Appendix A

Project Drawings

Appendix A-1

USACE Permit Drawings

SAFETY ON THIS JOB
DEPENDS ON YOU

PALM BEACH HARBOR, FLORIDA

PLANS FOR

MAINTENANCE DREDGING

33-FOOT PROJECT

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

2006

TO ACCOMPANY INVITATION
NO. W912EP-06-B-0015

VE "INCREASE PROFIT -- SUBMIT VECP'S"

D. O. FILE NO. 16-38,523

114293-PBH06-CN-0-01.DGN

PALM BEACH HARBOR, FLORIDA

PLANS FOR

MAINTENANCE DREDGING

33-FOOT PROJECT

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

2006

INDEX TO DRAWINGS

DWG NO	TITLE
GENERAL	
G 001	INDEX
G 101	LOCATION, VICINITY MAP, LEGEND, AND GENERAL NOTES
G 102	CONTROL DATA
DISPOSAL	
C 103	DISPOSAL PLAN
C 104	DISPOSAL PLAN
C 301	BEACH DISPOSAL SECTIONS
C 302	BEACH DISPOSAL SECTIONS

DWG NO	TITLE

DWG NO	TITLE

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Inv. No. W912EP-06-B-0015

D.O.FILE NO. 16-38,523
Dated: APRIL 2006

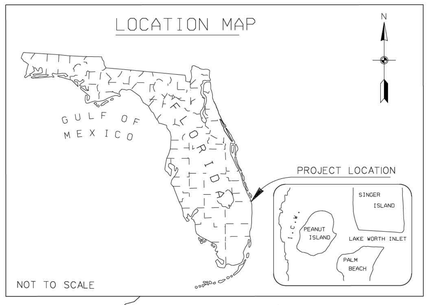
Designed by: A.C.K.
Dwn by: A.C.K.
Ckd by: J.W.B.

File name: 114293-PBH06-CN 0 01.DGN
Reference files: BKDRANGS_E11.DGN

PALM BEACH HARBOR, FLORIDA
MAINTENANCE DREDGING
33-FOOT PROJECT
INDEX TO DRAWINGS

Scale:

DRAWING NO.
G 001



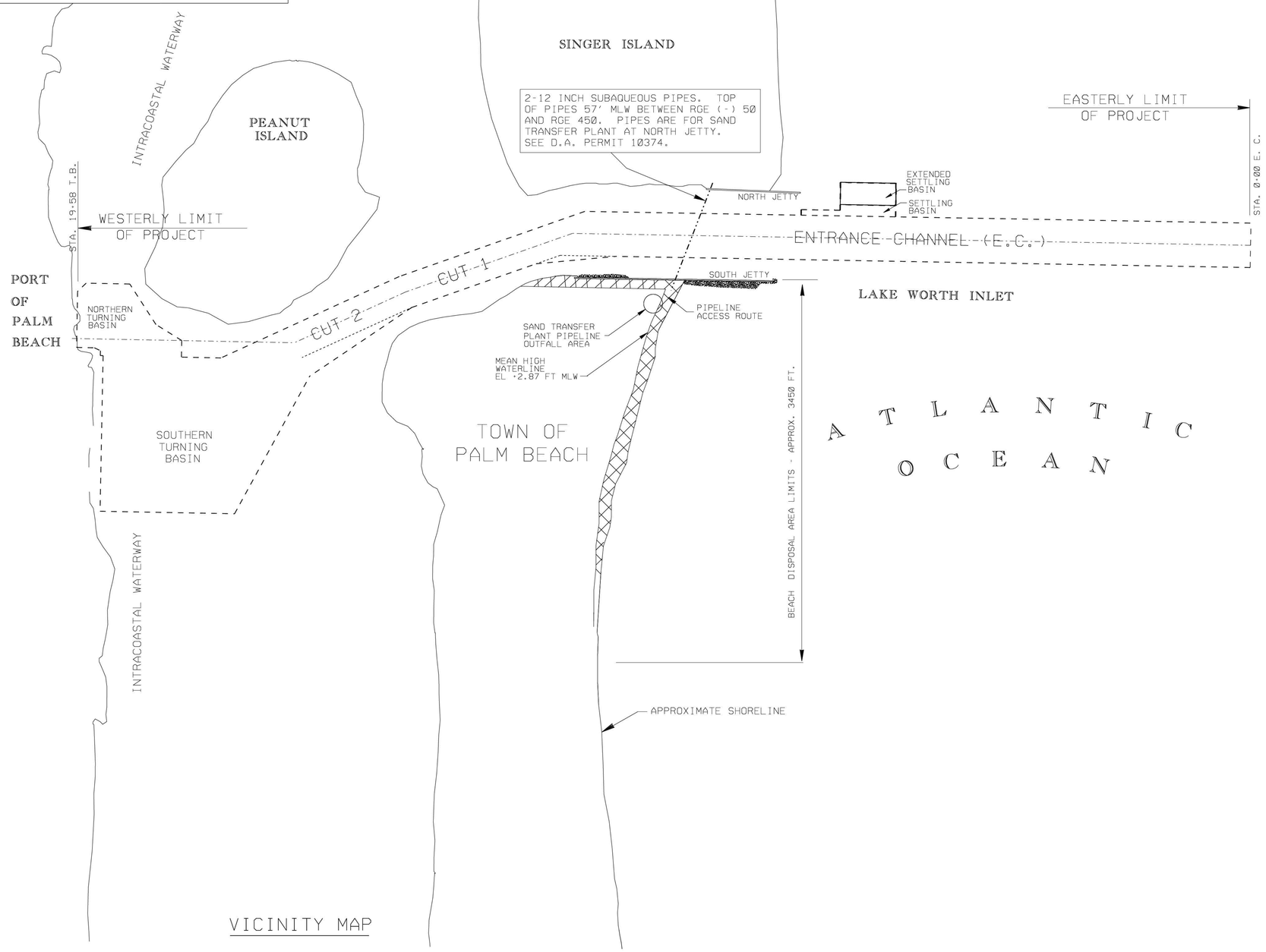
GENERAL NOTES:

1. NO RAILROAD RIGHTS-OF-WAY SHALL BE ENTERED UPON IN THE PROSECUTION OF ANY AND ALL WORK UNDER THIS CONTRACT WITHOUT THE CONTRACTOR FIRST OBTAINING THE WRITTEN APPROVAL OF A RESPONSIBLE OFFICIAL OF THE RAILROAD AND PRESENTING IT TO THE CONTRACTING OFFICER FOR APPROVAL. PUBLIC RAILROAD CROSSINGS, FREIGHT DEPOTS, ETC., ENTERED FOR THE PURPOSES OF RECEIVING OR SHIPPING GOODS AND MATERIAL OR RAILROAD LANDS WITHIN THE CONSTRUCTION LANDS SHOWN IN THE CONTRACT DRAWINGS, ARE EXEMPT FROM THE FOREGOING PROVISIONS.

2. SEE DWG. NO. G 102 FOR CONTROL DATA.

BENCHMARK	NGVD ELEV. (FT)
A-310	4.75

LEGEND	
	LIGHTED BEACON
	GREEN DAYBEACON
	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
C	CAN BUOY
N	NUN BUOY
	TIDE STAFF



VICINITY MAP

LEGEND:

- PIPELINE EASEMENT AND STAGING AREA
- DNR MONUMENT
- CONTROL MONUMENT/BENCHMARK
- UTILITY CROSSING

GRAPHIC SCALE

400' 0 400' 800'

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No. | Symbol | Zone | Description

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Inv. No. W912EP-06-B-0015
D.O.FILE NO. 16-38,523
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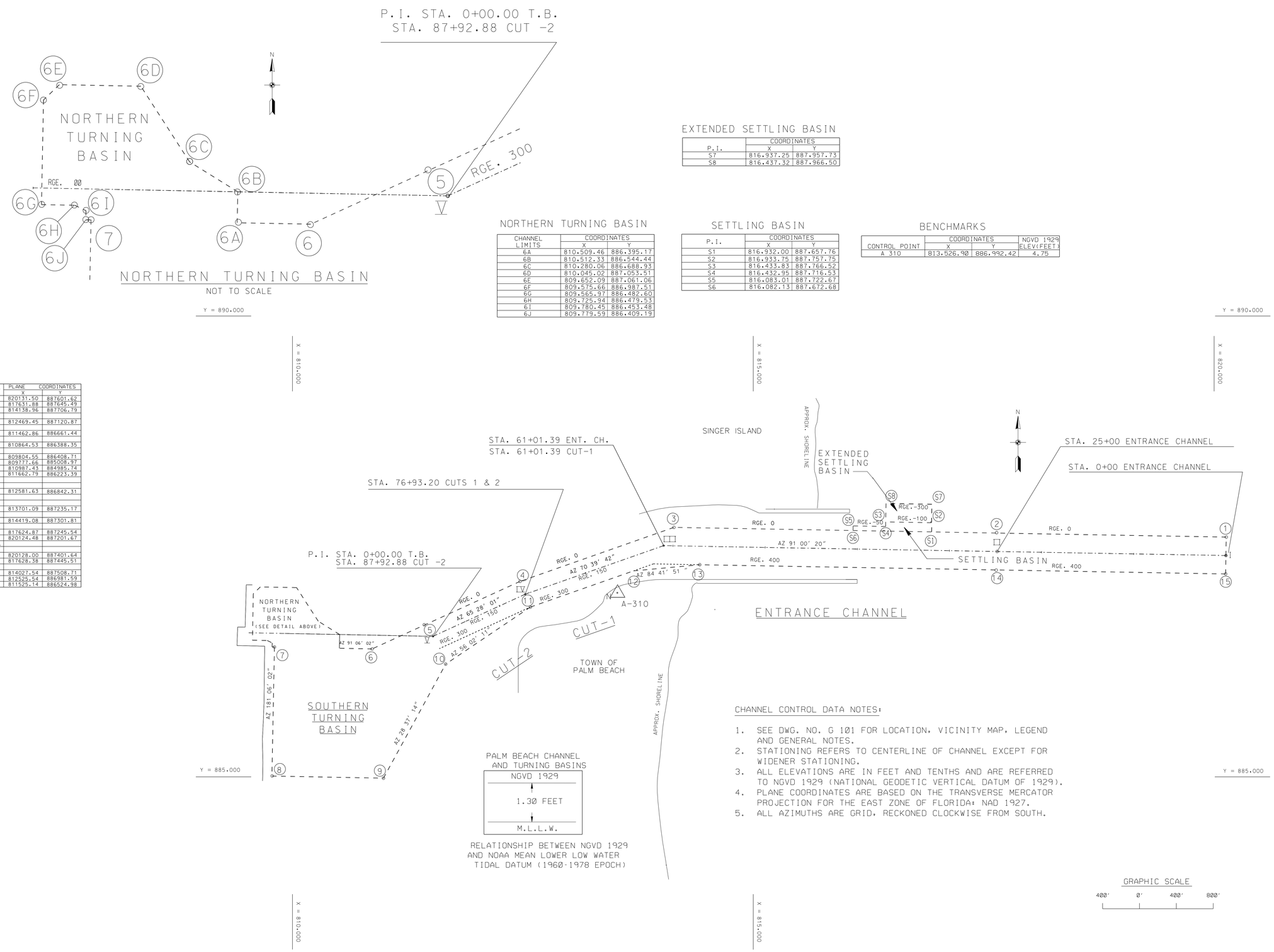
Designed by: A.C.K.
Dwn by: A.C.K.
Ckd by: J.W.B.

File name: 114293-PBH06-CN 101.DGN
Reference files: BKGRANS_L01.DGN PALMBCH.DGN

PALM BEACH HARBOR, FLORIDA
MAINTENANCE DREDGING
33-FOOT PROJECT
LOCATION, VICINITY MAP, LEGEND, AND GENERAL NOTES

Scale:

DRAWING NO.
G 101



EXTENDED SETTLING BASIN

P.I.	COORDINATES X	COORDINATES Y
S7	816.937.25	887.957.73
S8	816.437.32	887.966.50

NORTHERN TURNING BASIN

CHANNEL LIMITS	COORDINATES X	COORDINATES Y
6A	810.509.46	886.395.17
6B	810.512.33	886.544.44
6C	810.280.06	886.688.93
6D	810.045.02	887.053.51
6E	809.652.09	887.061.06
6F	809.575.66	886.987.51
6G	809.565.97	886.482.60
6H	809.725.94	886.479.53
6I	809.780.45	886.453.48
6J	809.779.59	886.409.19

SETTLING BASIN

P.I.	COORDINATES X	COORDINATES Y
S1	816.932.00	887.657.76
S2	816.933.75	887.757.75
S3	816.433.83	887.766.52
S4	816.432.95	887.716.53
S5	816.083.01	887.722.67
S6	816.082.13	887.672.68

BENCHMARKS

CONTROL POINT	COORDINATES X	COORDINATES Y	NGVD 1929 ELEV(FEET)
A 310	813.526.90	886.992.42	4.75

CHANNEL LIMITS	PLANE COORDINATES X	PLANE COORDINATES Y
1	820131.50	887601.62
2	817631.88	887645.49
3	814138.96	887706.79
4	812469.45	887120.87
5	811462.86	886661.44
6	810864.53	886388.35
7	809804.55	886408.71
8	809777.66	885008.97
9	810987.43	884985.74
10	811662.79	886223.39
11	812581.63	886842.31
12	813701.09	887235.17
13	814419.08	887301.81
14	817624.87	887245.54
15	820124.48	887201.67
CHANNEL C/L		
I	820128.00	887401.64
II	817628.38	887445.51
III	814027.54	887508.71
IV	812525.54	886981.59
V	811525.14	886524.98

PALM BEACH CHANNEL AND TURNING BASINS

NGVD 1929

1.30 FEET

M.L.L.W.

RELATIONSHIP BETWEEN NGVD 1929 AND NOAA MEAN LOWER LOW WATER TIDAL DATUM (1960-1978 EPOCH)

CHANNEL CONTROL DATA NOTES:

1. SEE DWG. NO. G 101 FOR LOCATION, VICINITY MAP, LEGEND AND GENERAL NOTES.
2. STATIONING REFERS TO CENTERLINE OF CHANNEL EXCEPT FOR WIDENER STATIONING.
3. ALL ELEVATIONS ARE IN FEET AND TENTHS AND ARE REFERRED TO NGVD 1929 (NATIONAL GEODETIC VERTICAL DATUM OF 1929).
4. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA: NAD 1927.
5. ALL AZIMUTHS ARE GRID, RECKONED CLOCKWISE FROM SOUTH.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Inv. No. W912EP-06-B-0015

D.O.FILE NO. 16-38.523
Dated: APRIL 2006

Designed by: A.C.K.
Dwn by: A.C.K.
Ckd by: J.W.B.

File name: 114293-PBH06-CN 102.DGN
Reference files: BKDRANSI_E11.DGN

PALM BEACH HARBOR, FLORIDA

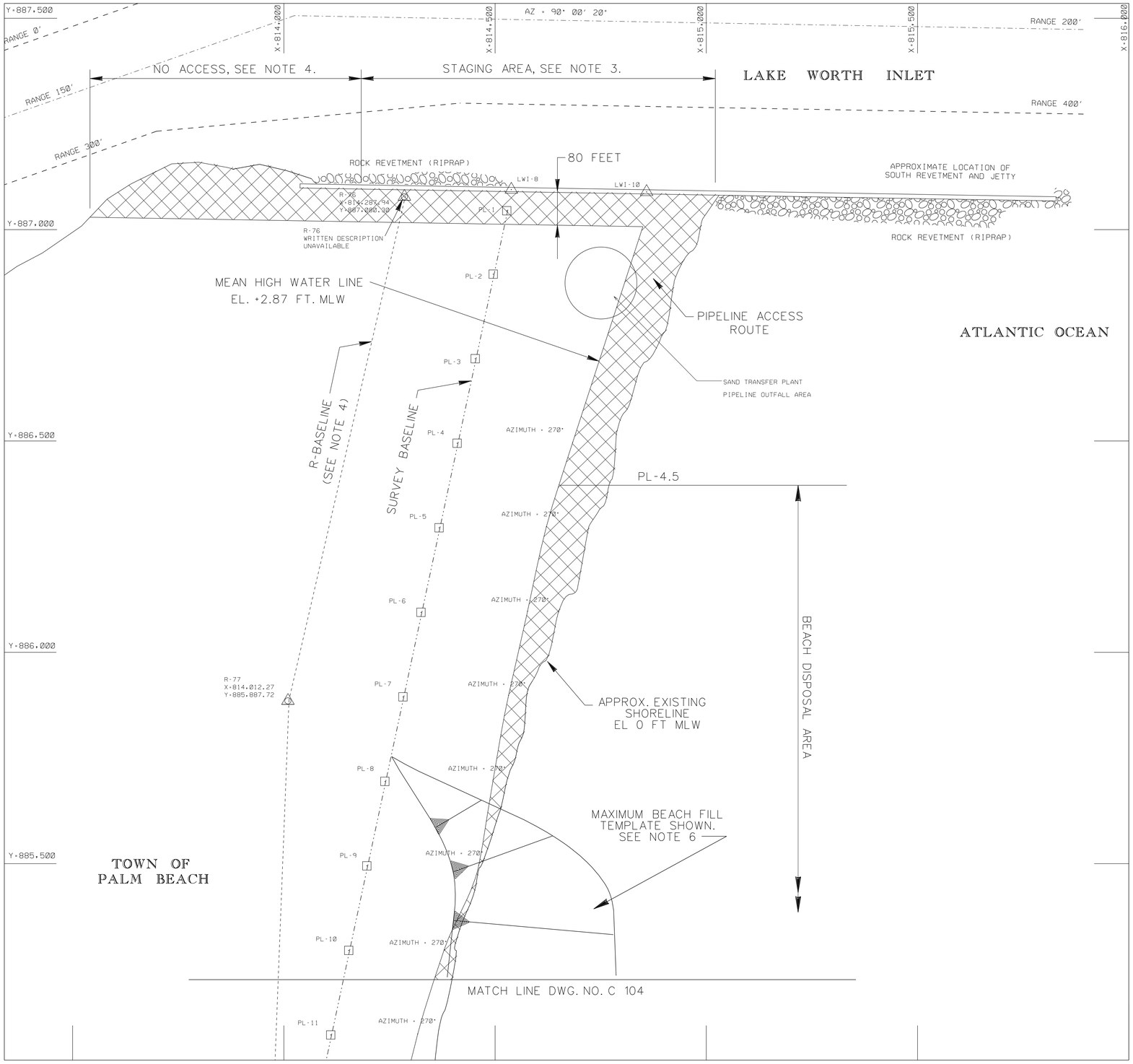
MAINTENANCE DREDGING
33-FOOT PROJECT

CONTROL DATA

Scale:

DRAWING NO.

G 102



NOTES:

1. SEE DWG. NO. G 101 FOR LOCATION, VICINITY MAP, LEGEND AND GENERAL NOTES.
2. R-MONUMENT X-Y COORDINATES ARE PROVIDED FOR INFORMATION ONLY. SEE PROJECT DEP WATER QUALITY CERTIFICATE NO. 0216012-001-JC DATED 17 MARCH 2005 AND ACCOMPANY DWGS.
3. SOUTHERN BOUNDARY OF STAGING AREA IS A LINE PARALLEL TO AND 80 FEET SOUTH OF THE SOUTH FACE OF CONCRETE JETTY WALL. ACCESS TO STAGING AREA IS FROM WATER ONLY (NO STREET ACCESS).
4. NO CONTRACTOR ACCESS WEST OF X=814,200 DUE TO HOMEOWNER ENCROACHMENTS ON GOVERNMENT PROPERTY.
5. THE BEACH DISPOSAL AREA IS DEFINED AS THE AREA SOUTH OF PL-4.5, NORTH OF PL-13, AND EAST OF THE SURVEY BASELINE AS SHOWN IN CROSS SECTIONS..
6. THE BEACH FILL SHOWN IS THE MAXIMUM PERMITTED WIDTH AND HEIGHT OF FILL THAT CAN BE PLACED ALONG THE BEACH. ACTUAL BEACH FILL PLACEMENT WILL BE BASED ON AVAILABLE DREDGE VOLUMES AND PLACED WITHIN THE PERMITTED TEMPLATE AS DIRECTED BY THE CONTRACTING OFFICER.

