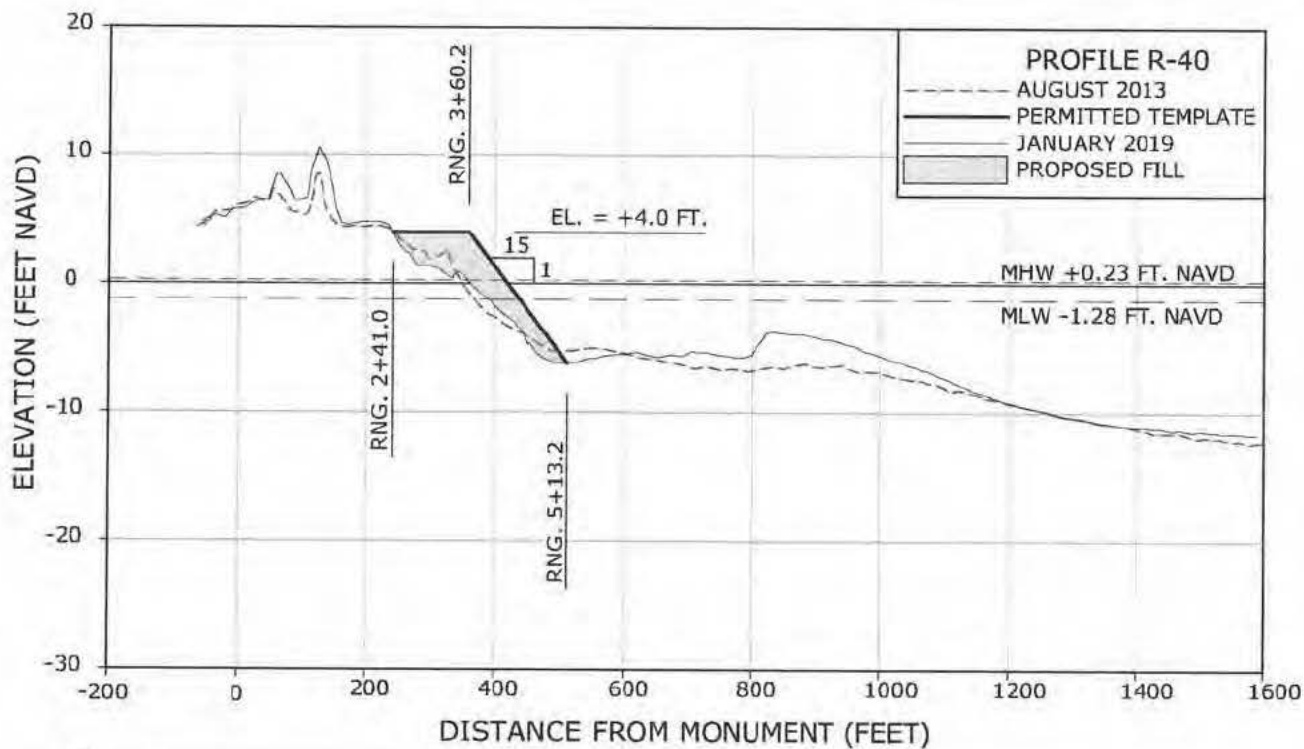
REVISIONS		
DATE	BY	DESCRIPTION

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
CROSS SECTIONS

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
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DATE: 6/20/19
BY: GK
COMM NO.: 1131002940
SHEET: 7

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NOTE:

1. MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) ELEVATIONS PUBLISHED IN NAVD 88, FROM LAND BOUNDARY INFORMATION SYSTEM (LABINS) BASED ON EPOCH 1983-2001 TIDE INTERPOLATION POINT IDENTIFICATION NUMBER 200904.

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MICHELLE REES PFEISTER P.E. NO. 76209

7/19/19

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DATE	BY	DESCRIPTION

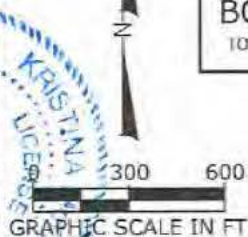
COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
CROSS SECTIONS

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
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2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.APTIM.com

DATE: 6/20/19
BY: GK
COMM NO.: 1131.002940
SHEET: 8

KRISTINA MCCOY, P.E., INC. PG. 18

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**2013 AMI
BORROW AREA I**
TOTAL VOLUME = 747,600 C.Y.

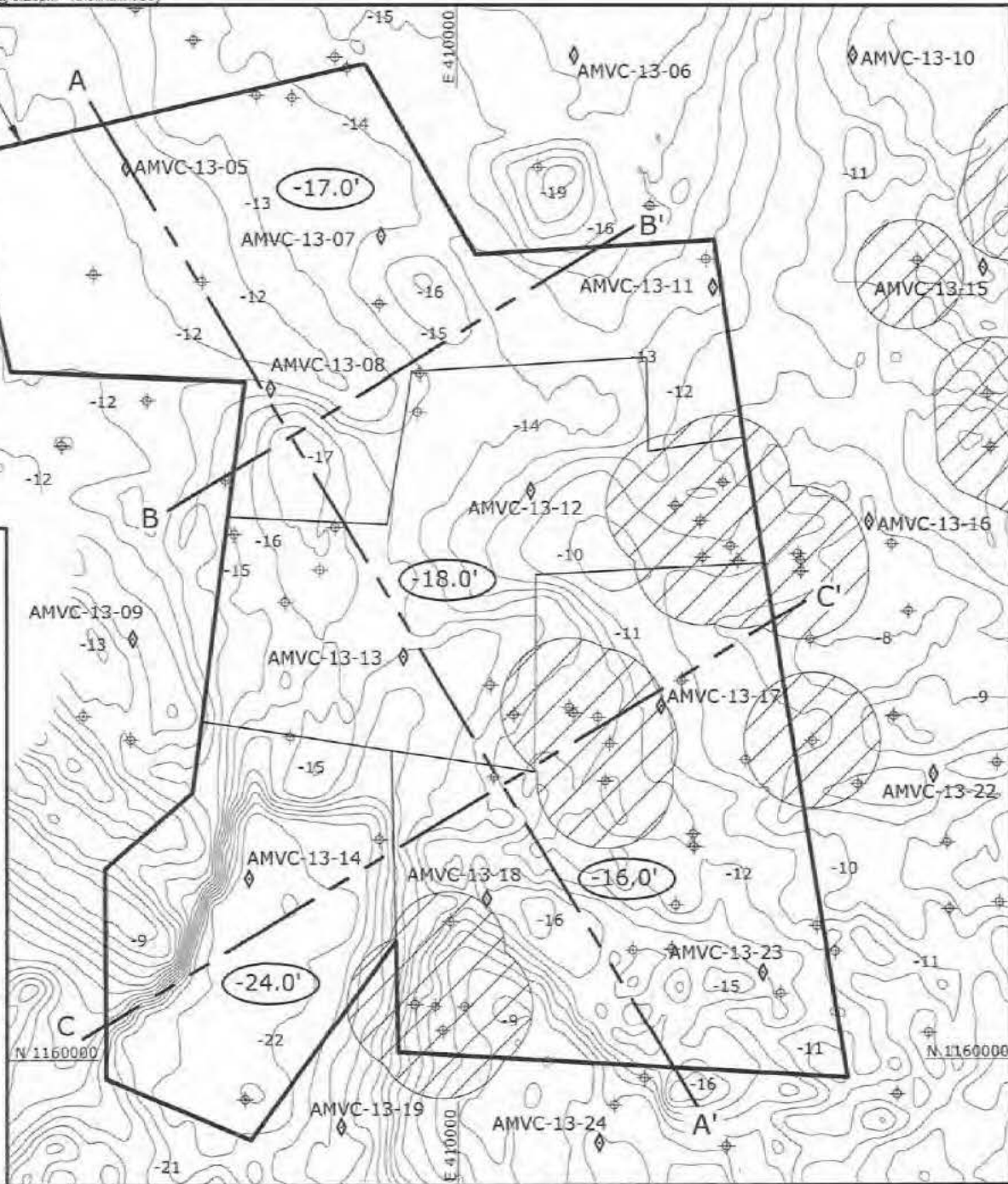
GULF
OF
MEXICO

LEGEND:

- BATHYMETRIC CONTOUR
- CPE 2013 VIBRACORES
- MAXIMUM AFTER DREDGE (AD) ELEVATION
- COMBINED TAR/USACE 2012/2013 CULTURAL RESOURCE BUFFERS
- TAR 2012 MAGNETIC ANOMALIES

NOTES:

1. COORDINATES SHOWN ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 1983.
2. ELEVATIONS SHOWN ARE IN FEET BASED ON NAVD88, GEOID 2009.
3. DATE OF BATHYMETRIC SURVEY IS JANUARY, 2019 AND CONDUCTED BY APTIM.
4. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN ARE THE MAXIMUM ELEVATIONS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
5. THE CONTRACTOR MAY DISTURB UP TO 2 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT.



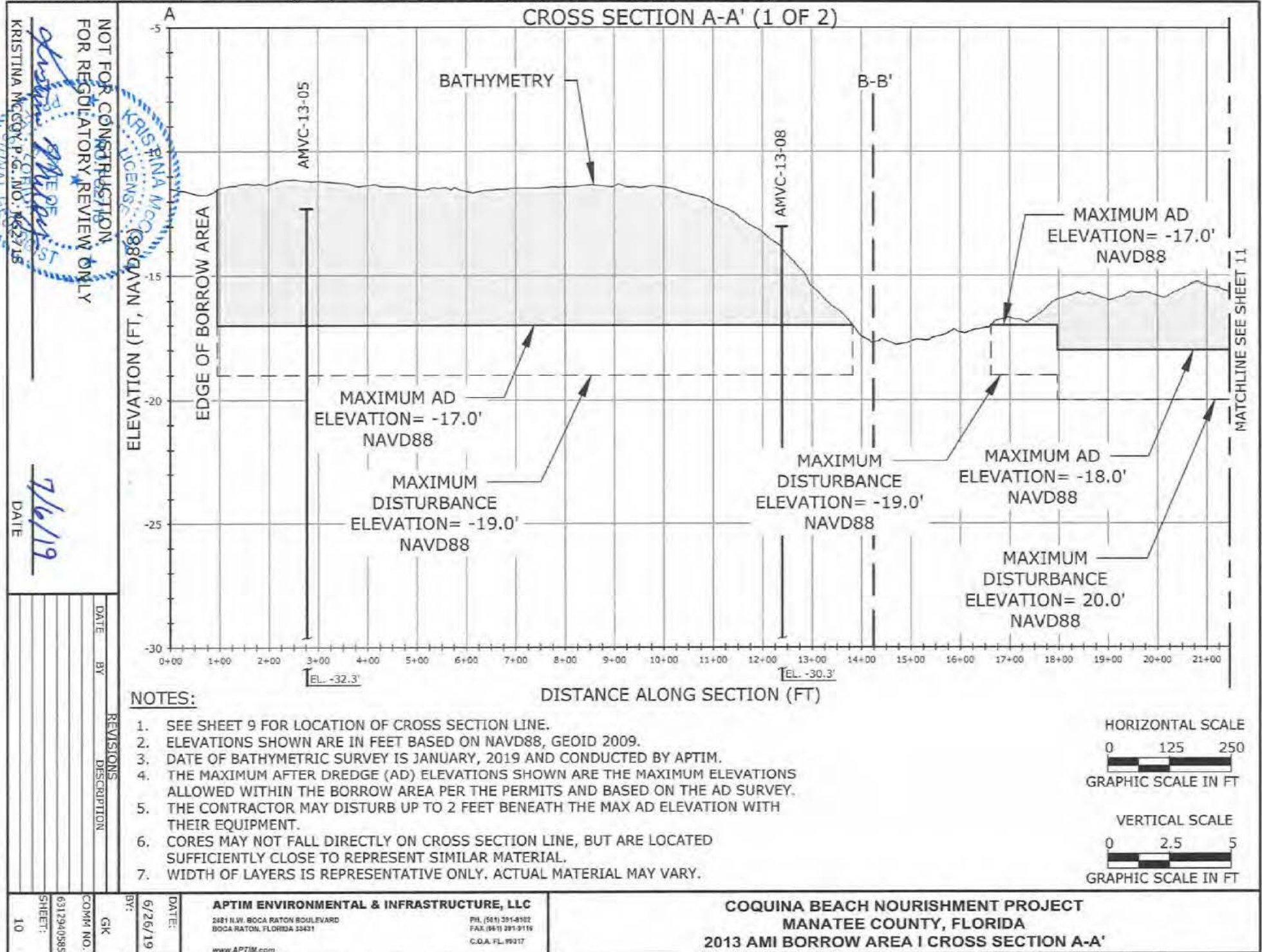
DATE	BY	REVISIONS	DESCRIPTION

DATE: 6/26/19
BY: GK

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
2401 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH: (561) 381-8102
FAX: (561) 381-0116
C.O.A. FL. #9317
www.APTIM.com

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
2013 AMI BORROW AREA I PLAN VIEW