ABBREVIATIONS	
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
MLW	MEAN LOW WATER
P.I.	POINT OF INTERSECTION
EL	ELEVATION (FEET)

GRAPHIC SCALE

100' 0 100' 200'

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS

Inv. No. W912EP-06-B-0015
D.O.FILE NO. 16-38,523
Dated: APRIL 2006

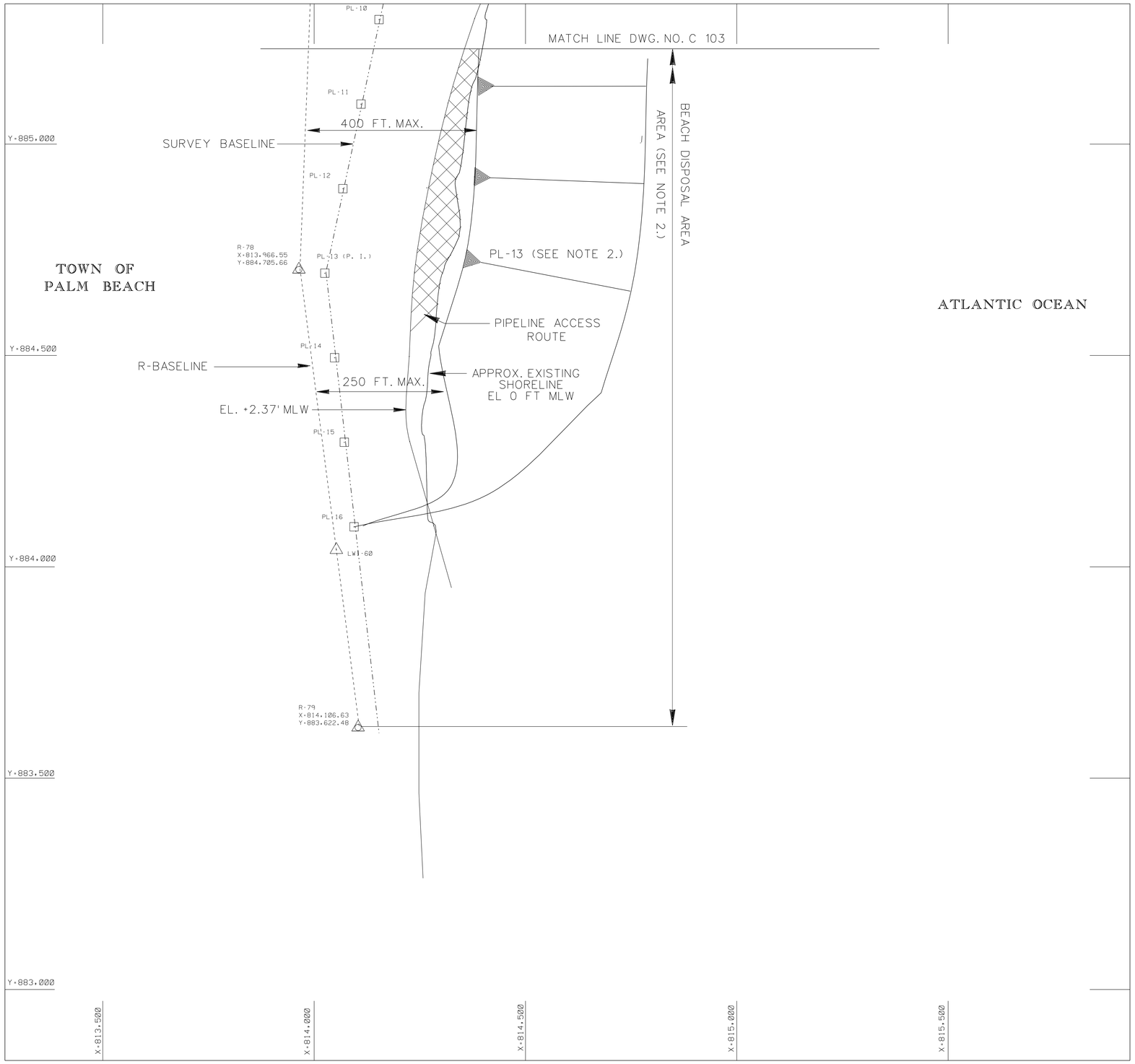
Designed by: A.C.K.
Dwn by: A.C.K.
Ckd by: J.W.B.

File name: 114293-PBH06-CN 1.03.DGN
Reference files: BROKANG5-E11.DGN BDPLAN06.DGN 110-C78-TRL.DGN 110-PLN.DGN

PALM BEACH HARBOR, FLORIDA
MAINTENANCE DREDGING
33-FOOT PROJECT
DISPOSAL PLAN

Scale:

DRAWING NO.
C 103

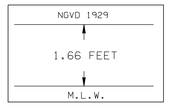


N

PROFILE CONTROL			
PROFILE LINE	PLANE COORDINATES X	PLANE COORDINATES Y	PROFILE AZIMUTH
LWI-8	814541.00	887097.24	
PL-1	814530.31	887047.24	270°
PL-2	814498.25	886897.23	270°
PL-3	814455.50	886697.22	270°
PL-4	814412.75	886497.21	270°
PL-5	814370.00	886297.21	270°
PL-6	814327.25	886097.19	270°
PL-7	814284.50	885897.18	270°
PL-8	814241.75	887697.23	270°
PL-9	814199.00	885497.17	270°
PL-10	814156.27	887297.23	270°
PL-11	814113.51	885097.15	270°
PL-12	814070.76	884897.15	270°
PL-13	814027.66	884697.23	270°
PL-14	814051.04	884497.22	270°
PL-15	814074.06	884297.21	270°
PL-16	814096.71	884097.12	270°

SURVEY CONTROL			
CONTROL POINT	PLANE COORDINATES X	PLANE COORDINATES Y	NGVD ELEV. (ft)
LWI-8	814,541.00	887,097.24	6.42
LWI-10	814,861.30	887,091.67	6.34
LWI-60	814,055.21	884,042.60	13.64

LEGEND	
△	CONTROL MONUMENT
□	WOODEN HUB



RELATIONSHIP BETWEEN NGVD 1929
AND MEAN LOW WATER

NOTES:

1. THE BEACH DISPOSAL AREA SHOWN IS THE MAXIMUM ALLOWABLE TEMPLATE; NOT A REQUIRED TEMPLATE.
2. TOE OF FILL SHALL NOT EXTEND BEYOND THIS LINE DUE TO HARDBOTTOMS LOCATED ABOUT 500 FEET OFFSHORE AND SOUTH OF PL-13.

GRAPHIC SCALE

100' 0 100' 200'

US Army Corps of Engineers
Jacksonville District

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JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Inv. No. W912EP-06-B-0015

D.O.FILE NO. 16-38,523
Dated: APRIL 2006

Designed by: A.C.K.
Dwn by: A.C.K.
Ckd by: J.W.B.

File name: 114293-PBH06-CN 1 04.DGN
Reference files: BRDRANSL.E11.DGN BDPLAN06.DGN 1107CTRL.DGN 1107PLN.DGN

PALM BEACH HARBOR, FLORIDA

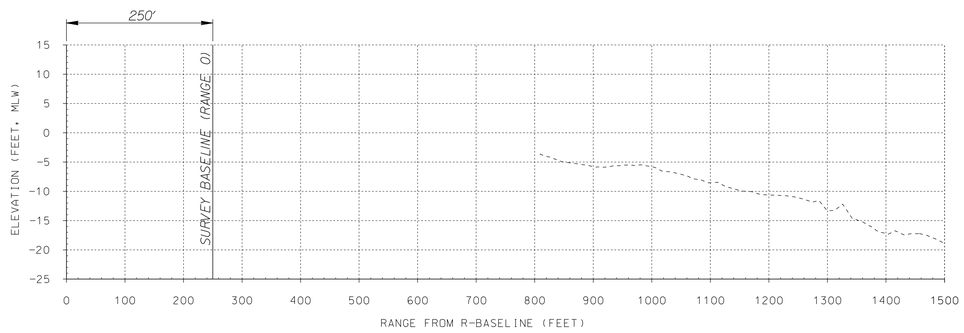
MAINTENANCE DREDGING
33-FOOT PROJECT

DISPOSAL PLAN

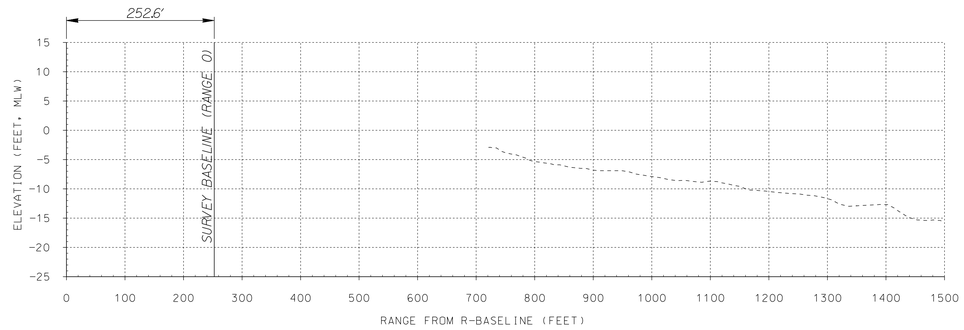
Scale:

DRAWING NO.

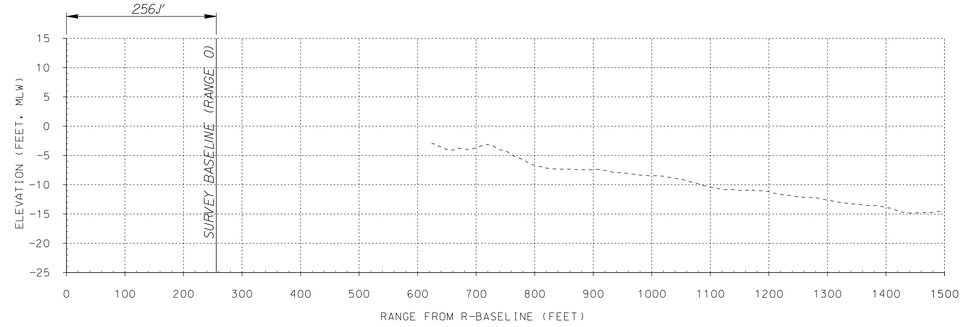
C 104



STA.- PL1



STA. - PL2



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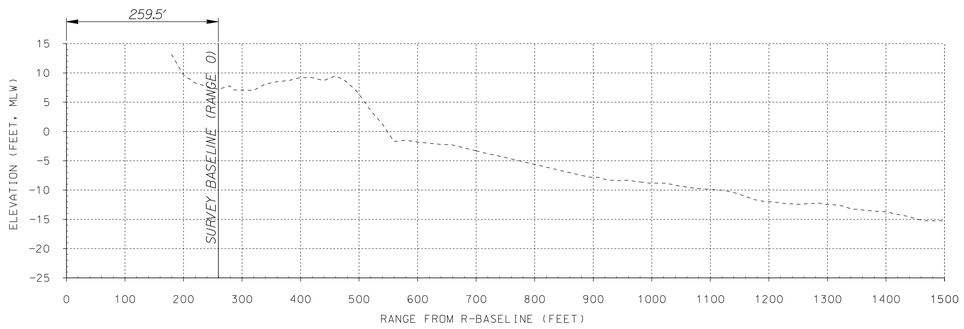

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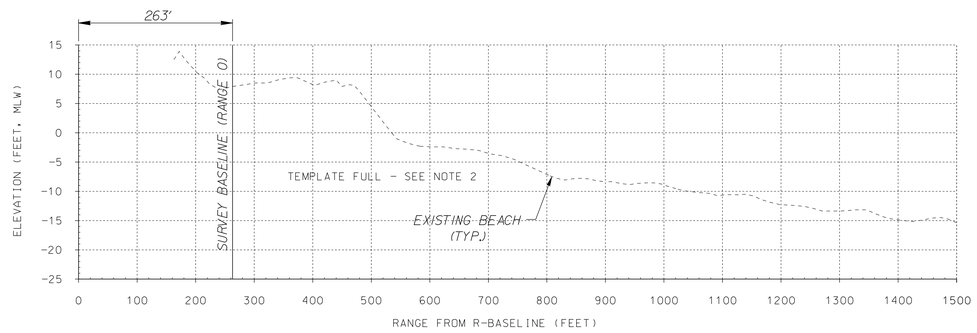

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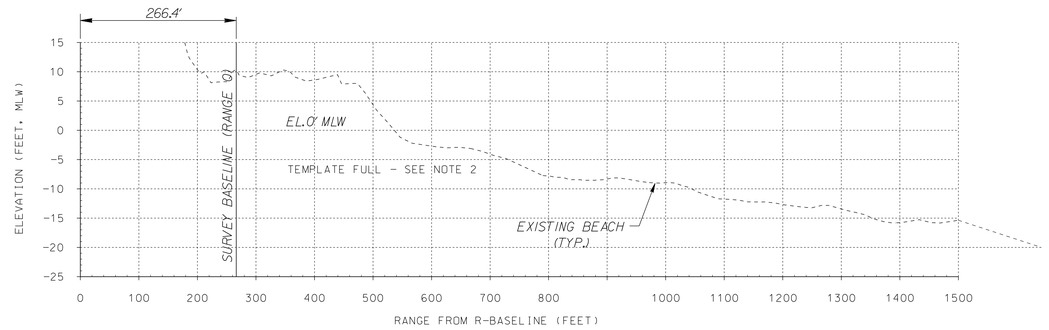

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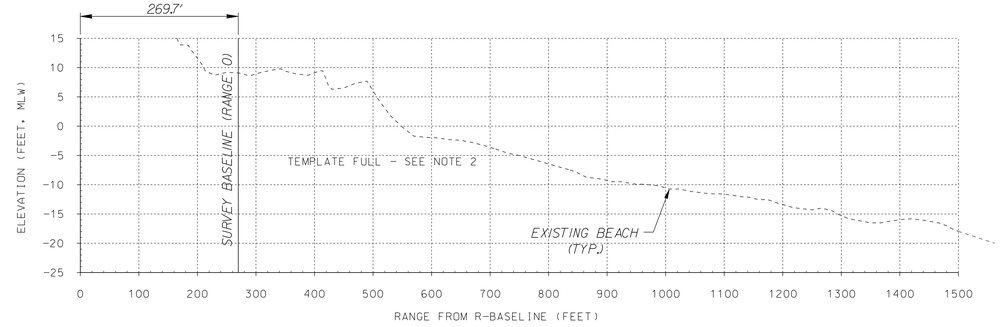

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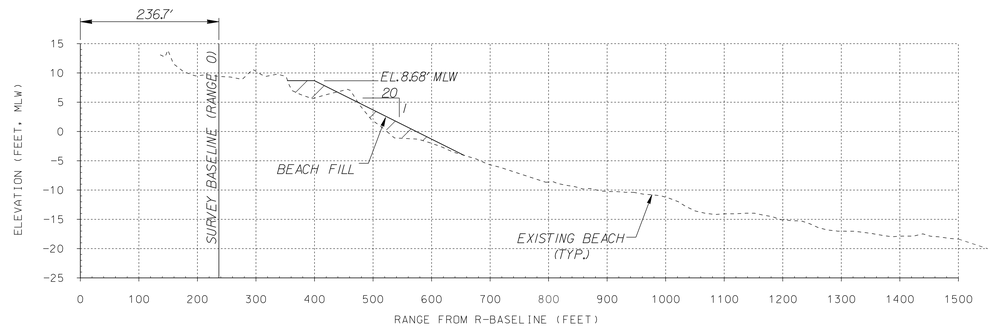

STA. - PL8

NOTES:

1. SEE DWG. C 103 FOR BEACH DISPOSAL AREA SURVEY NOTES.

2. PERMITTED BEACH FILL TEMPLATE IS FULL AT THIS STATION. CONTRACTOR SHALL PERFORM PRE-FILL SURVEY OF BEACH DISPOSAL AREA FOR USE BY CONTRACTING OFFICER TO ADJUST DISPOSAL WHERE NEEDED.

GRAPHIC SCALES

SCALE "A" (HORIZ.) 100' 0 100' 200'

SCALE "B" (VERT.) 10' 0 10' 20'

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
1	△	A-1	DELETED TO ACCOMPANY AMENDMENT NO. 0002

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS

Inv. No. W912EP-06-B-0015

D.O.FILE NO. 16-38,523

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File name: 114293-PBH06-CN_3_01.DGN
Reference files: BRDRANSL_E11.DGN

PALM BEACH HARBOR, FLORIDA

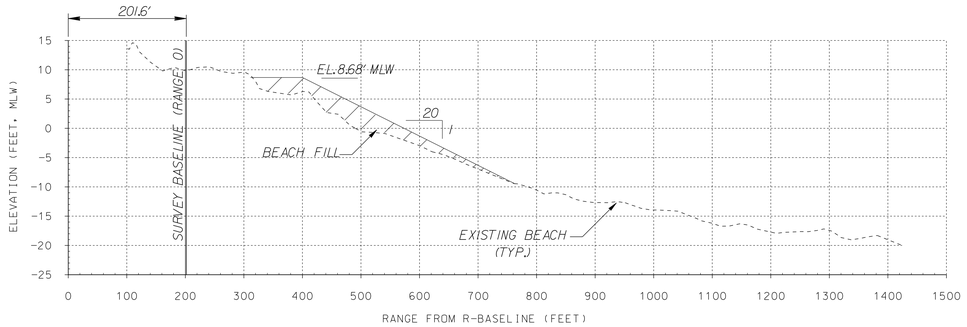
MAINTENANCE DREDGING
33-FOOT PROJECT

BEACH DISPOSAL SECTIONS

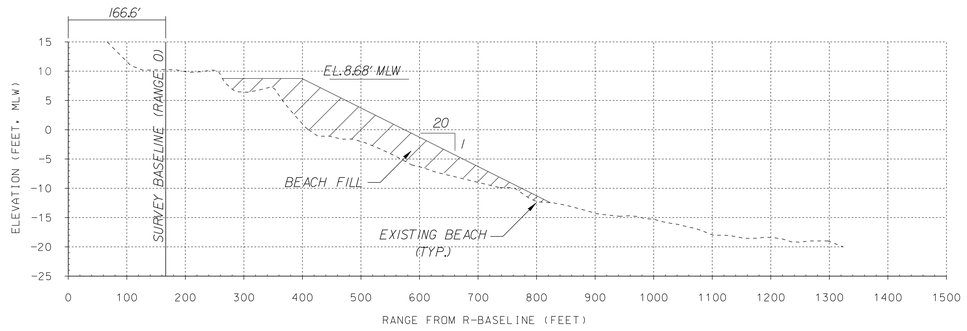
Scale: AS SHOWN

DRAWING NO.

C 301



STA. - PL9



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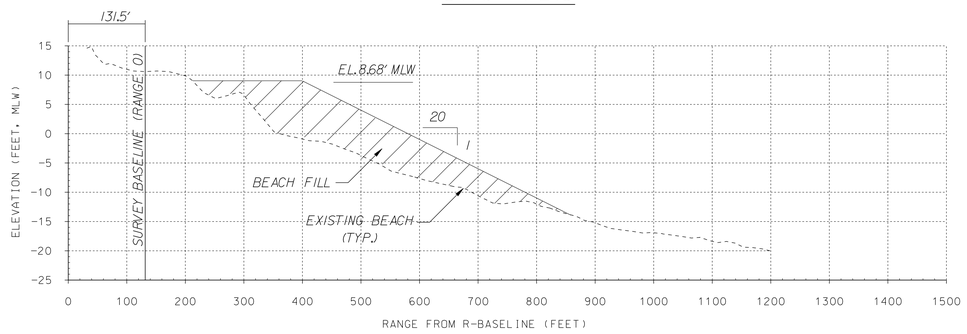

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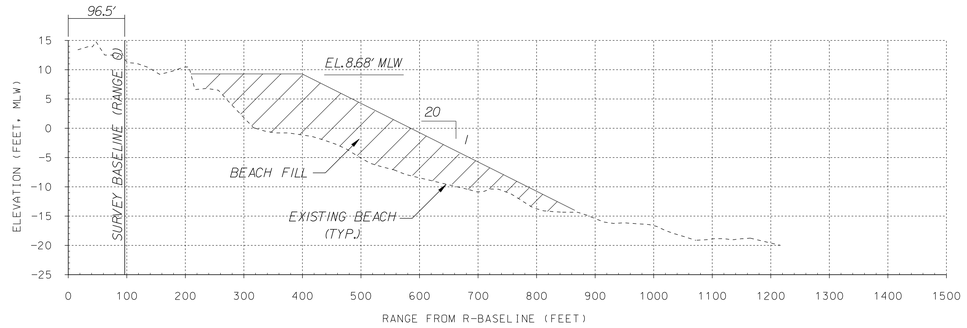

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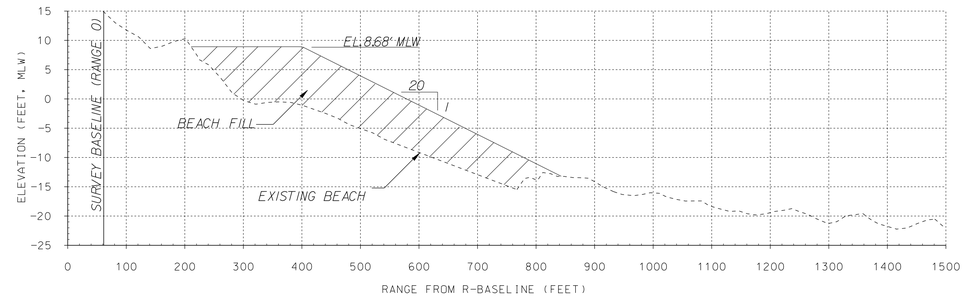

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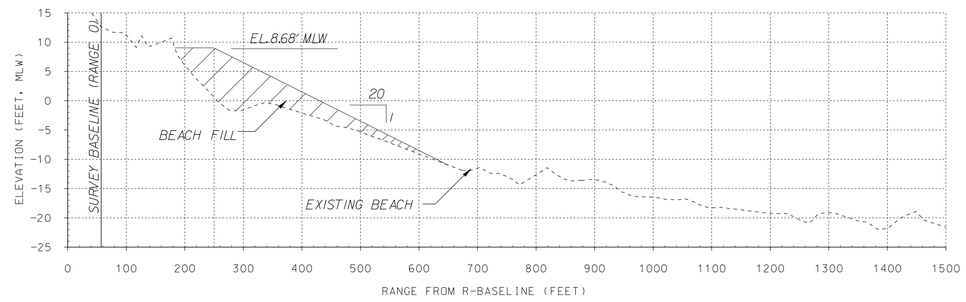

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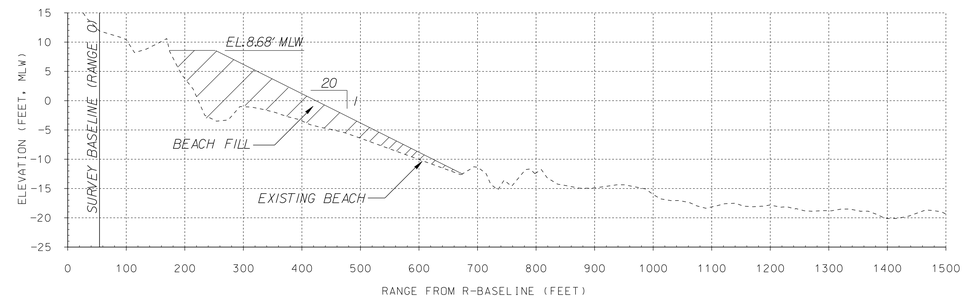

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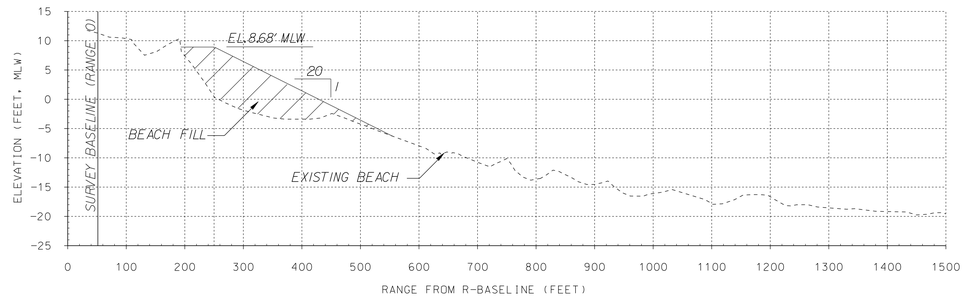

STA. - PL16

GRAPHIC SCALES

SCALE: "A" (HORIZ.) 100' 0 100' 200'

SCALE: "B" (VERT.) 10' 0 10' 20'

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Inv. No. W912EP-06-B-0015

D.O.FILE NO. 16-38,523
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File name: 114293-PBH06-CN_3_02.DGN
Reference files: BROWNSL_E11.DGN

PALM BEACH HARBOR, FLORIDA

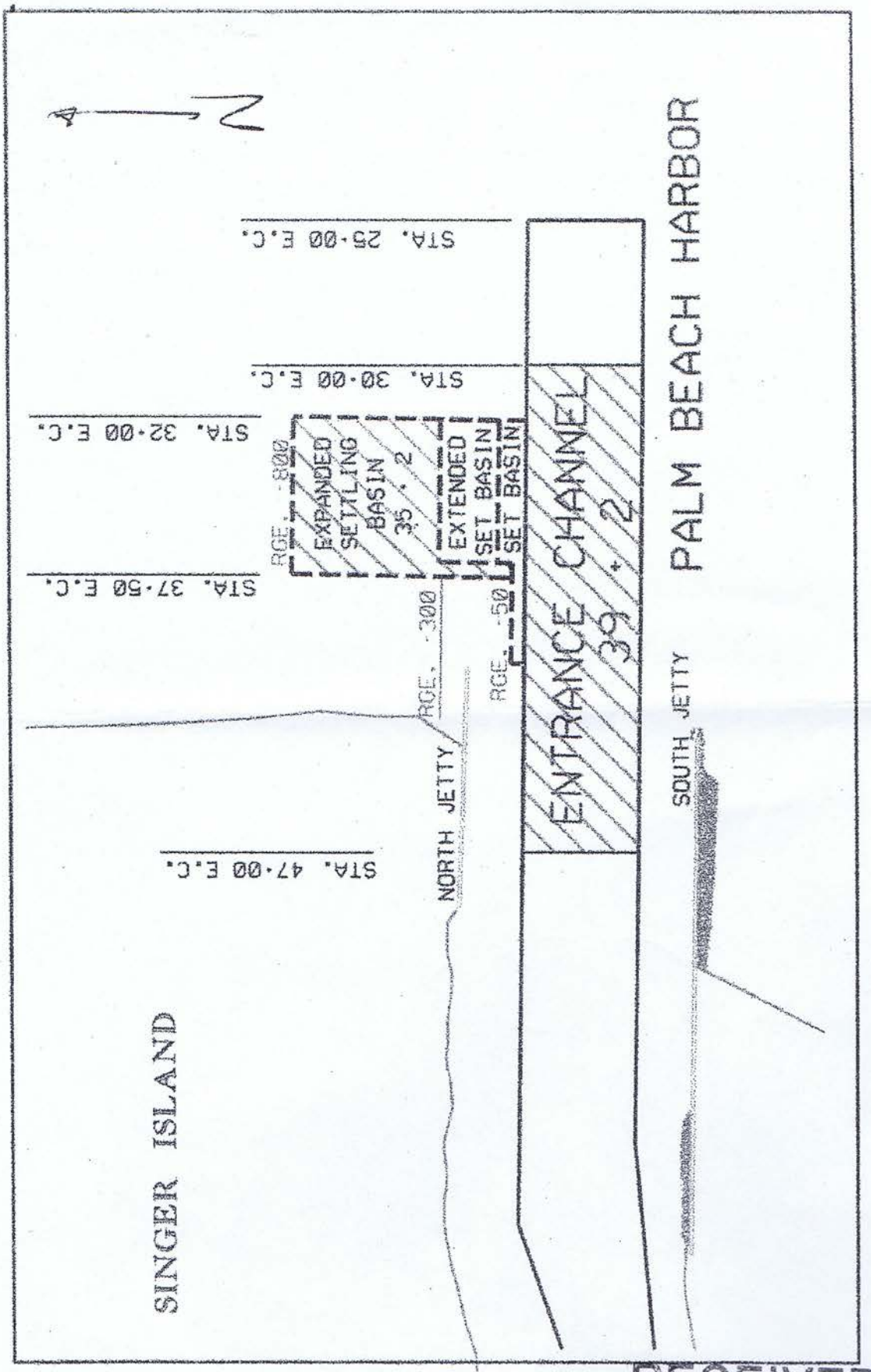
MAINTENANCE DREDGING
33-FOOT PROJECT

BEACH DISPOSAL SECTIONS

Scale: AS SHOWN

DRAWING NO.

C 302

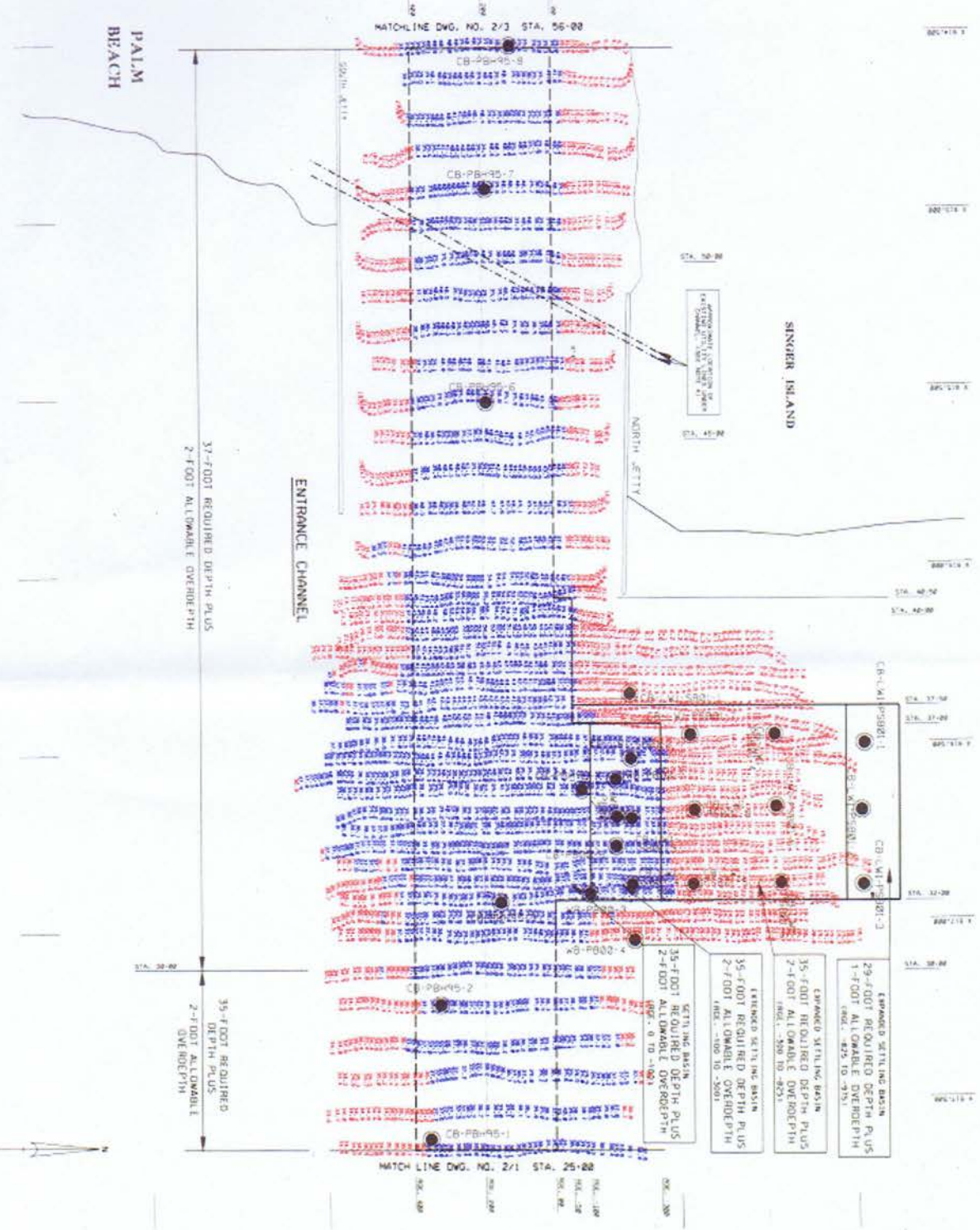


RECEIVED
NOV 04 2011
BUREAU OF BEACHES

PERMIT # 216012016

Incl 1

Encl 2
PERMIT # 21601201 6
12
BUREAU OF BEACHES
NOV 0 4 2011
RECEIVED
0216012-001-JC



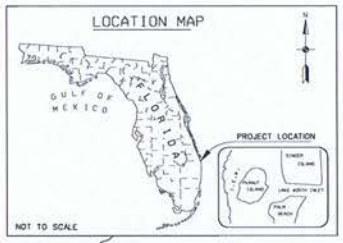
DRAWINGS TO ACCOMPANY THE APPLICATION FOR WATER QUALITY CERTIFICATE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICANT: U.S. ARMY CORPS OF ENGINEERS

PROJECT: MAINTENANCE DREDGING, PALM BEACH HARBOR

25, 33, 35 & 37 FT PROJECT

DATE: REVISED, DEC 2004 SHEET 3 OF 12



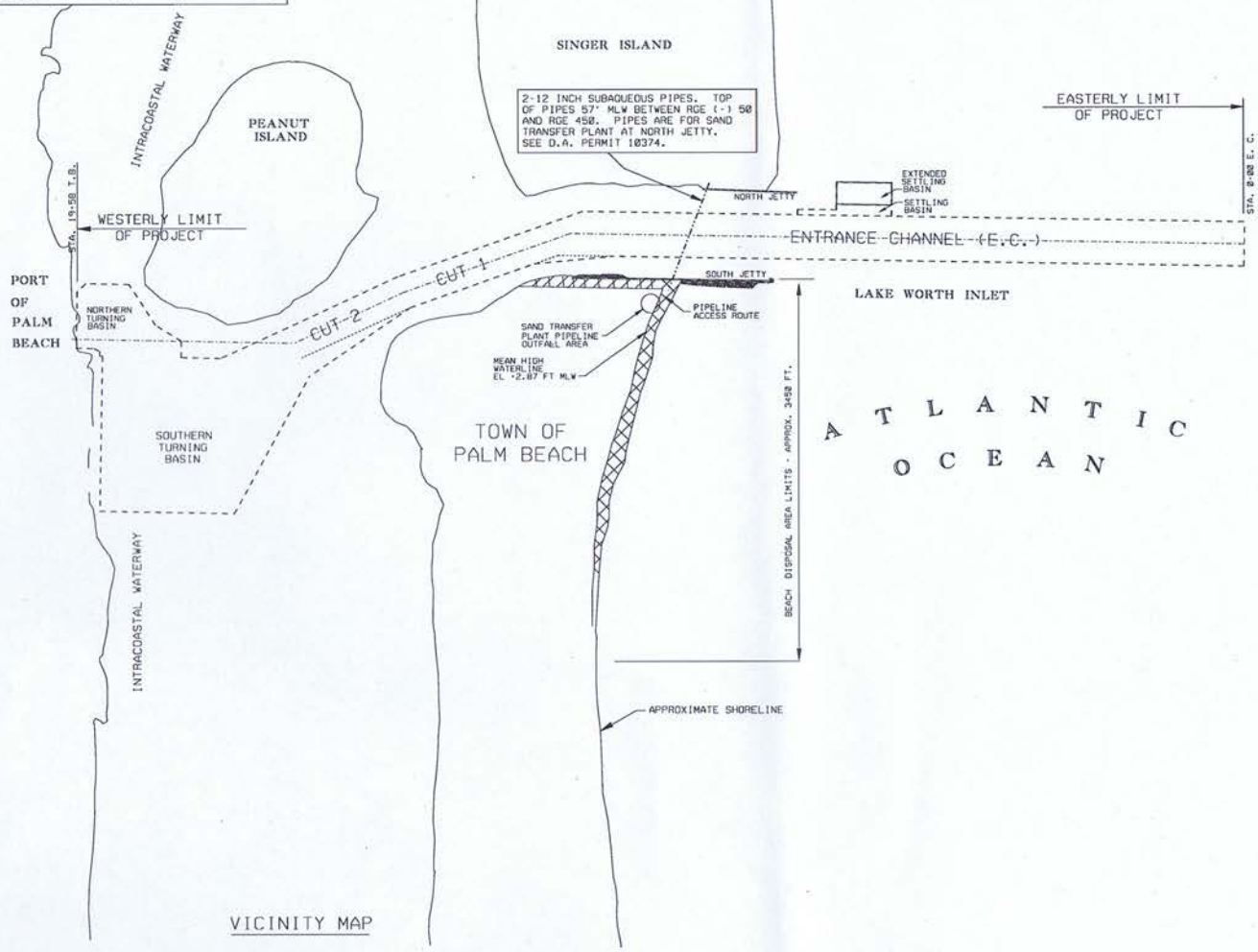
GENERAL NOTES:

1. NO RAILROAD RIGHTS-OF-WAY SHALL BE ENTERED UPON IN THE PROSECUTION OF ANY AND ALL WORK UNDER THIS CONTRACT WITHOUT THE CONTRACTOR FIRST OBTAINING THE WRITTEN APPROVAL OF A RESPONSIBLE OFFICIAL OF THE RAILROAD AND PRESENTING IT TO THE CONTRACTING OFFICER FOR APPROVAL. PUBLIC RAILROAD CROSSINGS, FREIGHT DEPOTS, ETC., ENTERED FOR THE PURPOSES OF RECEIVING OR SHIPPING GOODS AND MATERIAL OR RAILROAD LANDS WITHIN THE CONSTRUCTION LANDS SHOWN IN THE CONTRACT DRAWINGS, ARE EXEMPT FROM THE FOREGOING PROVISIONS.