SHEET: 9
COM NO.: 6312940585



DATE _____

DATE 7/6/19

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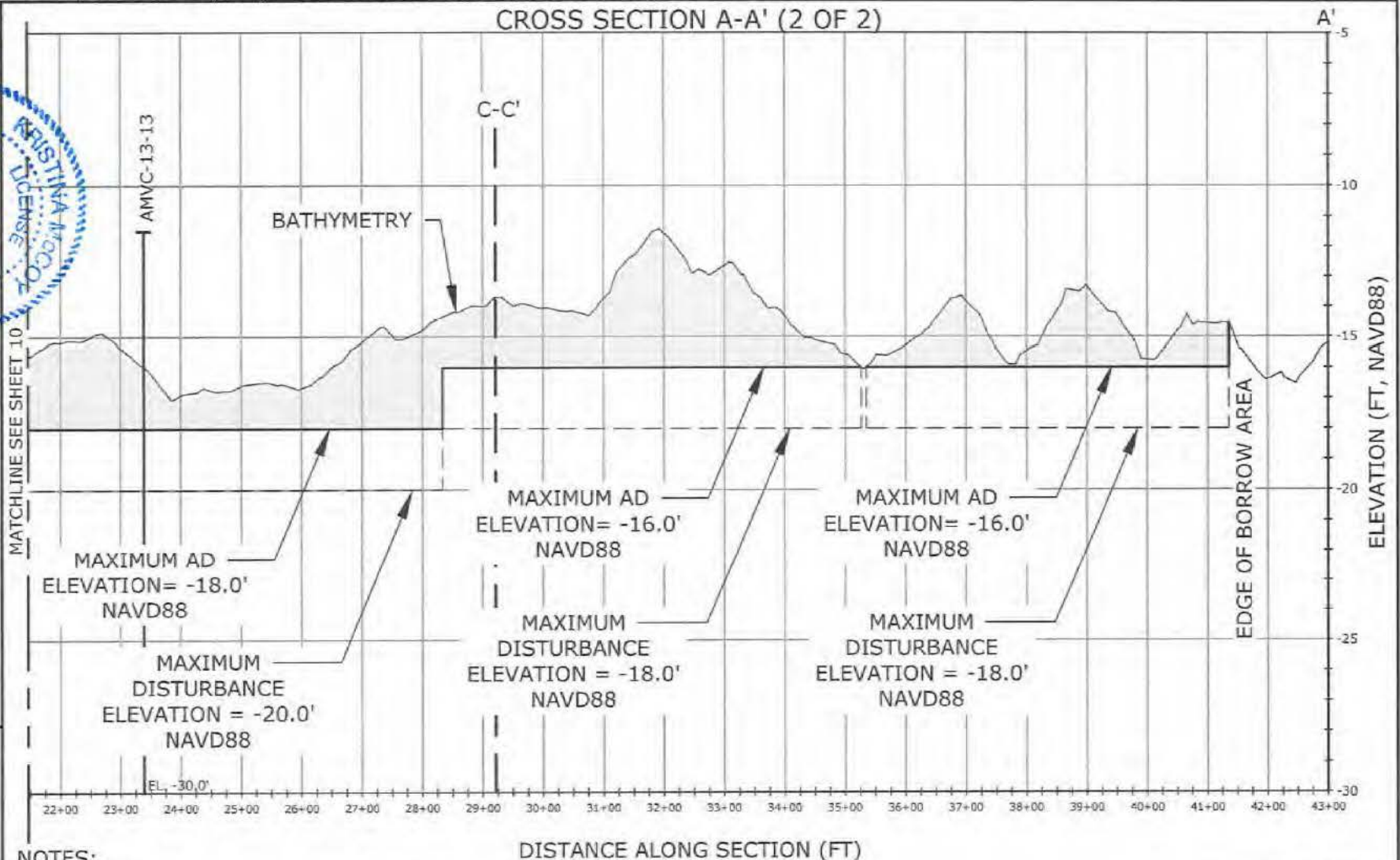
1. SEE SHEET 9 FOR LOCATION OF CROSS SECTION LINE.
2. ELEVATIONS SHOWN ARE IN FEET BASED ON NAVD88, GEOID 2009.
3. DATE OF BATHYMETRIC SURVEY IS JANUARY, 2019 AND CONDUCTED BY APTIM.
4. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN ARE THE MAXIMUM ELEVATIONS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
5. THE CONTRACTOR MAY DISTURB UP TO 2 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT.
6. CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
7. WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.

6/26/19
BY:

DATE:

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
1481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH. (561) 381-8100
FAX (561) 381-8118
C.O.A. FL. #2317
www.APTIM.com

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
2013 AMI BORROW AREA I CROSS SECTION A-A'