2. SEE DWG. NO. G 102 FOR CONTROL DATA.

BENCHMARK	NGVD ELEV. (FT)
A-310	4.75

LEGEND	
!	LIGHTED BEACON
■	GREEN DAYBEACON
▲	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
C	CAN BUOY
N	NUN BUOY
	TIDE STAFF



LEGEND:

- PIPELINE EASEMENT AND STAGING AREA
- DNR MONUMENT
- CONTROL MONUMENT/BENCHMARK
- UTILITY CROSSING

GRAPHIC SCALE

400' 0 400' 800'

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

D.O.FILE NO. 16-38,523

PALM BEACH HARBOR, FLORIDA
MAINTENANCE DREDGING
33-FOOT PROJECT
LOCATION, VICINITY MAP, LEGEND, AND GENERAL NOTES

Scale:

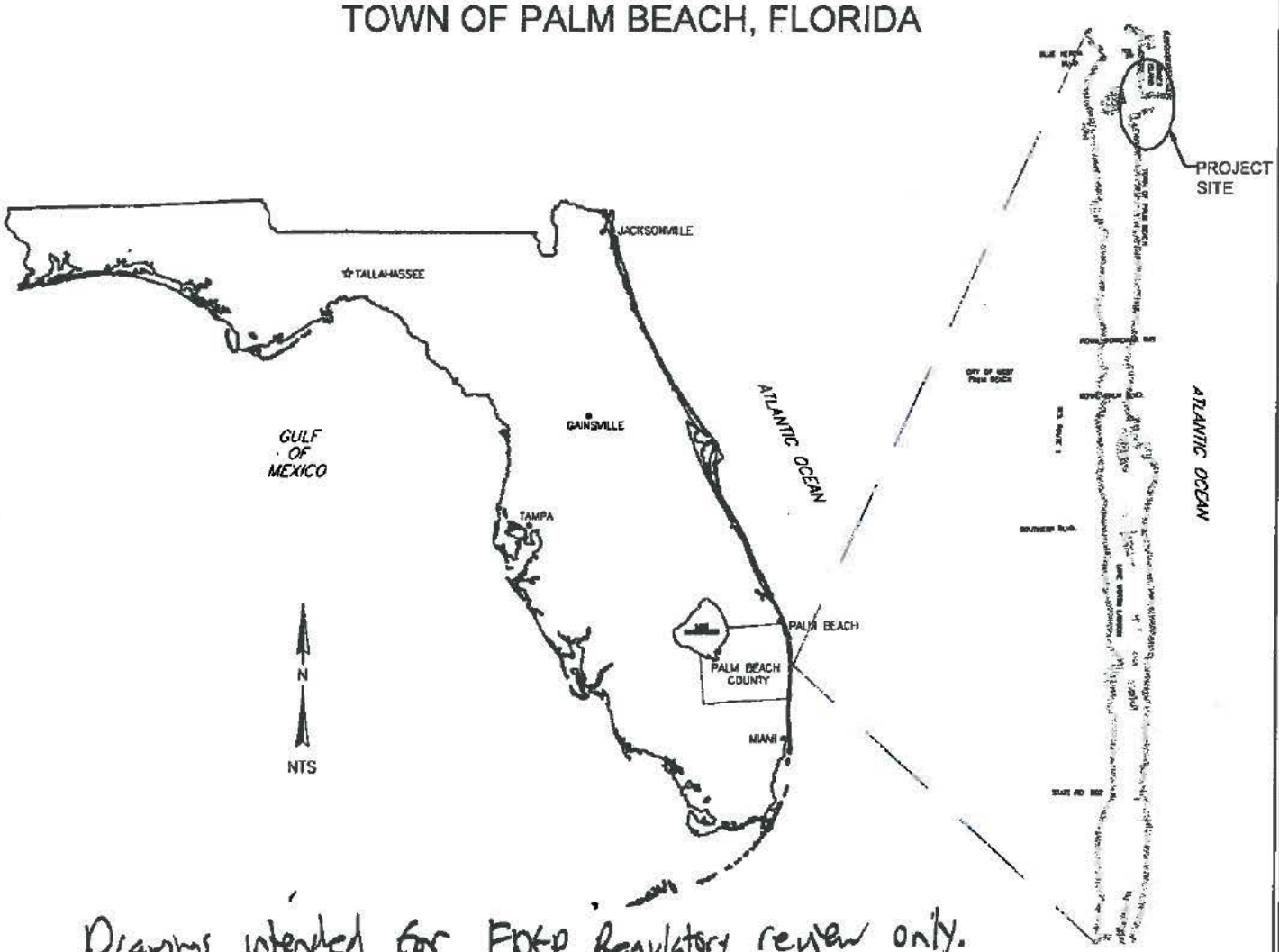
DRAWING NO.
G 101

DEP Permit No. 0216012-007-JC

Appendix A-

Sand Transfer Plant Drawings

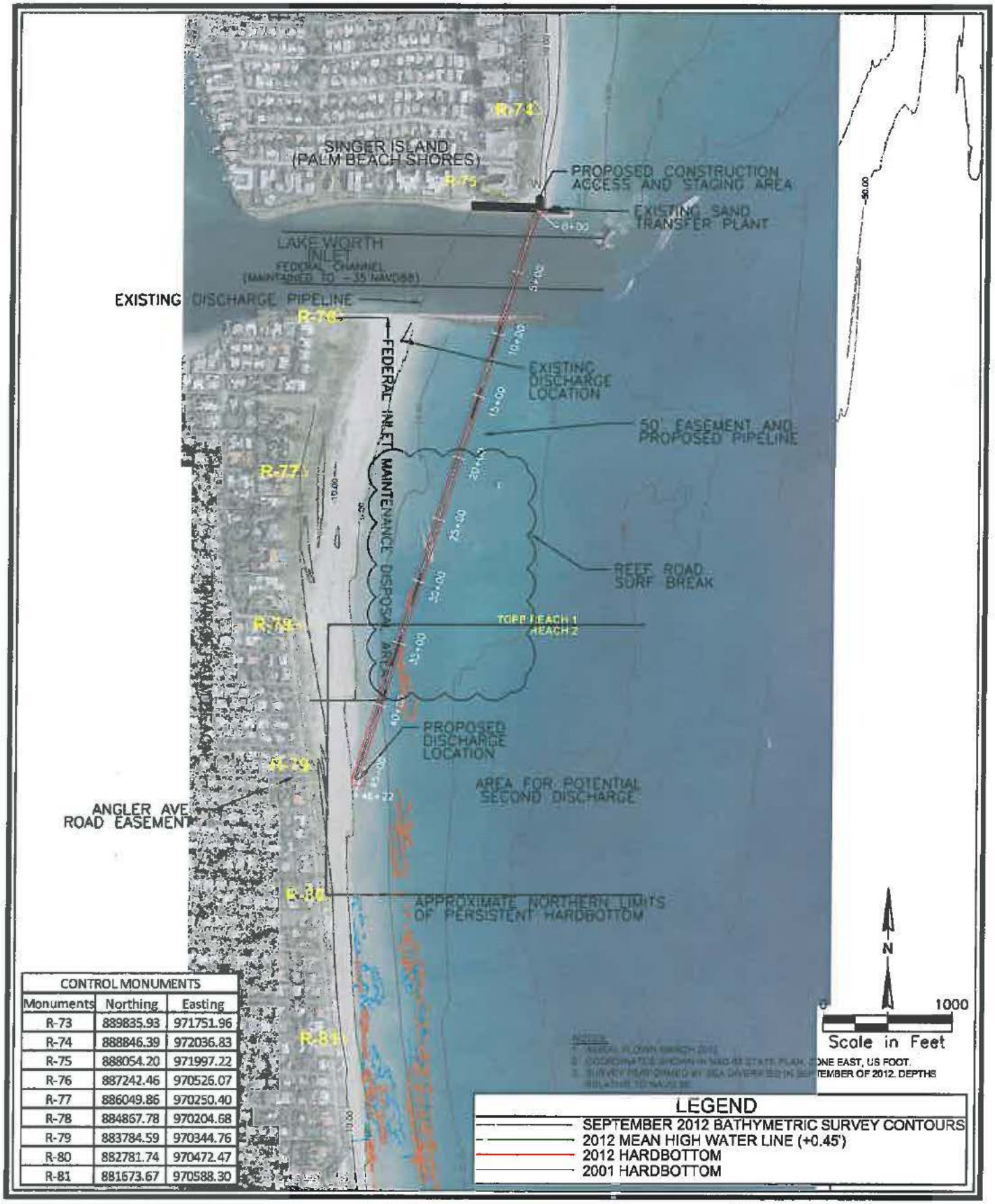
LAKE WORTH INLET
SAND TRANSFER PLANT MODIFICATION
TOWN OF PALM BEACH, FLORIDA



Drawings intended for FDEP Regulatory review only.
Not for Construction

PROJECT SITE

ATM 2047 Vista Parkway, Suite 201 West Palm Beach, FL 33411 (561) 659-0041 Certificate of Authorization #4659	Location Map Lake Worth Inlet Sand Transfer Plant Modification Town of Palm Beach, Florida	FIGURE 1 JOB NUMBER: 09-2078 ISSUE DATE: 09-22-2011 REVISED DATE: 10-17-2012 FOR PERMITTING PUPOSES ONLY NOT FOR CONSTRUCTION	Michael Jenkins, Ph.D., P.E. Florida License Number 58072 2/12/13



CONTROL MONUMENTS		
Monuments	Northing	Easting
R-73	889835.93	971751.96
R-74	888846.39	972036.83
R-75	888054.20	971997.22
R-76	887242.46	970526.07
R-77	886049.86	970250.40
R-78	884867.78	970204.68
R-79	883784.59	970344.76
R-80	882781.74	970472.47
R-81	881673.67	970588.30

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Project Overview

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 2

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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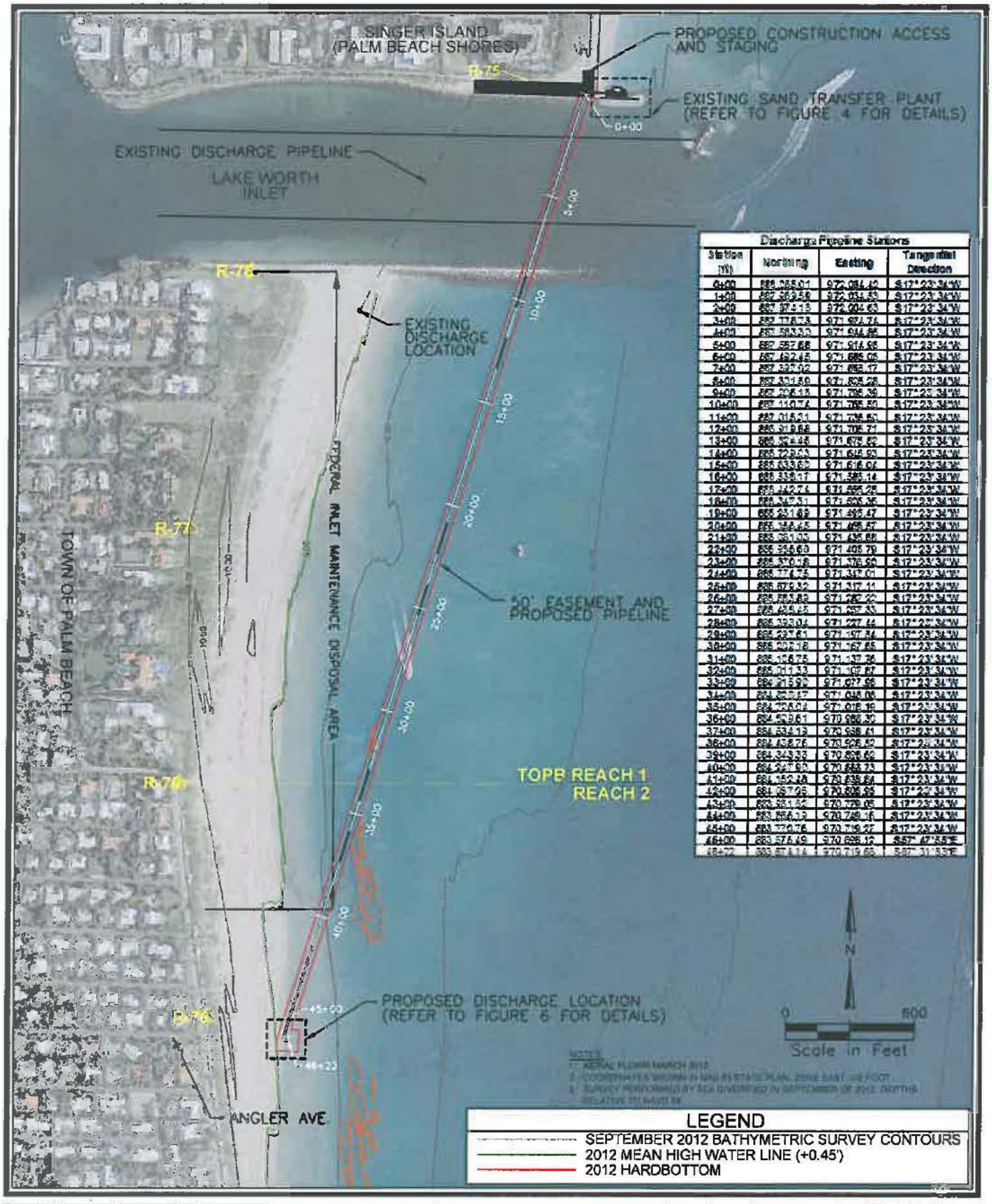

Discharge Pipeline Stations

Station (ft)	Northing	Easting	Tangential Direction
0+00	888,085.01	972,084.42	S17°23'34"W
1+00	887,969.59	972,034.53	S17°23'34"W
2+00	887,874.13	972,004.63	S17°23'34"W
3+00	887,778.73	971,974.74	S17°23'34"W
4+00	887,583.32	971,944.85	S17°23'34"W
5+00	887,587.68	971,914.95	S17°23'34"W
6+00	887,492.45	971,885.05	S17°23'34"W
7+00	887,397.02	971,855.17	S17°23'34"W
8+00	887,301.59	971,825.28	S17°23'34"W
9+00	887,206.15	971,795.39	S17°23'34"W
10+00	887,110.74	971,765.50	S17°23'34"W
11+00	887,015.31	971,735.50	S17°23'34"W
12+00	886,919.88	971,705.71	S17°23'34"W
13+00	886,824.45	971,675.82	S17°23'34"W
14+00	886,729.03	971,645.93	S17°23'34"W
15+00	886,633.60	971,616.04	S17°23'34"W
16+00	886,538.17	971,586.14	S17°23'34"W
17+00	886,442.74	971,556.25	S17°23'34"W
18+00	886,347.31	971,505.35	S17°23'34"W
19+00	886,251.89	971,495.47	S17°23'34"W
20+00	886,156.45	971,465.57	S17°23'34"W
21+00	886,061.03	971,435.68	S17°23'34"W
22+00	885,965.60	971,405.79	S17°23'34"W
23+00	885,870.18	971,376.90	S17°23'34"W
24+00	885,774.75	971,347.01	S17°23'34"W
25+00	885,679.32	971,317.11	S17°23'34"W
26+00	885,583.89	971,287.22	S17°23'34"W
27+00	885,488.45	971,257.33	S17°23'34"W
28+00	885,393.04	971,227.44	S17°23'34"W
29+00	885,297.61	971,197.54	S17°23'34"W
30+00	885,202.18	971,167.65	S17°23'34"W
31+00	885,106.75	971,137.76	S17°23'34"W
32+00	885,011.33	971,107.87	S17°23'34"W
33+00	884,915.92	971,077.98	S17°23'34"W
34+00	884,822.47	971,048.08	S17°23'34"W
35+00	884,726.04	971,018.19	S17°23'34"W
36+00	884,529.61	970,988.30	S17°23'34"W
37+00	884,534.19	970,958.41	S17°23'34"W
38+00	884,438.76	970,928.52	S17°23'34"W
39+00	884,343.33	970,898.62	S17°23'34"W
40+00	884,247.90	970,868.73	S17°23'34"W
41+00	884,152.48	970,838.84	S17°23'34"W
42+00	884,057.05	970,808.95	S17°23'34"W
43+00	883,961.52	970,779.05	S17°23'34"W
44+00	883,856.19	970,749.16	S17°23'34"W
45+00	883,770.76	970,719.27	S17°23'34"W
46+00	883,575.49	970,698.12	S57°47'55"E
46+22	883,574.14	970,719.68	S67°31'53"E

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Discharge Pipeline Layout

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 3

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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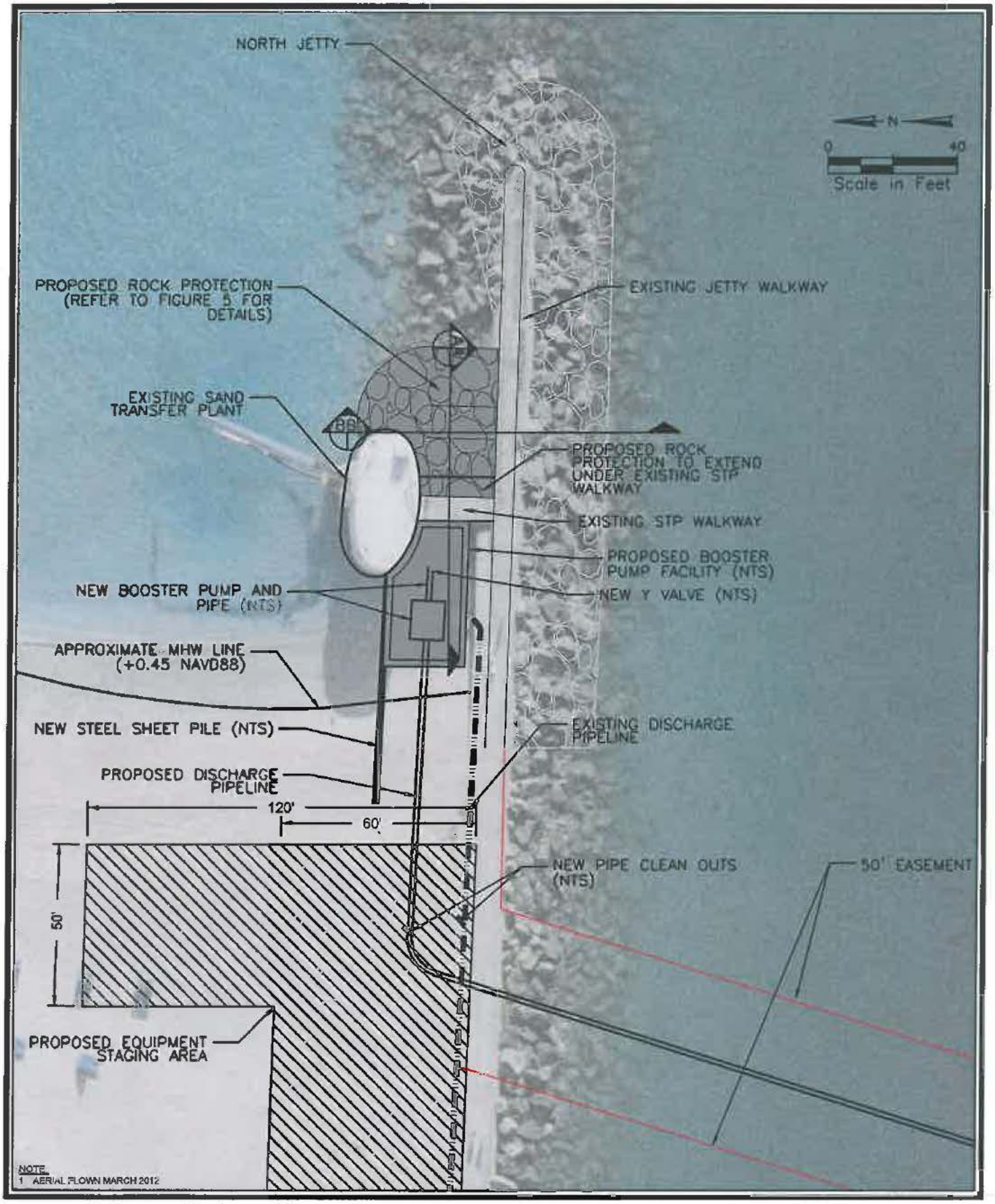