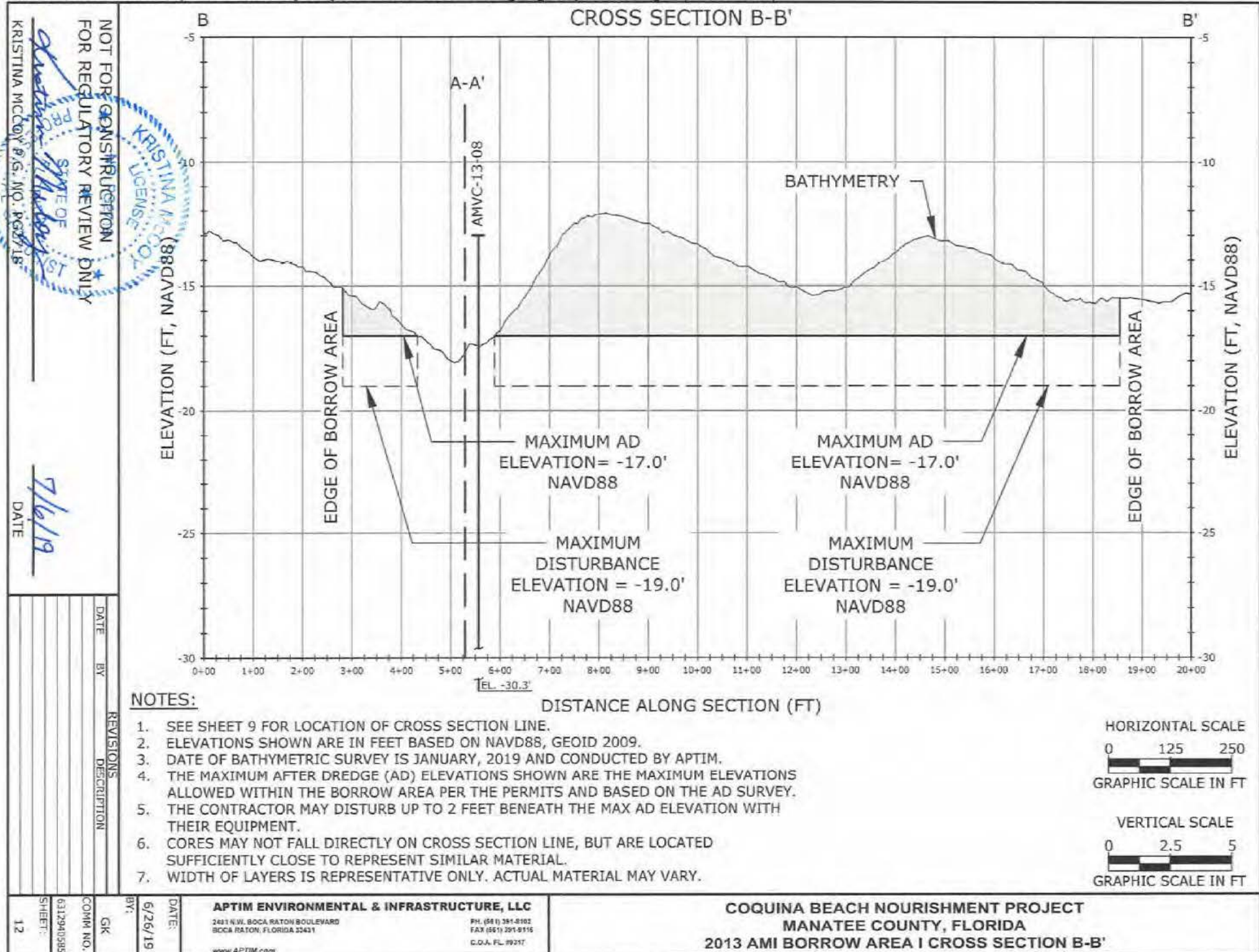


HORIZONTAL SCALE
0 125 250
GRAPHIC SCALE IN FT

VERTICAL SCALE

0 2.5 5

GRAPHIC SCALE IN FT

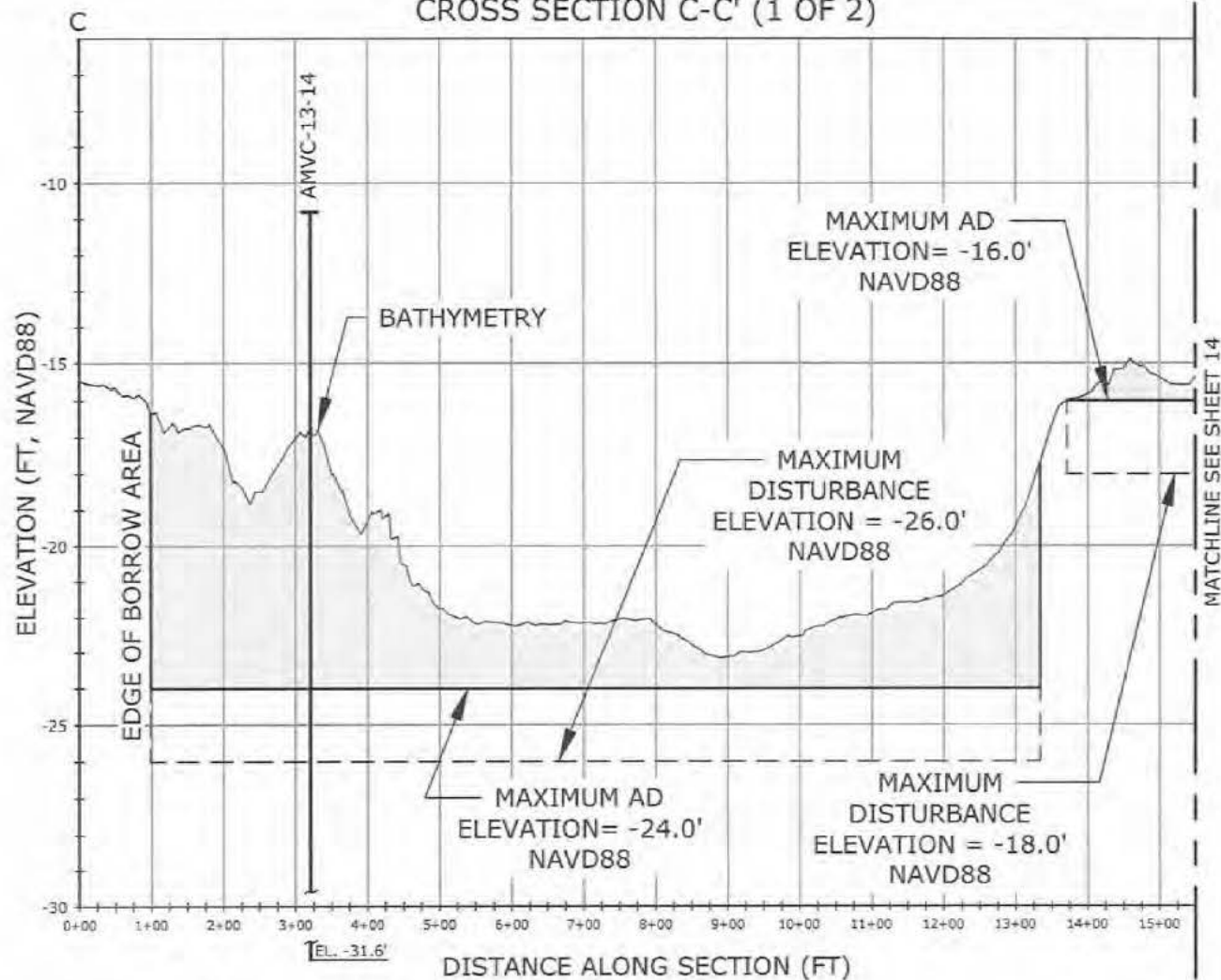


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KRISTINA MCCOY, P.G., NO. PG2718

DATE

CROSS SECTION C-C' (1 OF 2)



NOTES:

1. SEE SHEET 9 FOR LOCATION OF CROSS SECTION LINE.
2. ELEVATIONS SHOWN ARE IN FEET BASED ON NAVD88, GEOID 2009.
3. DATE OF BATHYMETRIC SURVEY IS JANUARY, 2019 AND CONDUCTED BY APTIM.
4. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN ARE THE MAXIMUM ELEVATIONS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
5. THE CONTRACTOR MAY DISTURB UP TO 2 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT.
6. CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
7. WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.

HORIZONTAL SCALE
0 125 250
GRAPHIC SCALE IN FT

VERTICAL SCALE
0 2.5 5
GRAPHIC SCALE IN FT

DATE BY REVISIONS DESCRIPTION

GK

DATE: 6/26/19

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
2481 N.W. BOCA RATON BOULEVARD
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C.O.A. FL 19317
www.APTIM.com

COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
2013 AMI BORROW AREA I CROSS SECTION C-C'

13

6312940585

SHEET

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

KRISTINA MCCOY, P.E., M.S.C.E., S.E.
REGISTERED PROFESSIONAL ENGINEER
STATE OF FLORIDA
LICENSE NO. 12518

DATE

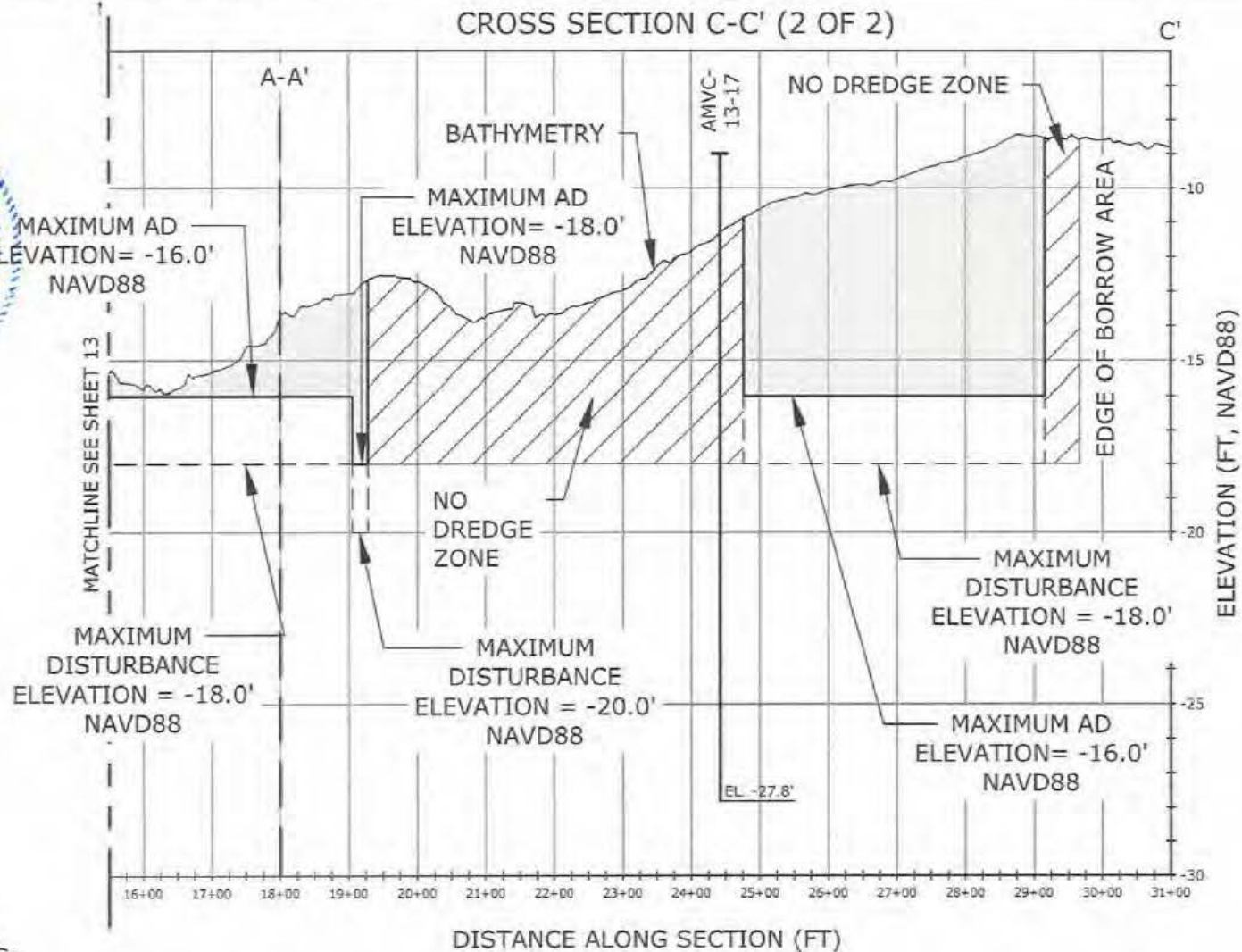
7/6/19

DATE	BY	REVISIONS
		DESCRIPTION

COM NO.: 6312940585
SHEET: 14

NOTES:

1. SEE SHEET 9 FOR LOCATION OF CROSS SECTION LINE.
2. ELEVATIONS SHOWN ARE IN FEET BASED ON NAVD88, GEOID 2009.
3. DATE OF BATHYMETRIC SURVEY IS JANUARY, 2019 AND CONDUCTED BY APTIM.
4. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN ARE THE MAXIMUM ELEVATIONS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
5. THE CONTRACTOR MAY DISTURB UP TO 2 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT.
6. CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
7. WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.