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Booster Pump Facility

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 4

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ISSUE DATE: 09-22-2011
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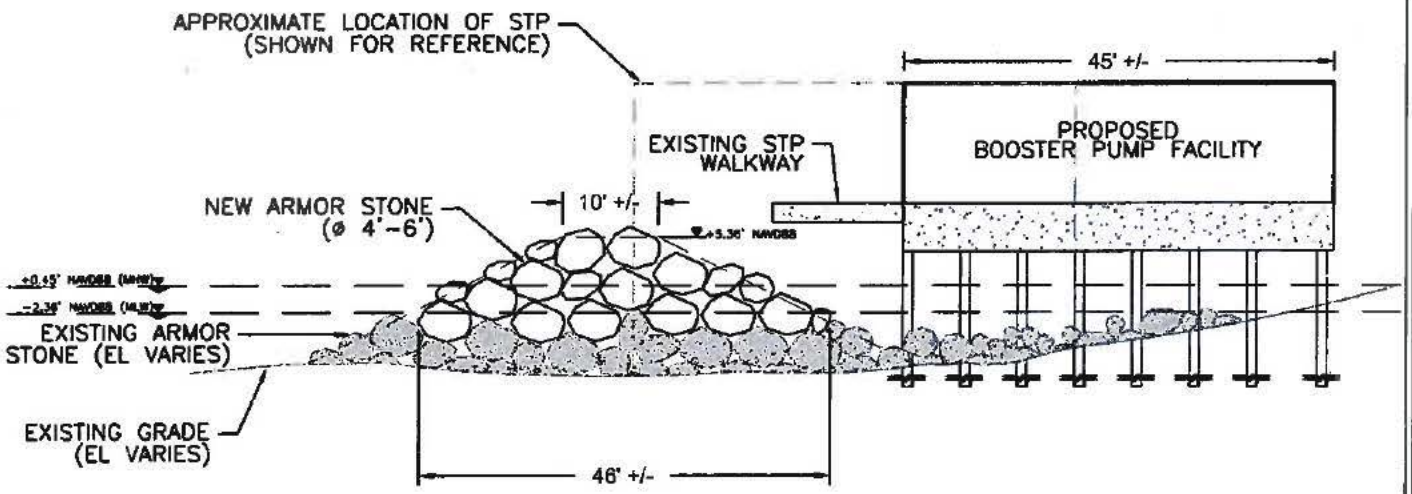
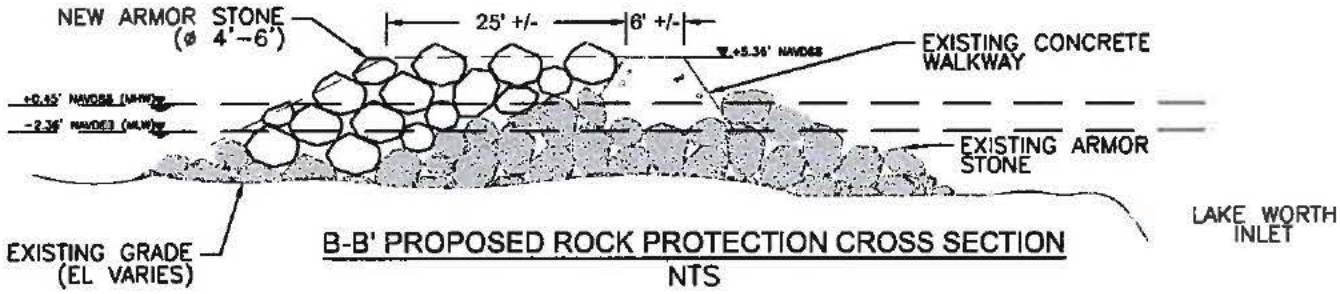


A-A' PROPOSED ROCK PROTECTION CROSS SECTION

NTS



B-B' PROPOSED ROCK PROTECTION CROSS SECTION

NTS

NOTE: APPROXIMATE DIMENSIONS SHOWN. FINAL DESIGN TO BE PERFORMED.

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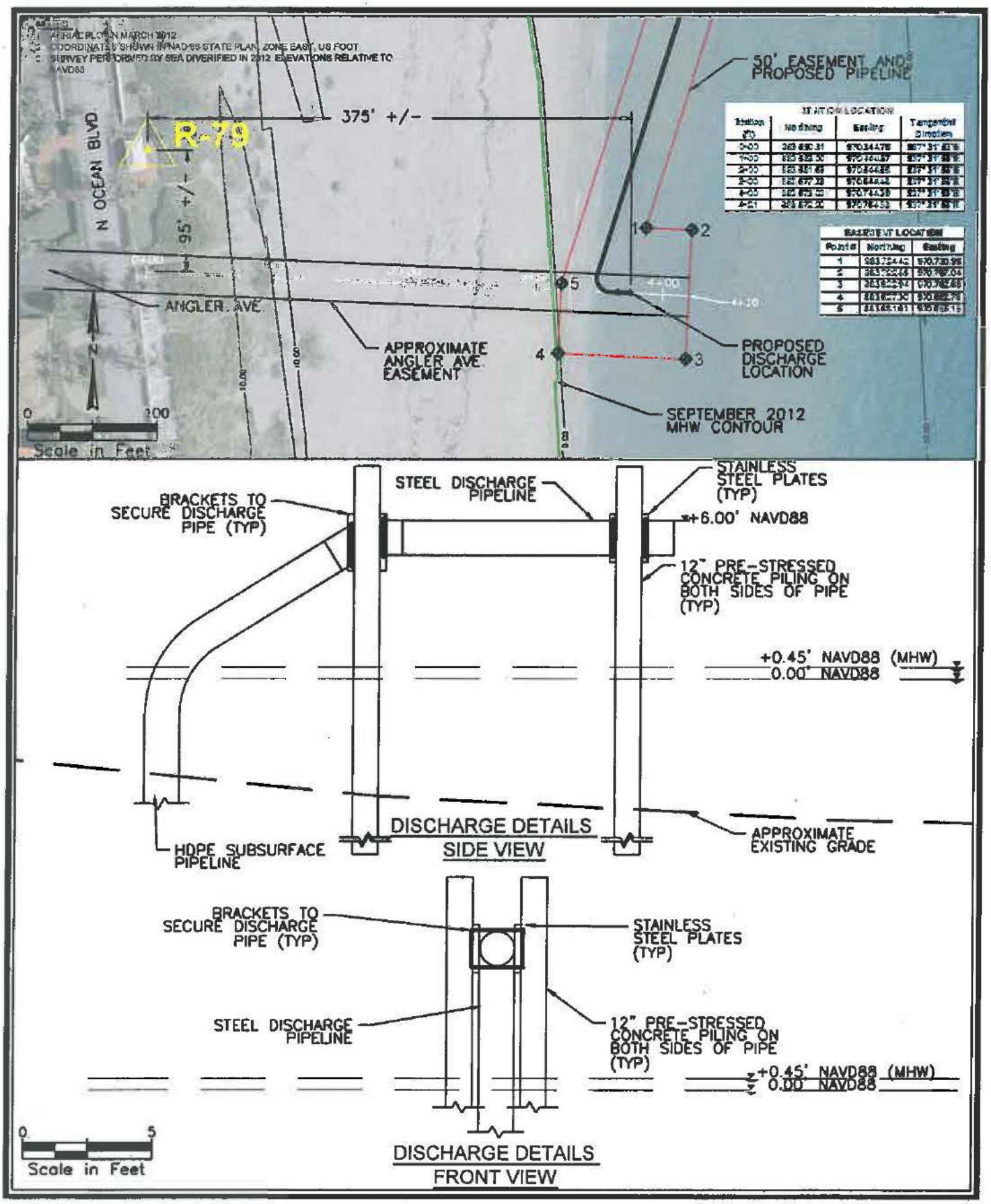
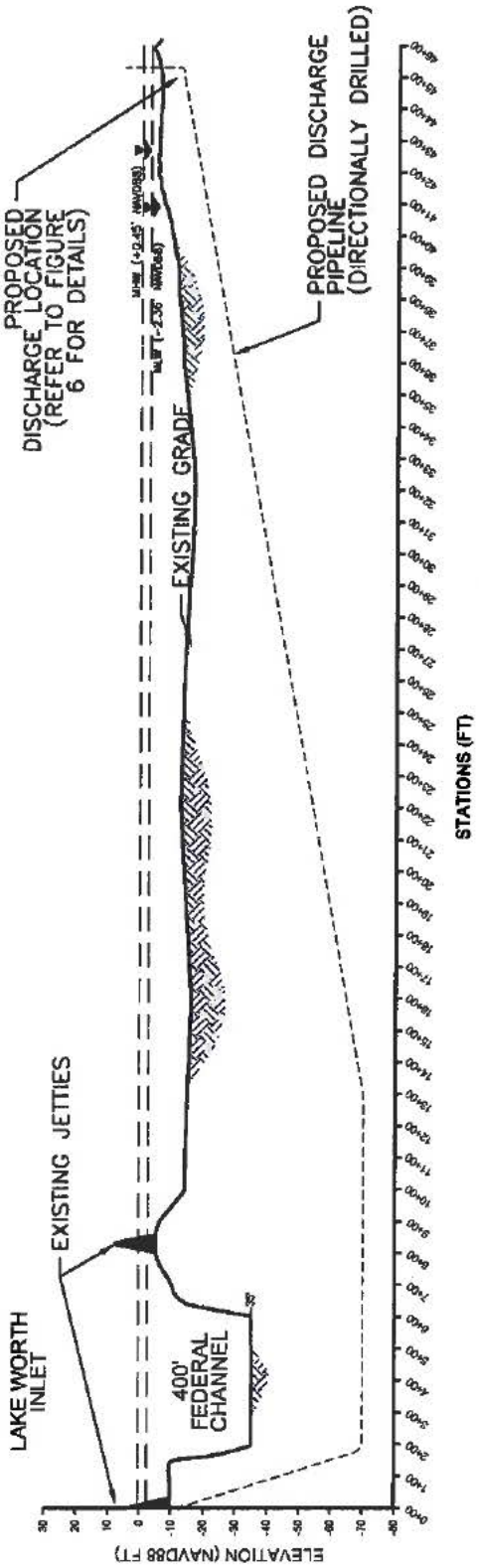


ATM 2047 Vista Parkway, Suite 201 West Palm Beach, FL 33411 (561) 659-0041 Certificate of Authorization #4669	Discharge Pipeline Layout Lake Worth Inlet Sand Transfer Plant Modification Town of Palm Beach, Florida	FIGURE 6 JOB NUMBER: 09-2078 ISSUE DATE: 09-22-2011 REVISED DATE: 10-17-2012 FOR PERMITTING PUPOSES ONLY NOT FOR CONSTRUCTION	Michael Jenkins, Ph.D., P.E. Florida License Number 58072 2/12/13



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Pipeline Profile

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 7

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ISSUE DATE: 09-22-2011
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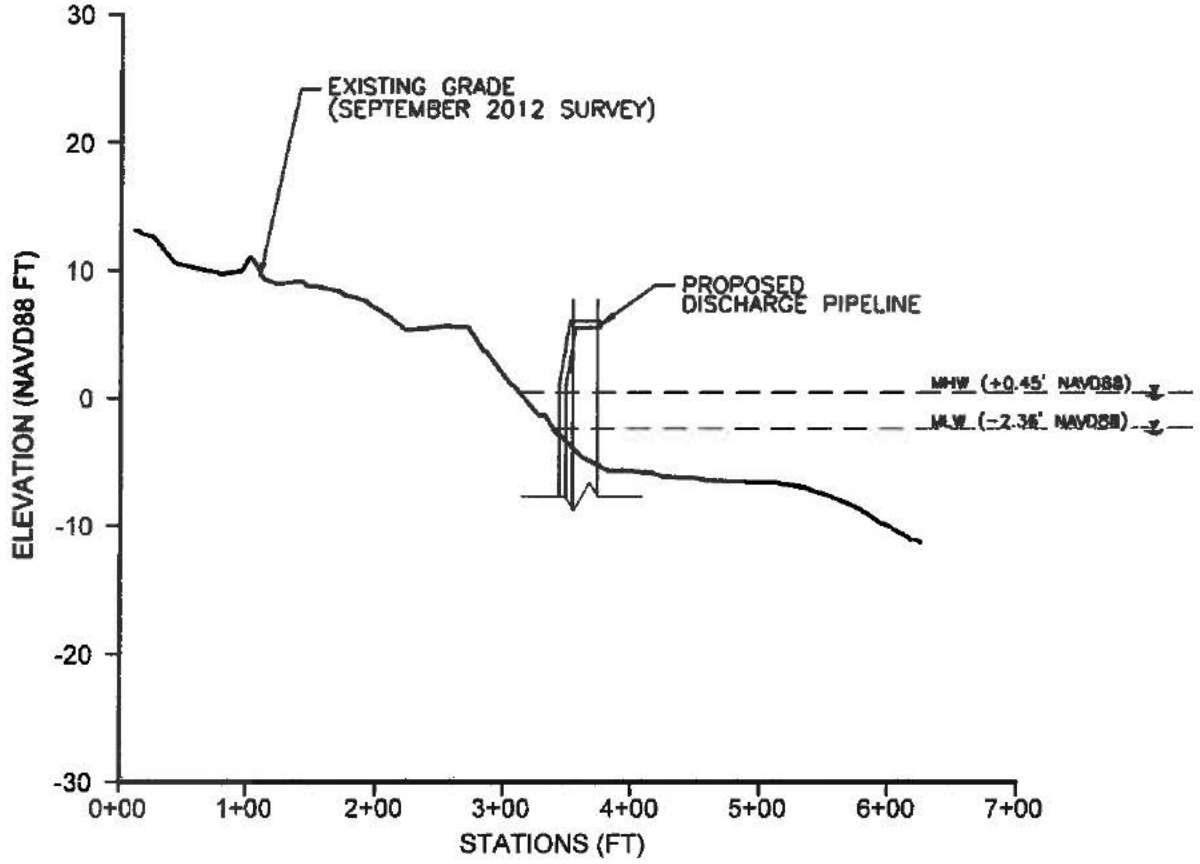

NOTE: VERTICAL EXAGGERATED TO SHOW DETAIL.

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Beach Profile at R-79
(New Discharge Location)

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 8

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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2012 Aerial Photography
and DNR Monuments

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 9

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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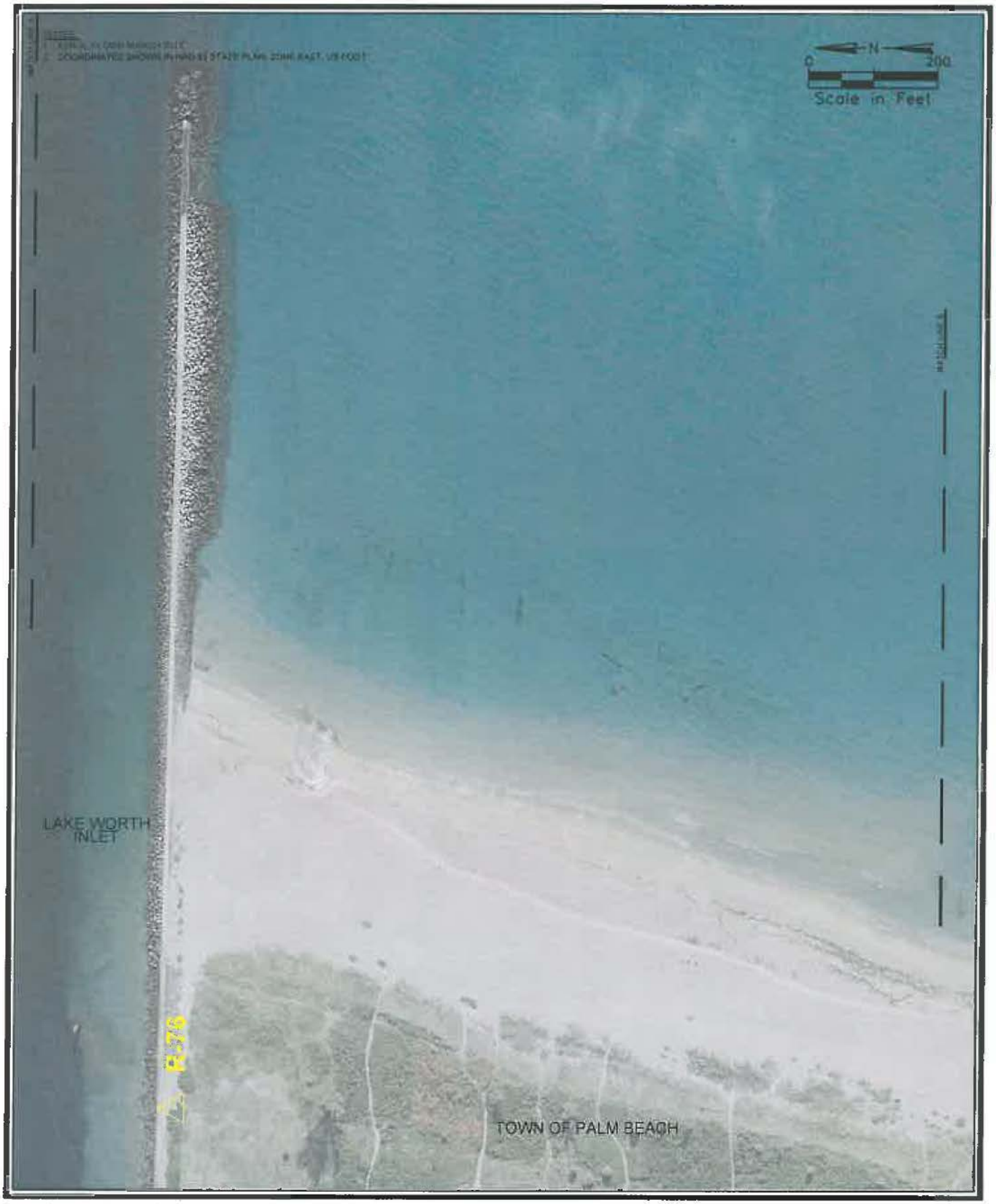

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2012 Aerial Photography and DNR Monuments

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 10

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
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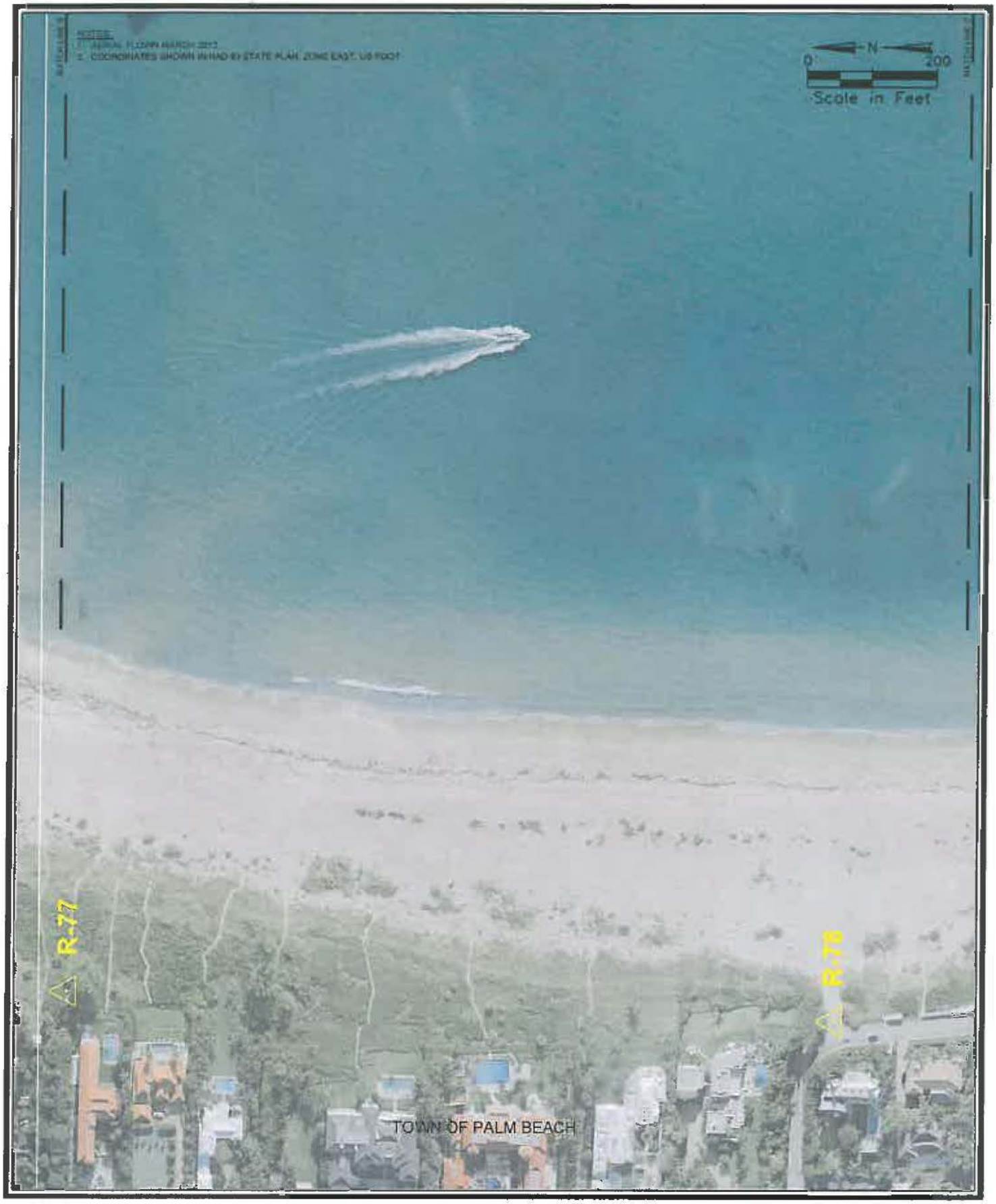