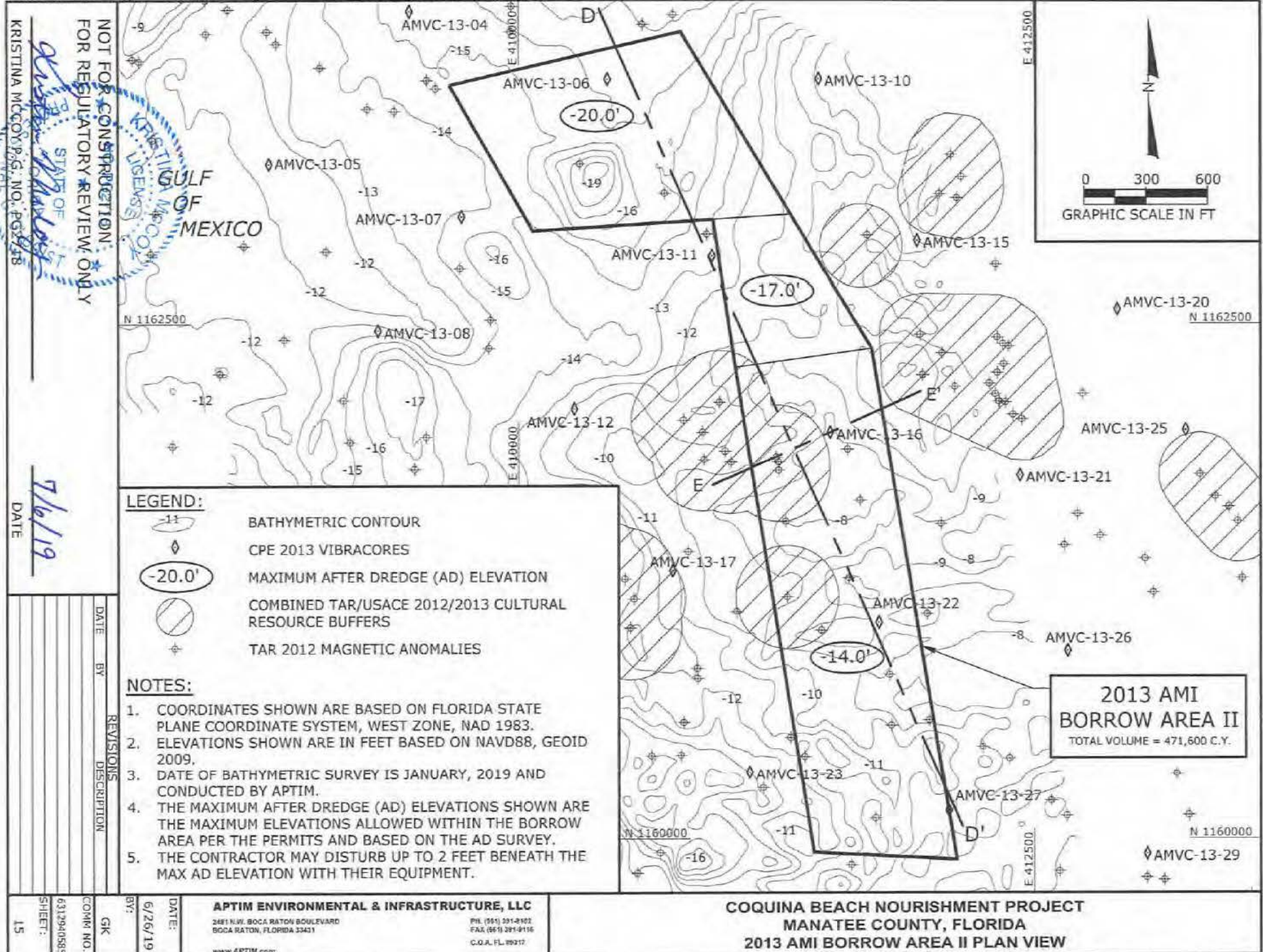


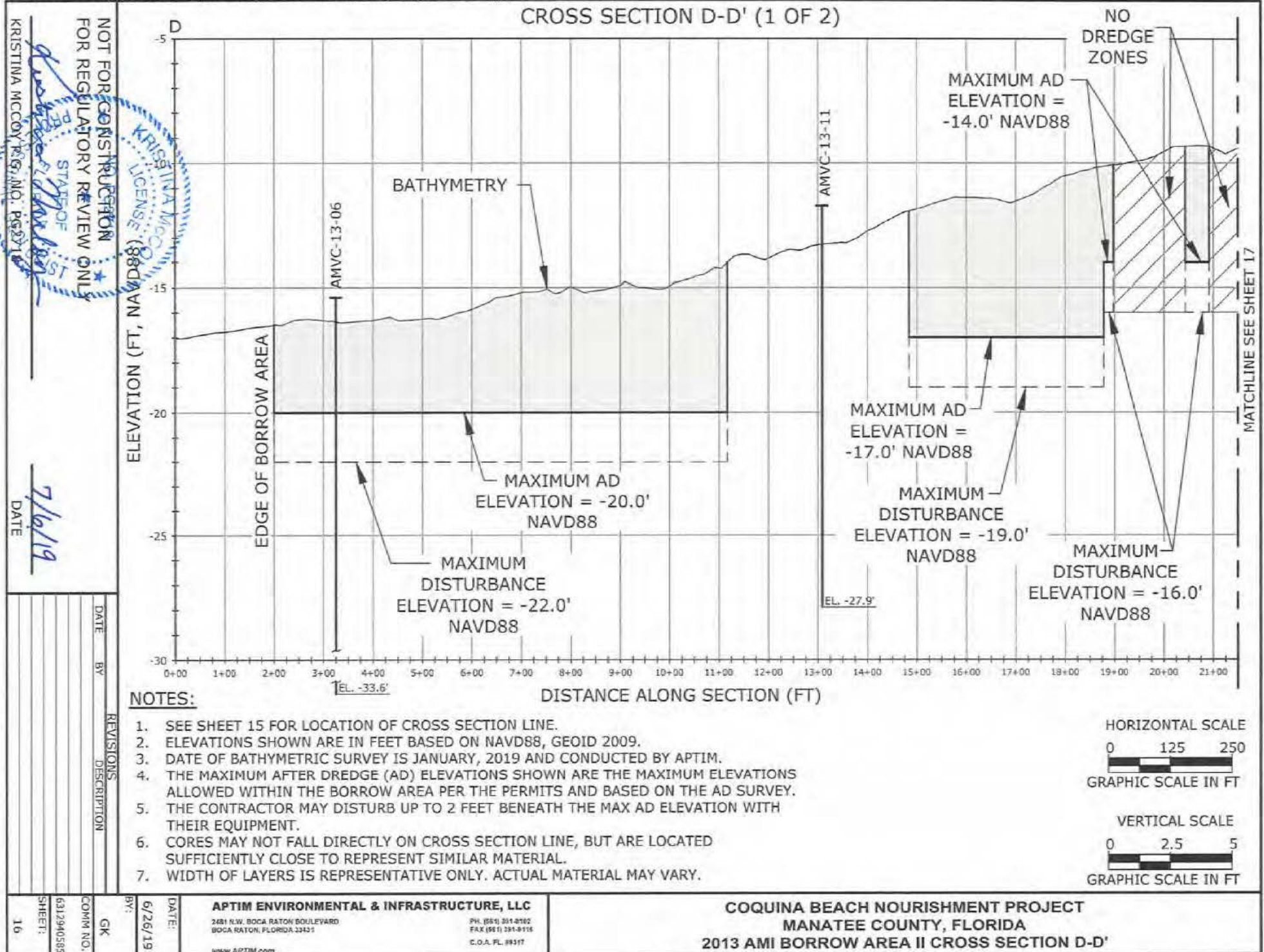
HORIZONTAL SCALE
0 125 250
GRAPHIC SCALE IN FT