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2012 Aerial Photography and DNR Monuments

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Town of Palm Beach, Florida

FIGURE 11

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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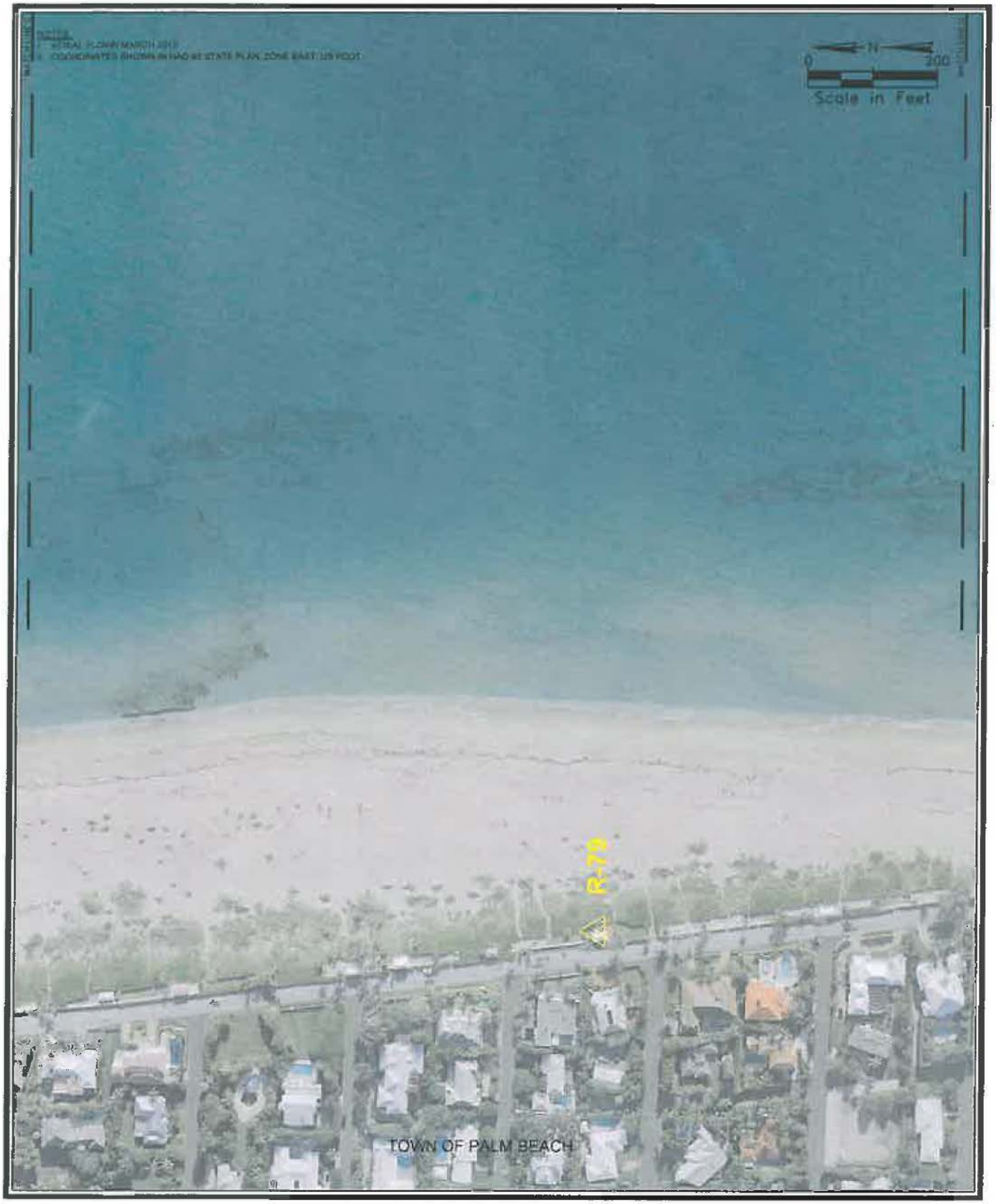

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2012 Aerial Photography and DNR Monuments

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 12

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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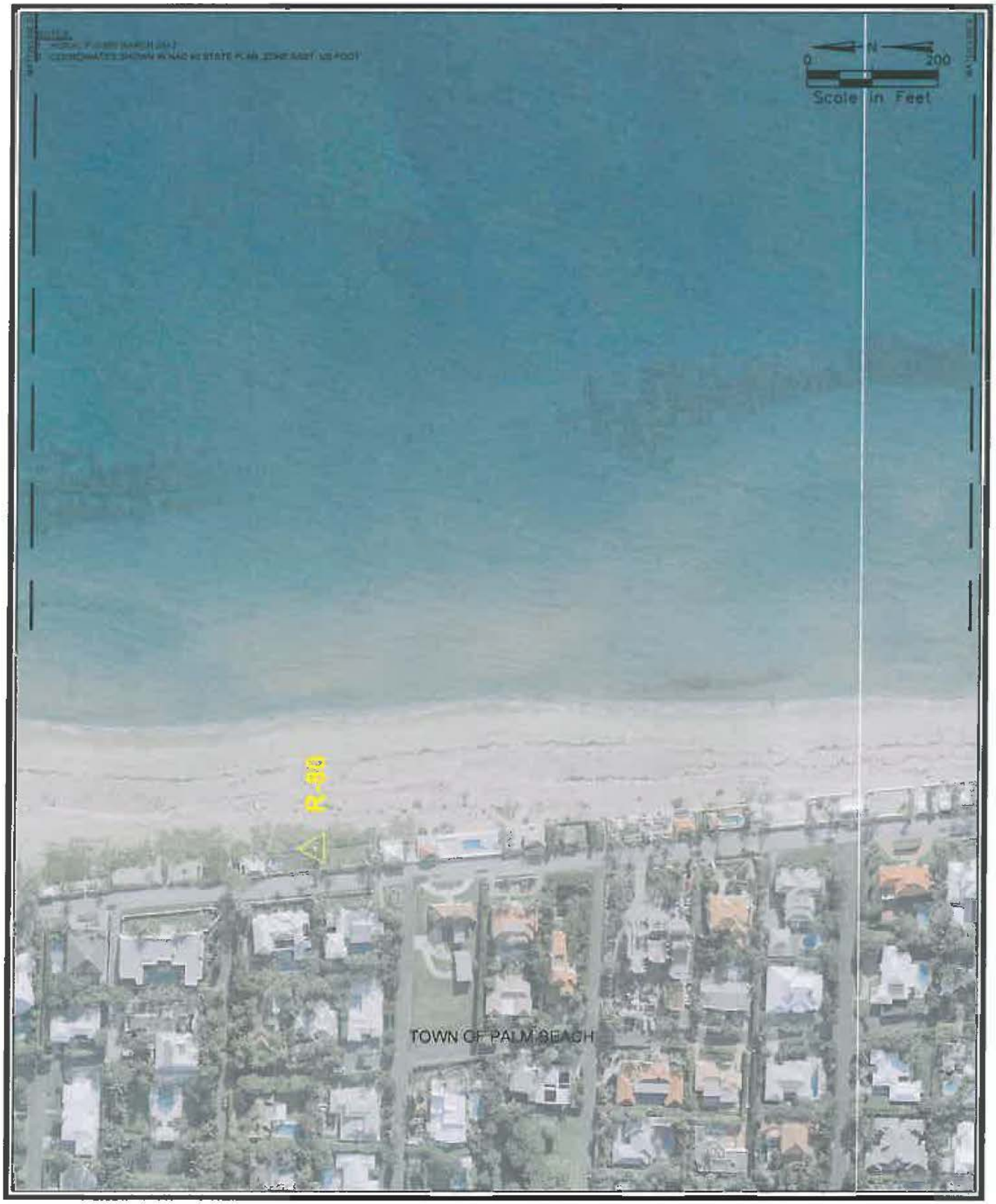

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2012 Aerial Photography and DNR Monuments

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 13

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
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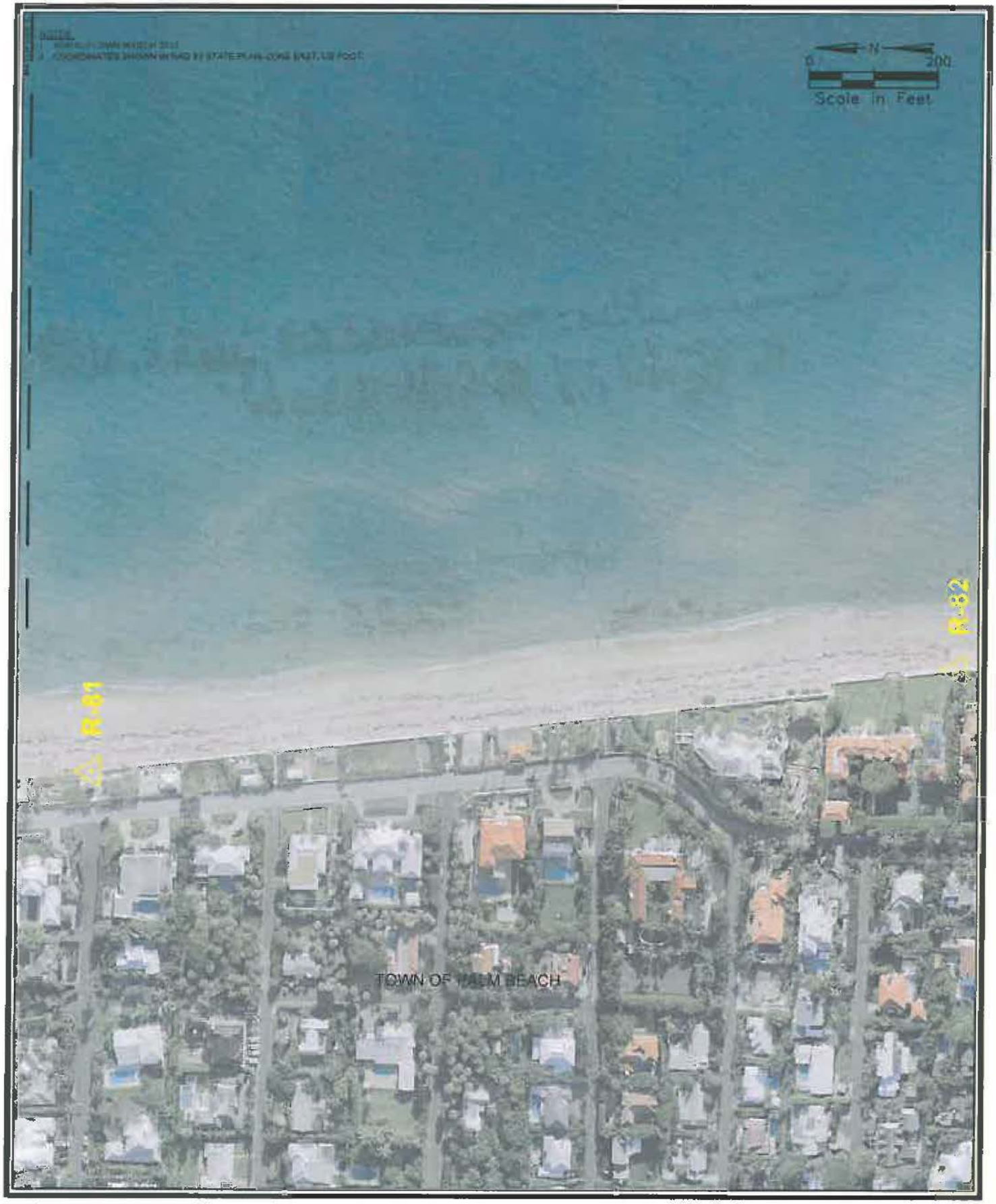

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2012 Aerial Photography
and DNR Monuments

Lake Worth Inlet
Sand Transfer Plant Modification
Town of Palm Beach, Florida

FIGURE 14

JOB NUMBER: 09-2078

ISSUE DATE: 09-22-2011
REVISED DATE: 10-17-2012

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Appendix A-

Mid -Town Nourishment Drawings

2012 Mid-Town Nourishment Project Design

Town of Palm Beach, Florida

NOTE: AERIAL DATED MARCH 2012

Drawings intended for PPEP (B/MA) Regulatory review only. Not for Construction

ATM 2047 Vista Parkway, Suite 201 West Palm Beach, FL 33411 (561) 659-0041 Certificate of Authorization #4669	Location Map	FIGURE 1	Michael Jenkins Ph.D., P.E. Florida License Number 58072 2/12/13
	2012 Mid-Town Nourishment Project Design	JOB NUMBER: 12-2398	
		ISSUE DATE: 11-05-12	

Town of Palm Beach
2012 Mid-Town Nourishment Project Design

	Mon.	Effective Distance (ft)	Density (cy/lf)	Volume (cy)	Average Density (cy/lf)
North Mid-Town	R89		0		
		1,047		17,876	17.07
	R90		34.147		
		1,118		40,170	35.93
	R91		37.714		
		1,154		46,372	40.18
	R92		42.654		
		1,173		72,819	62.08
	R93		81.504		
		1,071		47,646	44.49
	R94		7.47		
	North Total	Effective Distance (ft)		Volume (cy)	Average Density (cy/lf)
		5,563		224,883	40
South Mid-Town	R94+1118		0		
		475		22,121	46.57
	R95		93.141		
		786		74,137	94.32
	R96		95.502		
		1,268		90,280	71.20
	R97		46.895		
		1,212		70,138	57.87
	R98		68.845		
		1,154		90,467	78.39
	R99		87.944		
		988		82,647	83.65
	R100		79.358		
		1,207		90,218	74.75
	R101		70.134		
		1,082		37,942	35.07
	R102		0		
	South Total	Effective Distance (ft)		Volume (cy)	Average Density
		8,172		557,951	68
	Project Total	**Effective Distance (ft)**		**Volume (cy)**	**Average Density**
		13,735		**782,834**	**57**

NOTE: VOLUME BASED ON COMPARISON OF THE PROJECT TEMPLATE TO THE SEPTEMBER 2012 SURVEY.

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Volumes

2012 Mid-Town Nourishment Project Design

FIGURE 3

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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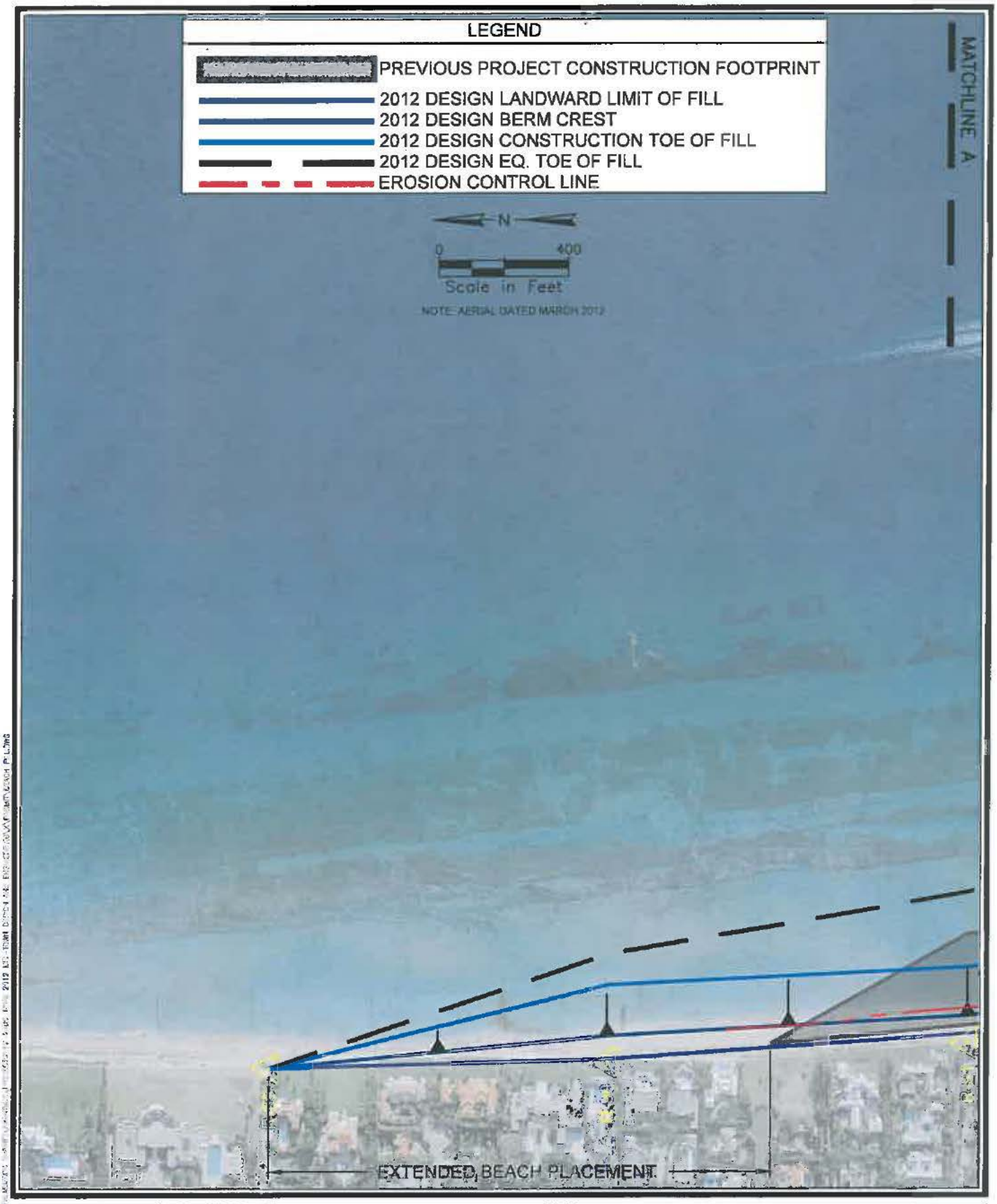