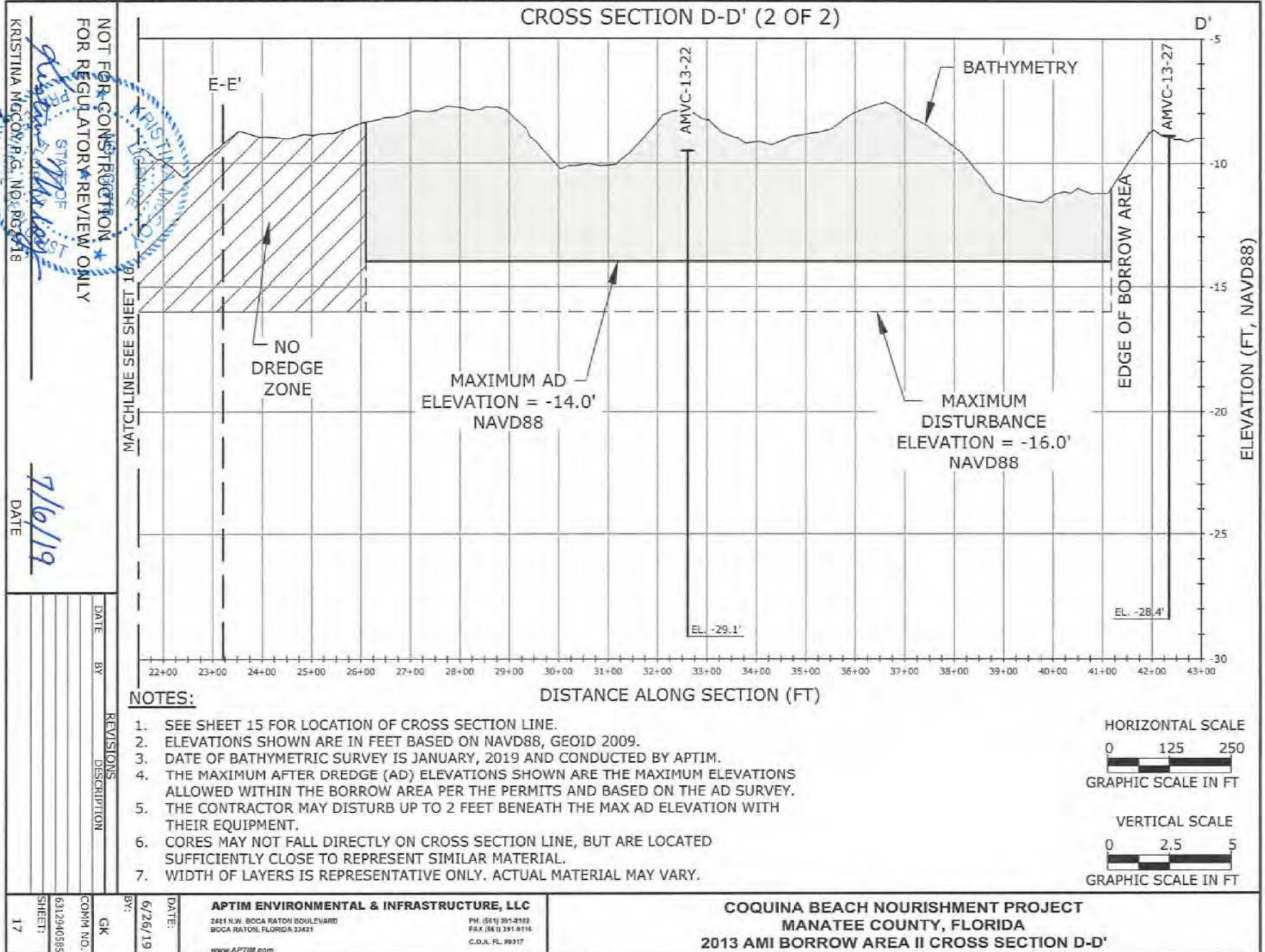
VERTICAL SCALE
0 2.5 5
GRAPHIC SCALE IN FT

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
2481 N.W. BOCA RATON BOULEVARD
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COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
2013 AMI BORROW AREA I CROSS SECTION C-C'







NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

KRISTINA MCCOY P.G. NO. PG2718

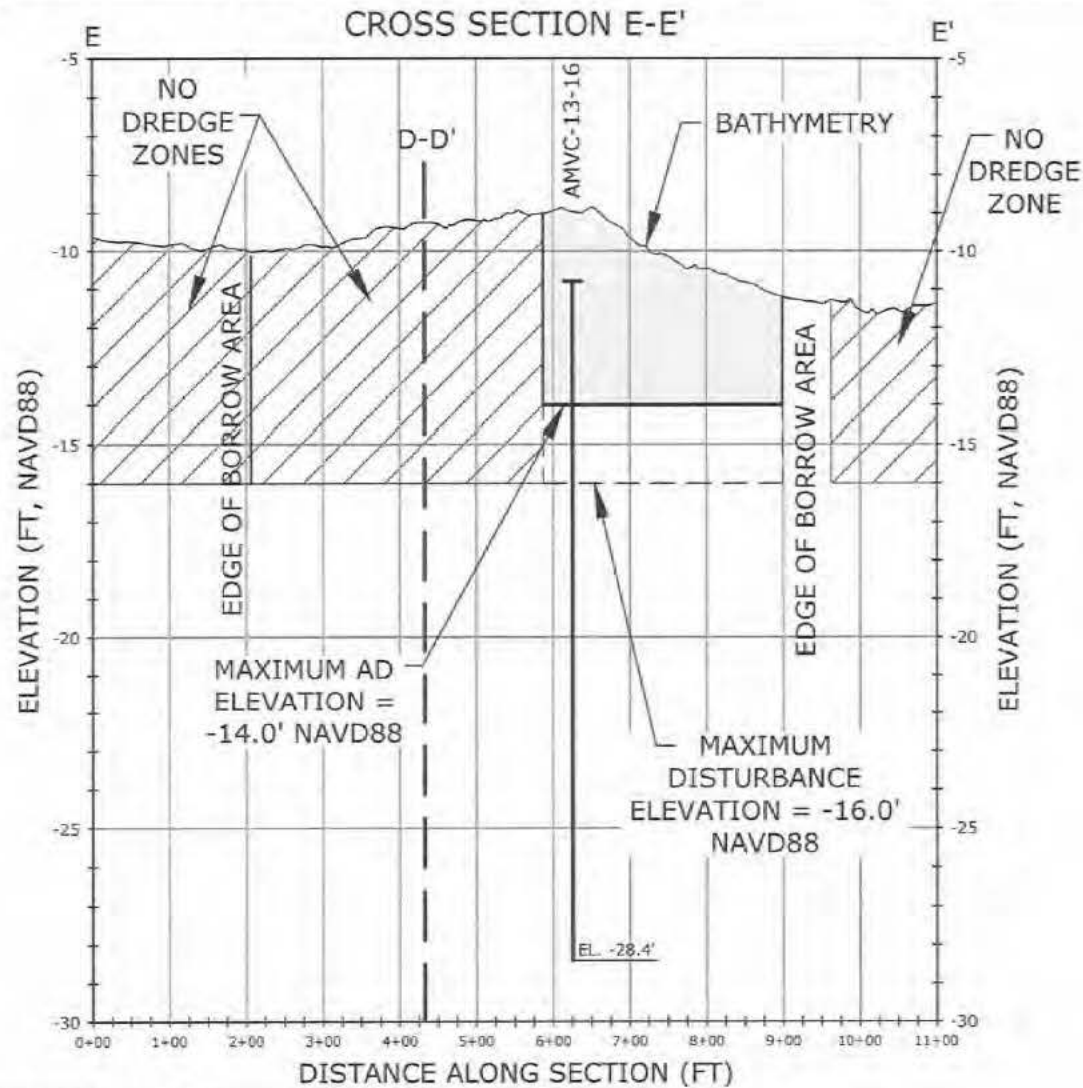
DATE

7/6/19

REVISIONS
DATE BY DESCRIPTION

NOTES:

1. SEE SHEET 15 FOR LOCATION OF CROSS SECTION LINE.
2. ELEVATIONS SHOWN ARE IN FEET BASED ON NAVD88, GEOID 2009.
3. DATE OF BATHYMETRIC SURVEY IS JANUARY, 2019 AND CONDUCTED BY APTIM.
4. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN ARE THE MAXIMUM ELEVATIONS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
5. THE CONTRACTOR MAY DISTURB UP TO 2 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT.
6. CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
7. WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.



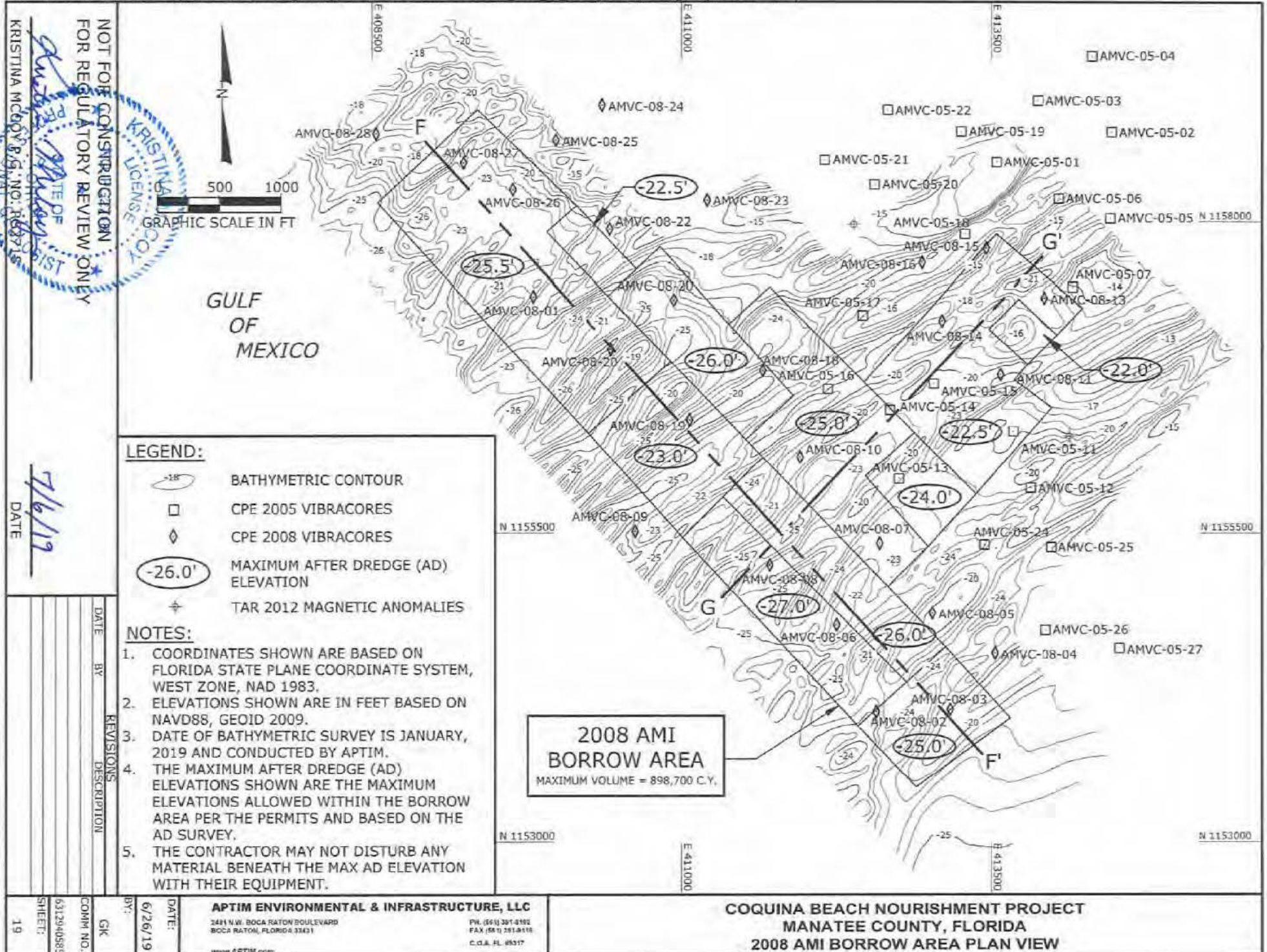
HORIZONTAL SCALE
0 125 250
GRAPHIC SCALE IN FT