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Mid-Town Design Plan View

2012 Mid-Town Nourishment Project Design

Figure 4

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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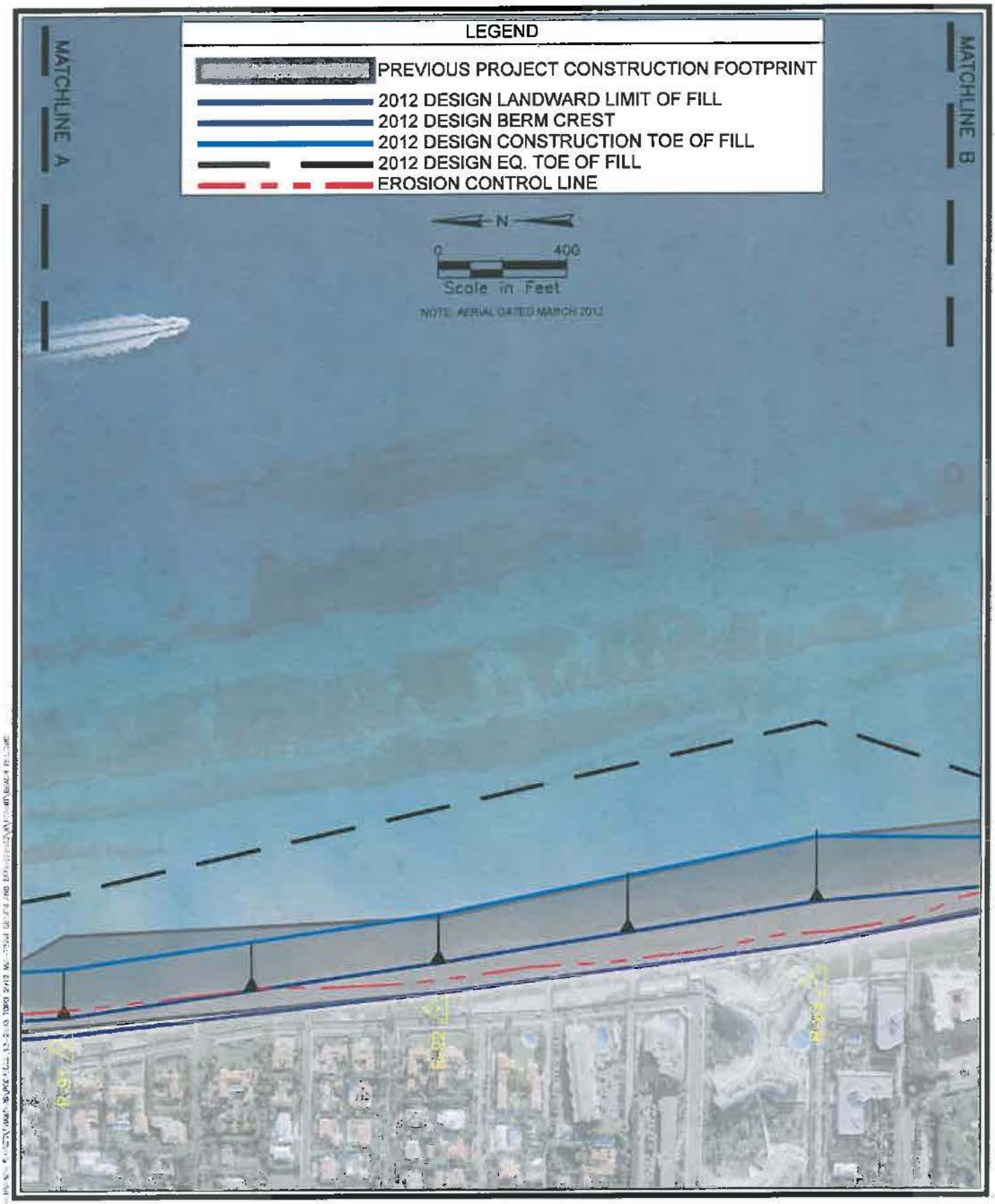

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Mid-Town Design Plan View

2012 Mid-Town Nourishment Project Design

Figure 5

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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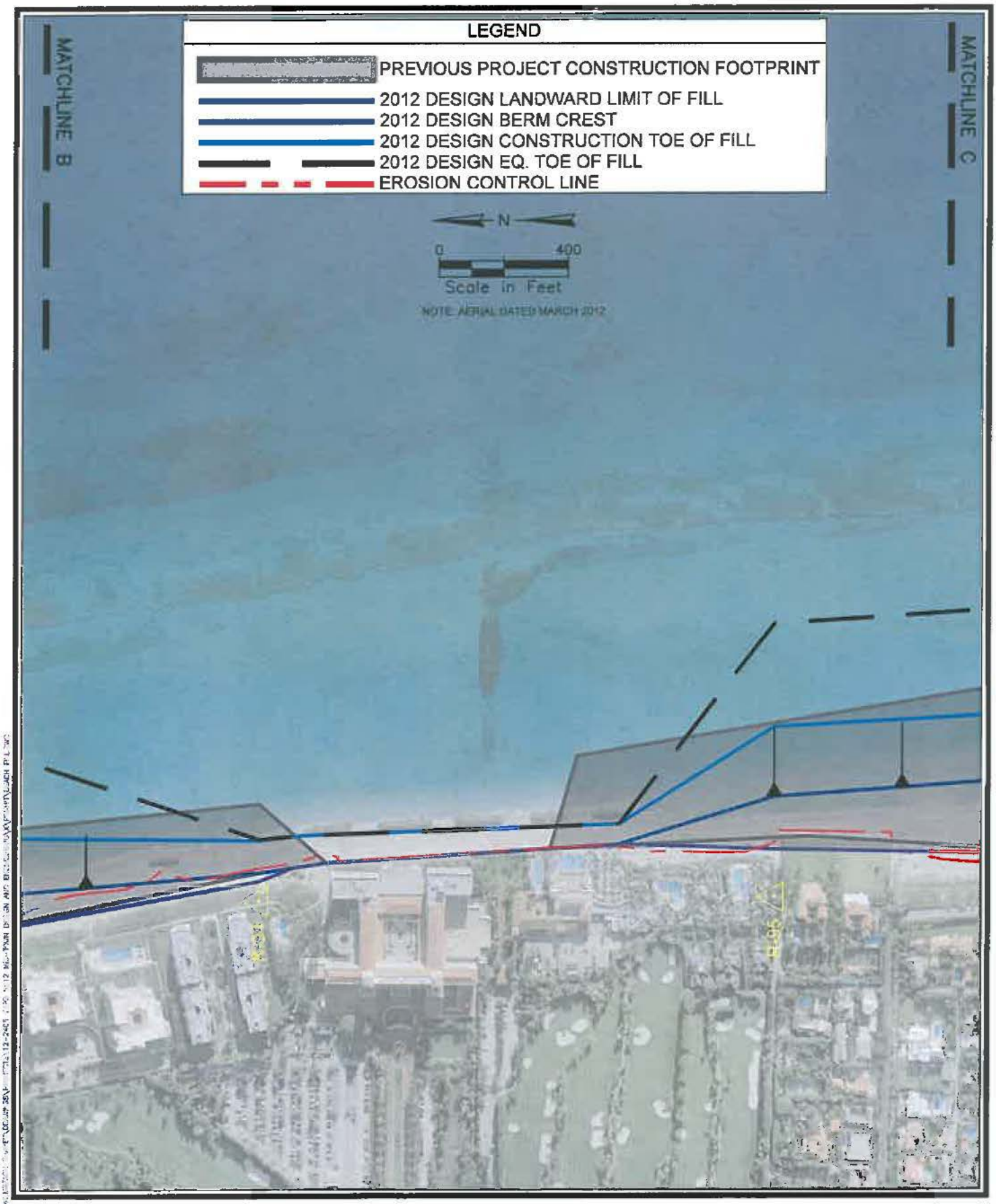

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Mid-Town Design Plan View

2012 Mid-Town Nourishment Project Design

Figure 6

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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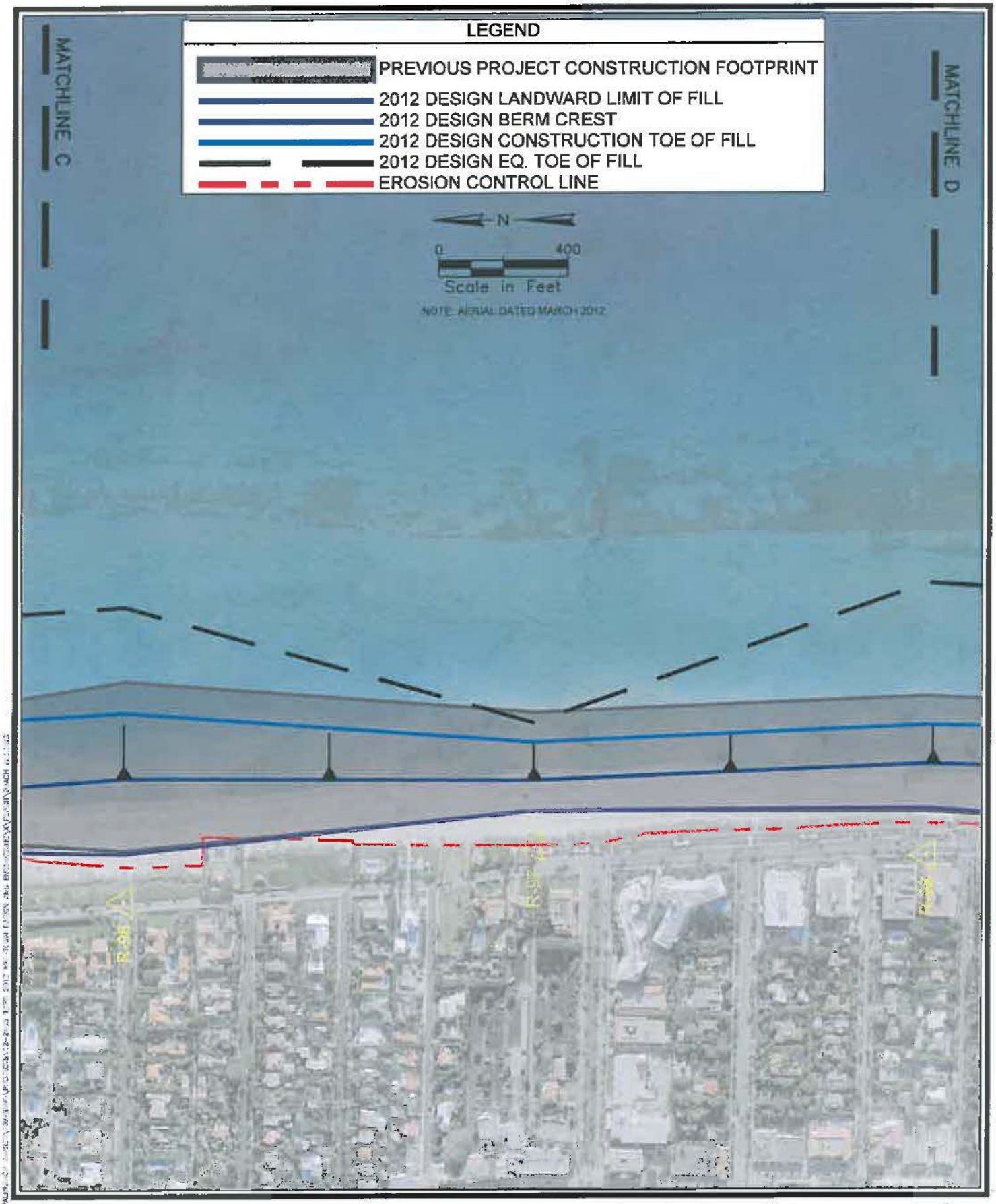

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Mid-Town Design Plan View

2012 Mid-Town Nourishment Project Design

Figure 7

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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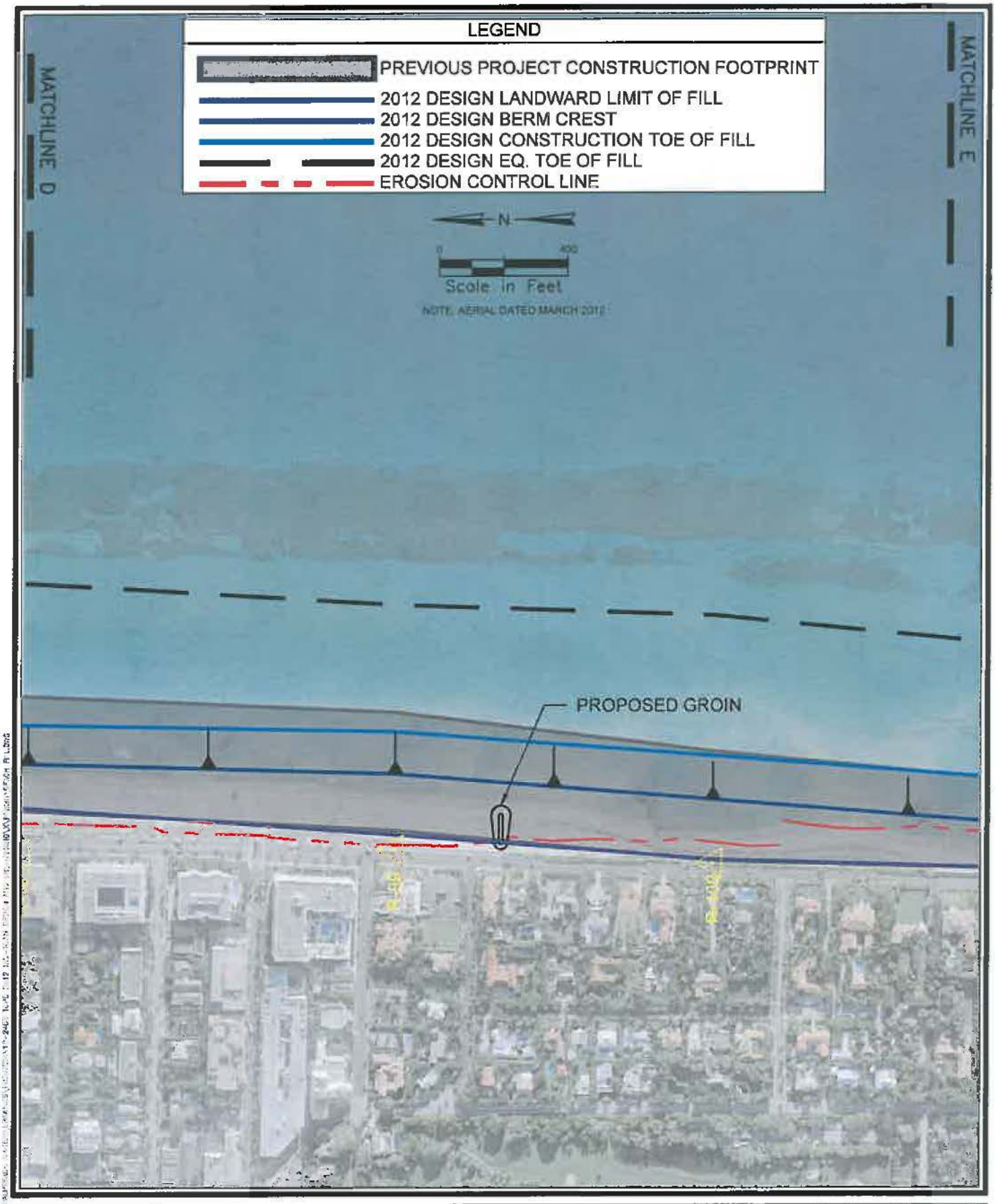

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Mid-Town Design Plan View

2012 Mid-Town Nourishment Project Design

Figure 8

JOB NUMBER: 12-2396

ISSUE DATE: 11-05-12

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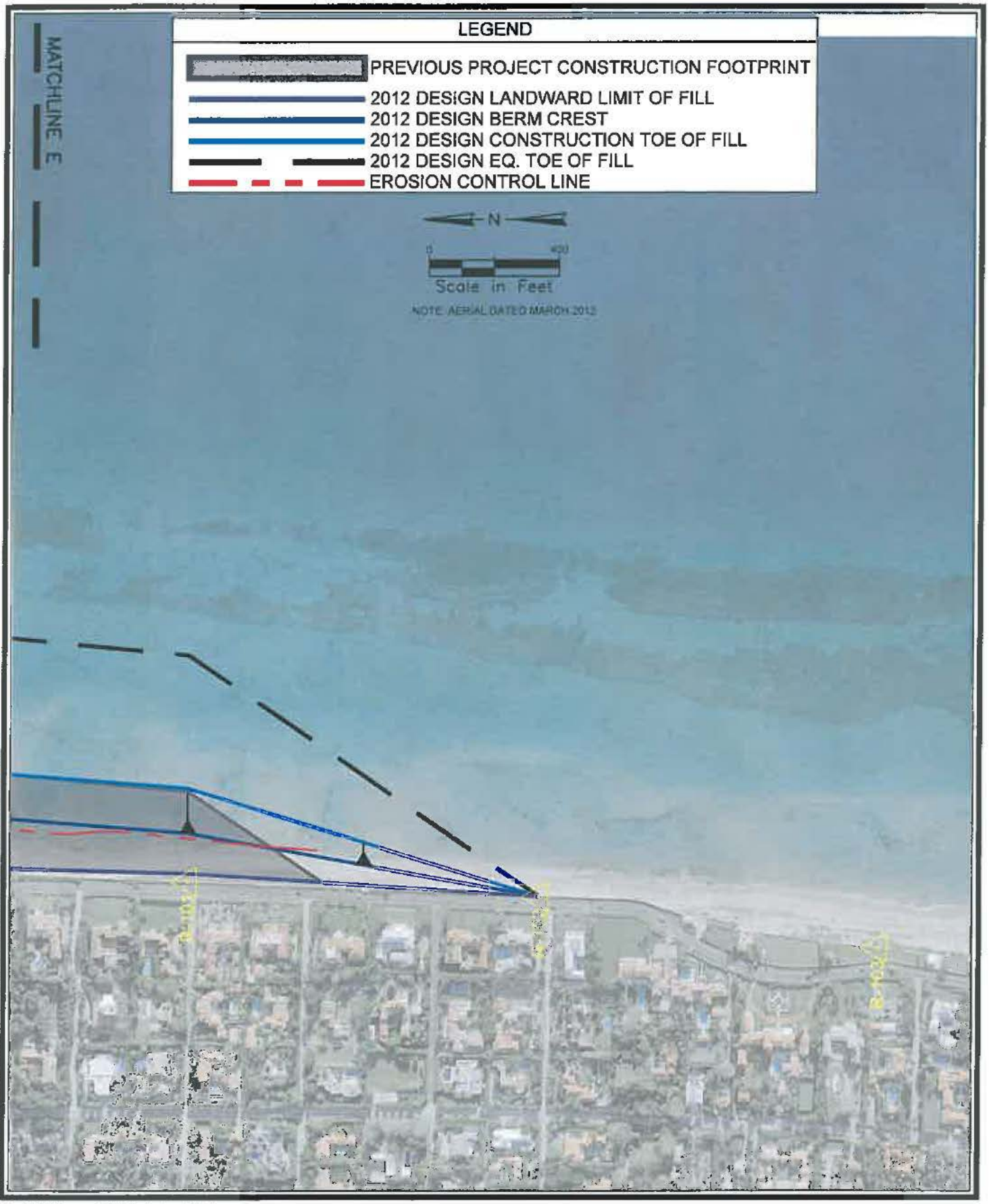
2/12/13