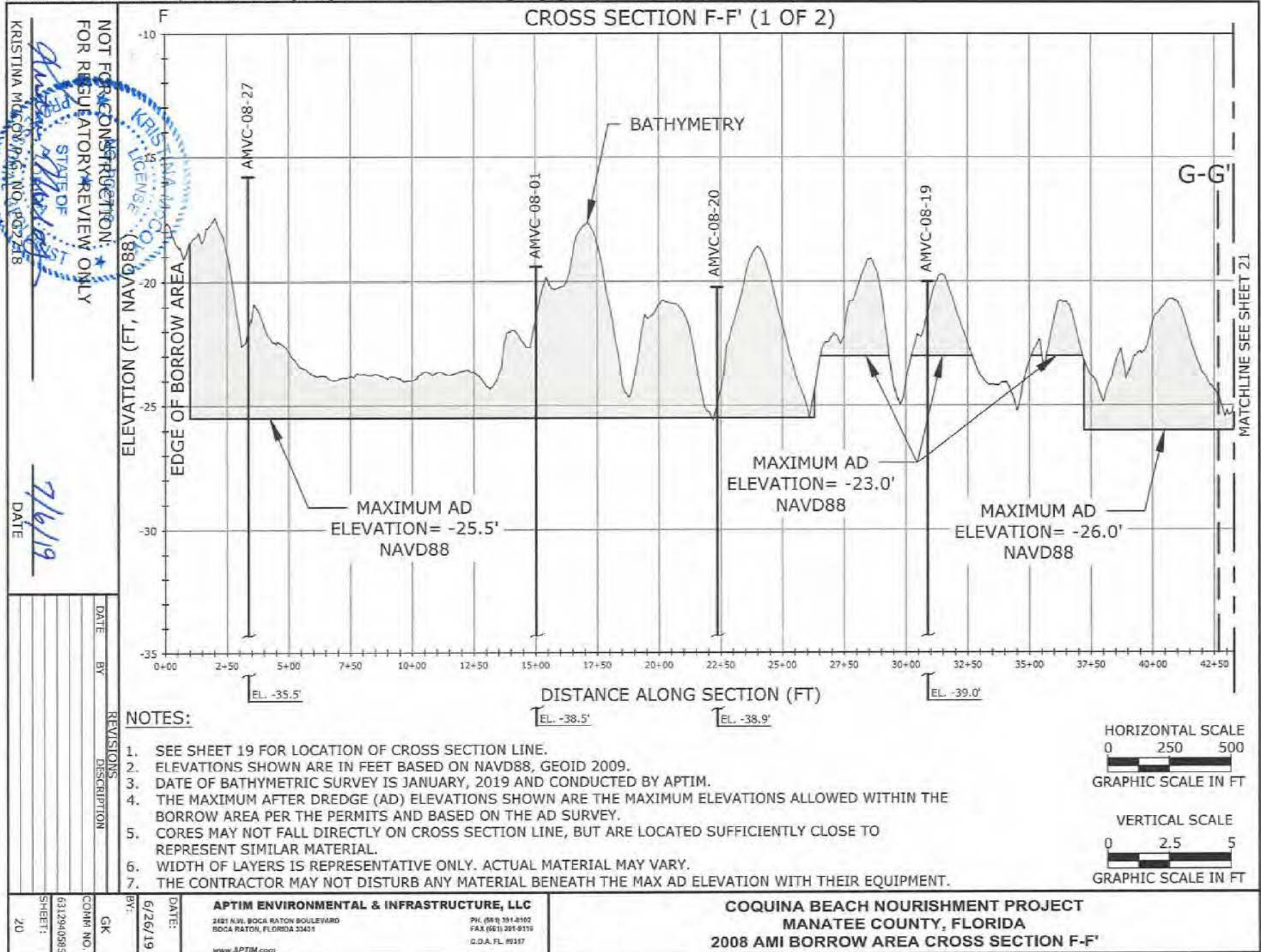
VERTICAL SCALE
0 2.5 5
GRAPHIC SCALE IN FT

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
3451 N.W. BOCA RATON BOULEVARD
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COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
2013 AMI BORROW AREA II CROSS SECTION E-E'

DATE: 6/26/19
BY:
GK
SHEET: 18





DATE _____

REVISIONS	
DATE	DESCRIPTION

GK

NOTES:

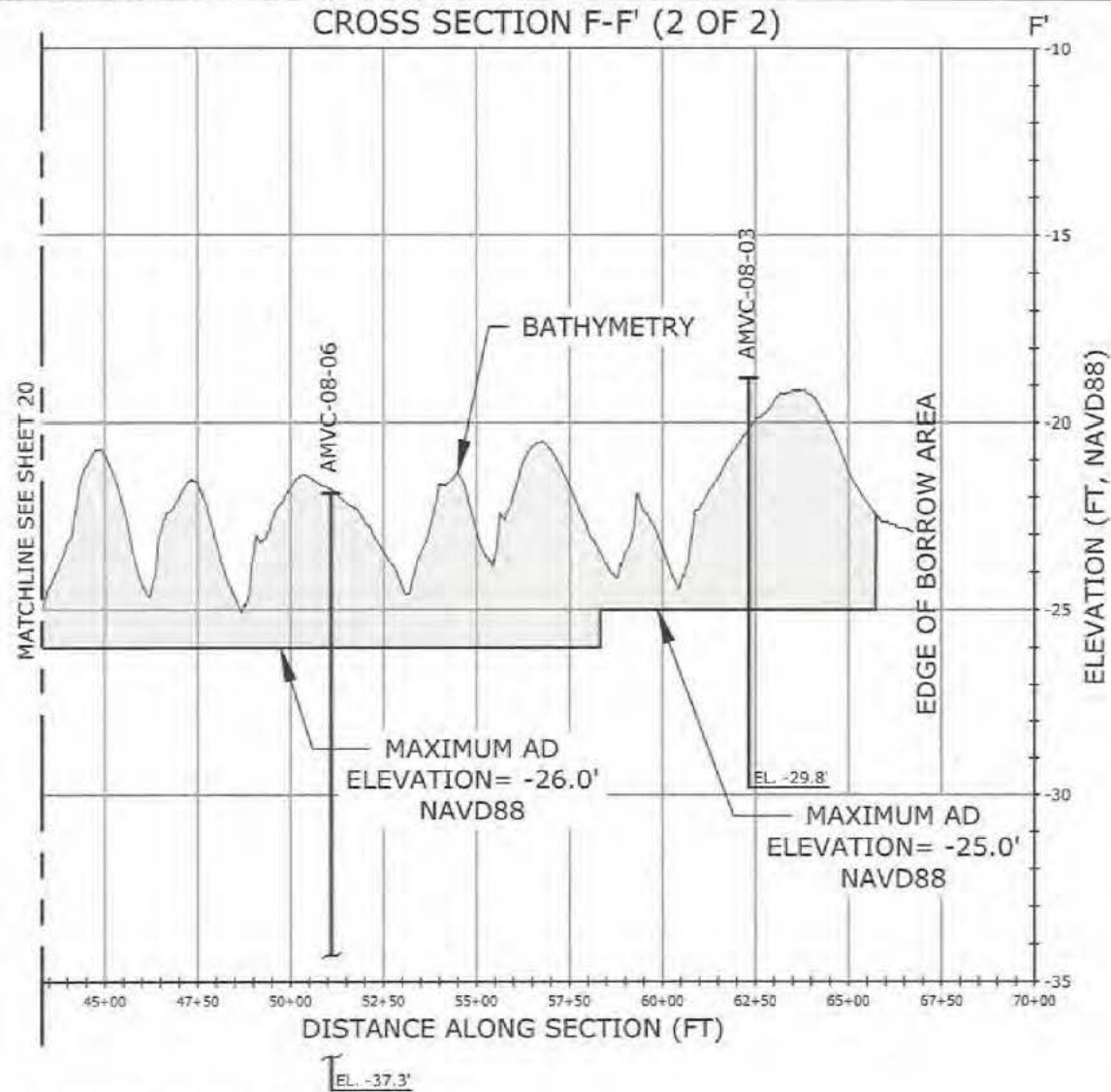
1. SEE SHEET 19 FOR LOCATION OF CROSS SECTION LINE.
2. ELEVATIONS SHOWN ARE IN FEET BASED ON NAVD88, GEOID 2009.
3. DATE OF BATHYMETRIC SURVEY IS JANUARY, 2019 AND CONDUCTED BY APTIM.
4. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN ARE THE MAXIMUM ELEVATIONS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
5. CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
6. WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
7. THE CONTRACTOR MAY NOT DISTURB ANY MATERIAL BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT.

6/26/19
BY:

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
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COQUINA BEACH NOURISHMENT PROJECT
MANATEE COUNTY, FLORIDA
2008 AMI BORROW AREA CROSS SECTION F-F'



HORIZONTAL SCALE
0 250 500
GRAPHIC SCALE IN FT

VERTICAL SCALE

0 2.5 5

GRAPHIC SCALE IN FT