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Mid-Town Design Plan View

2012 Mid-Town Nourishment Project Design

Figure 9

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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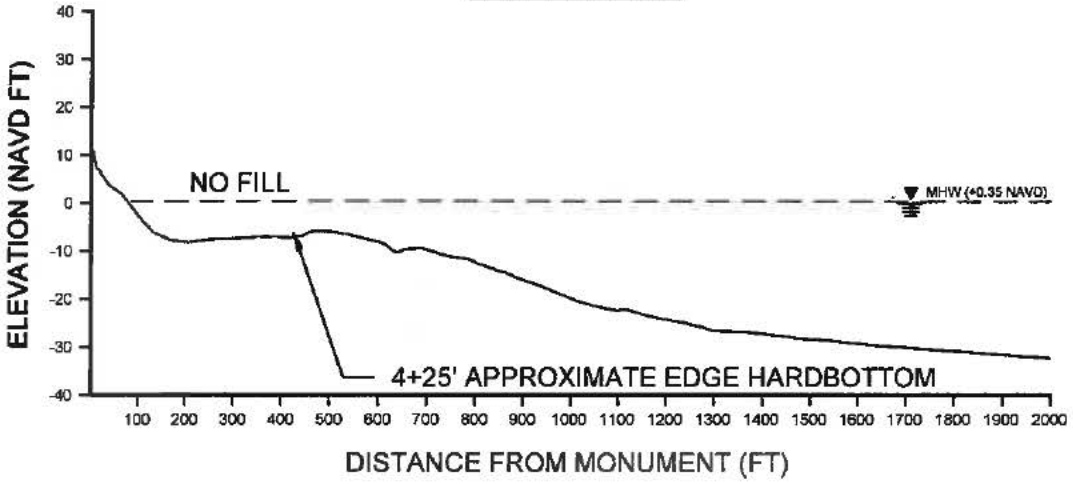
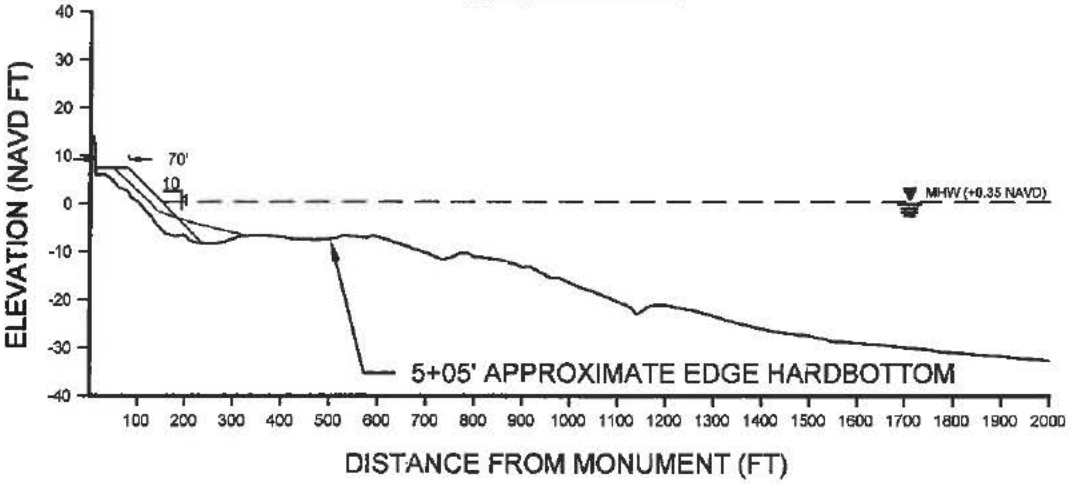
R-89 PROFILE



R-90 PROFILE



LEGEND
*2012 SURVEY PROFILE
SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 10

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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Florida License Number 58072
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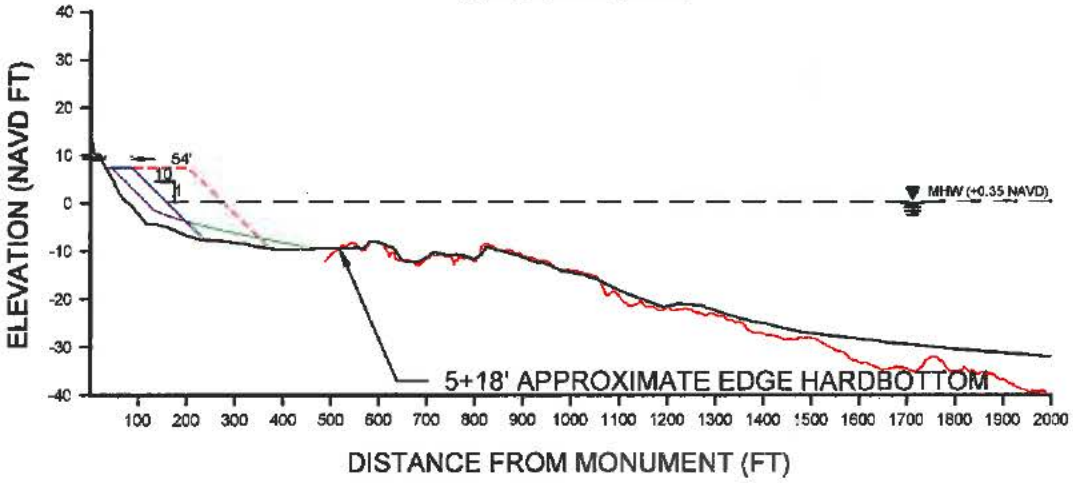
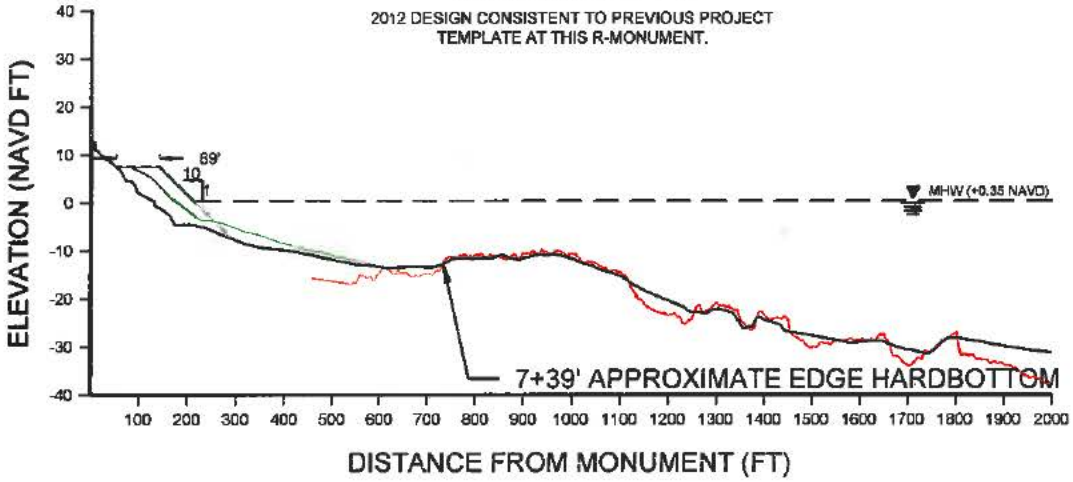
R-91 PROFILE



R-92 PROFILE

2012 DESIGN CONSISTENT TO PREVIOUS PROJECT TEMPLATE AT THIS R-MONUMENT.



LEGEND
*2012 SURVEY PROFILE
SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 11

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ISSUE DATE: 11-05-12

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Notes:

North Mid-Town

1. Beach placement has been extended north from R-90.5 to R-89.
2. Project fill densities have been reduced from the permitted design.
3. A reduced fill template has been adopted in the vicinity of the Breakers Hotel.
4. A 1:10 beach construction slope has been maintained.
5. The equilibrium toe of fill has been calculated based on the Munoz-Perez modified equilibrium profile theory utilizing a mean grain size of 0.25 mm and an Arp/A coefficient of 1.1 except for the profiles at R-92 and R-93.
6. At R-92 and R-93 the equilibrium toe of fill has been calculated based on the average of the modified equilibrium profile (as referenced above) and the translated profile for each monument.
7. Template density has been calculated to avoid direct and secondary impacts to nearshore hardbottom.

South Mid-Town

1. Beach placement has been extended south from R-101.4 to R-102.
2. Project fill densities have been reduced from the permitted design.
3. An additional groin structure has been implemented in the vicinity of R-99.3.
4. A 1:10 beach construction slope has been maintained.
5. The equilibrium toe of fill has been calculated based on the Munoz-Perez modified equilibrium profile theory utilizing a mean grain size of 0.25 mm and an Arp/A coefficient of 1.1.
6. Template density has been calculated to avoid direct and secondary impacts to nearshore hardbottom.

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Notes

2012 Mid-Town Nourishment Project Design

FIGURE 2

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ISSUE DATE: 11-05-12

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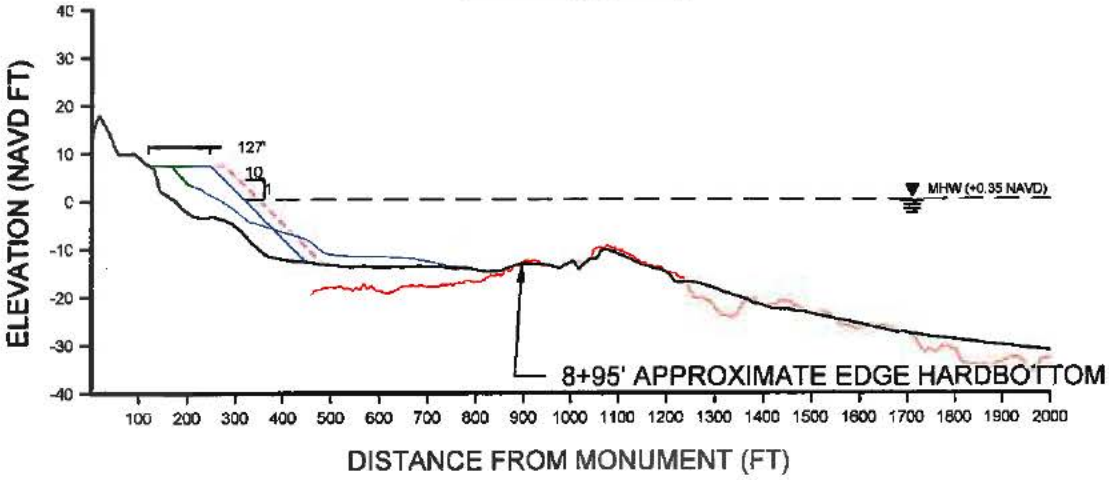
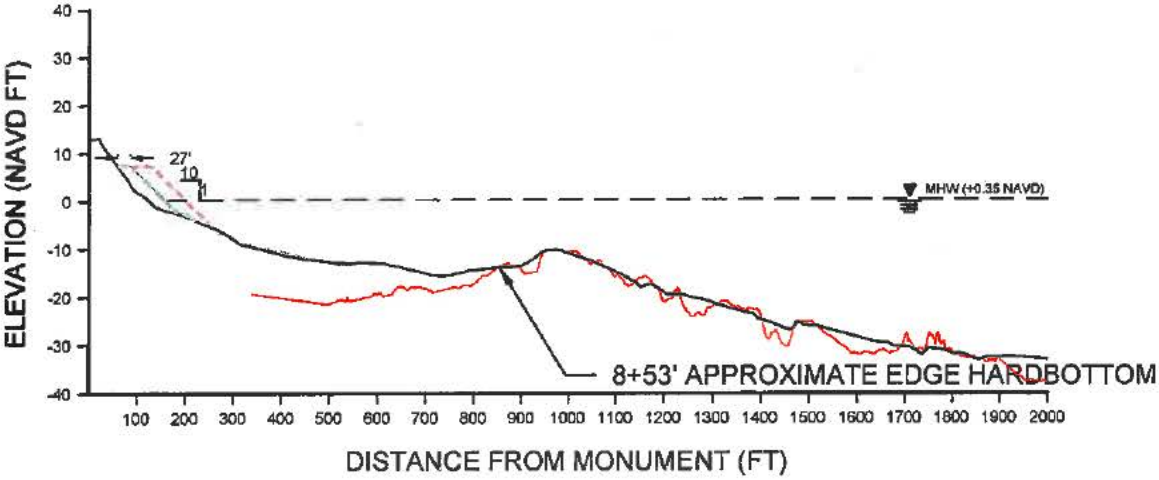
R-93 PROFILE



R-94 PROFILE



LEGEND
*2012 SURVEY PROFILE
SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 12

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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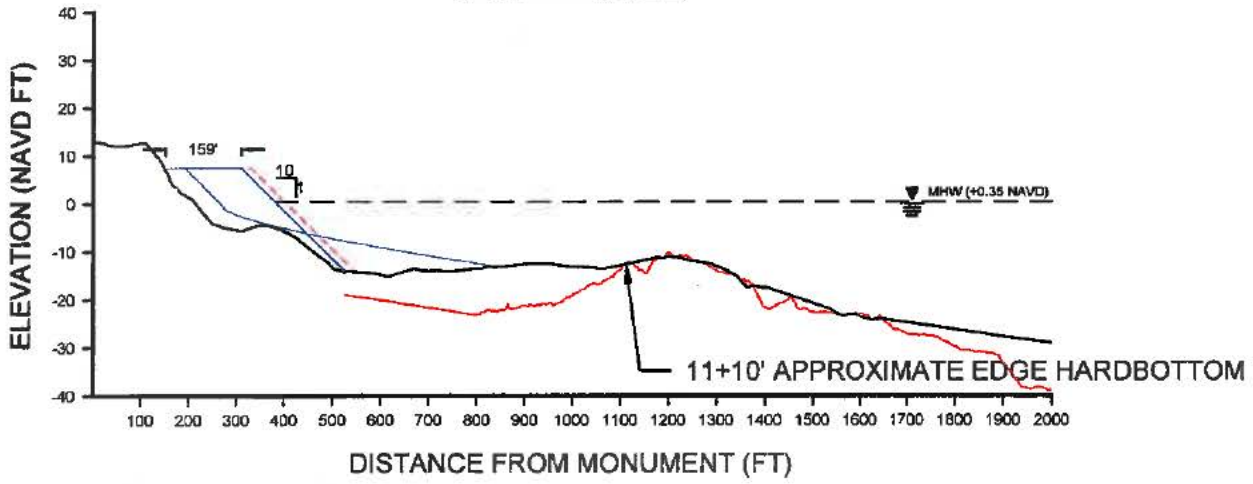
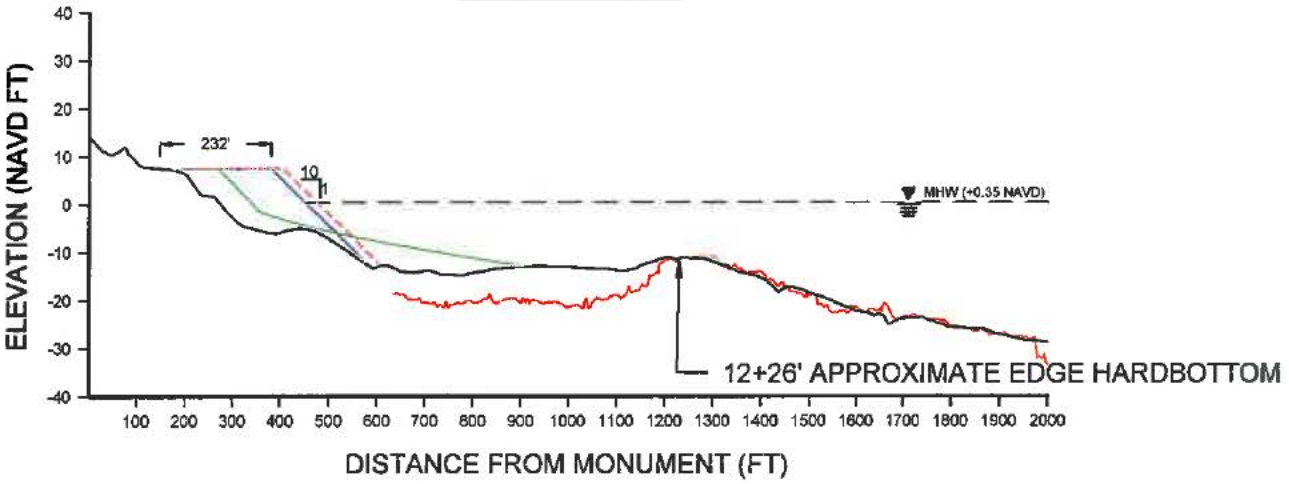
R-95 PROFILE



R-96 PROFILE



LEGEND
*2012 SURVEY PROFILE
SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 13

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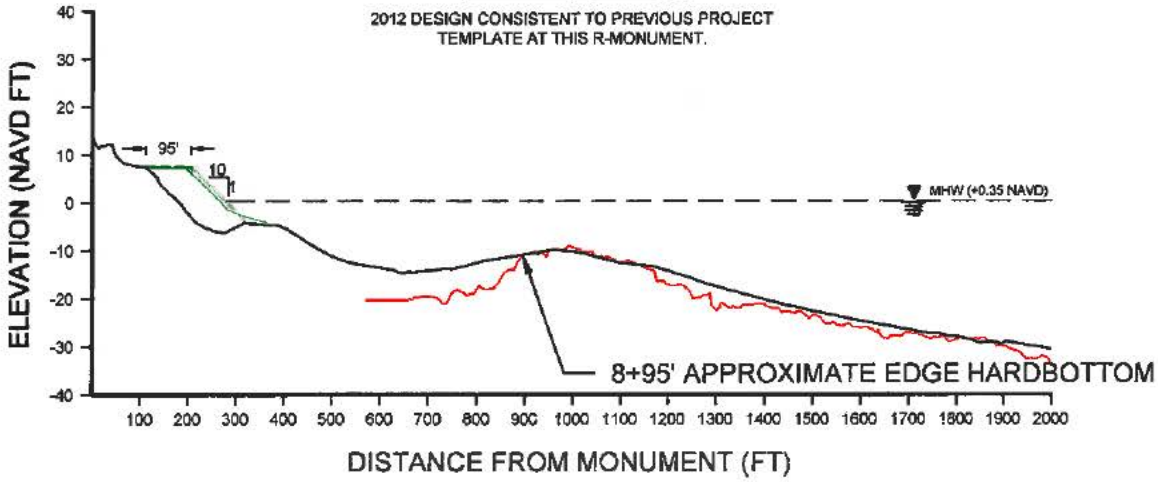
R-97 PROFILE



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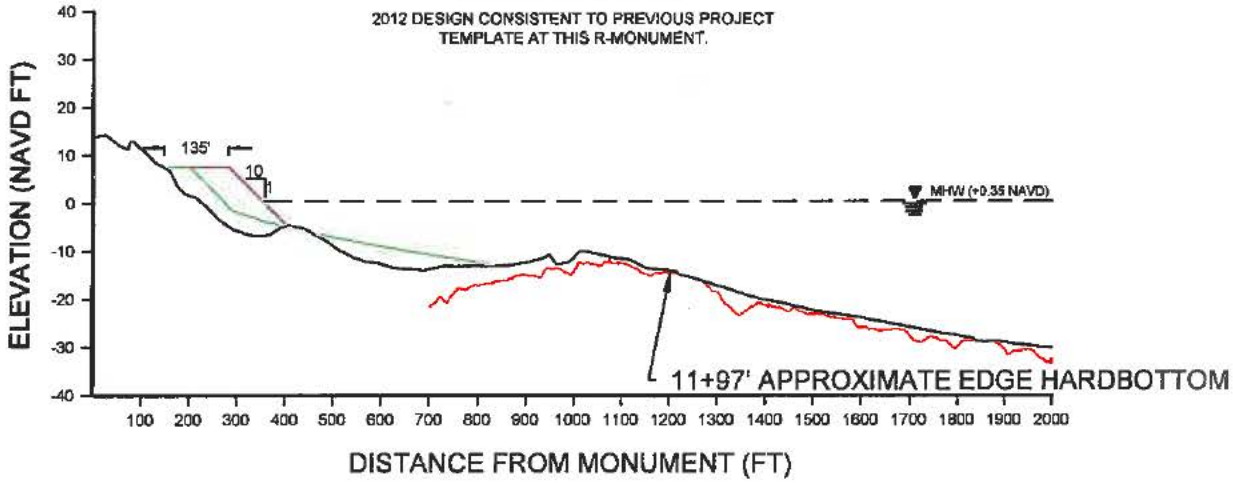

LEGEND
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SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 14

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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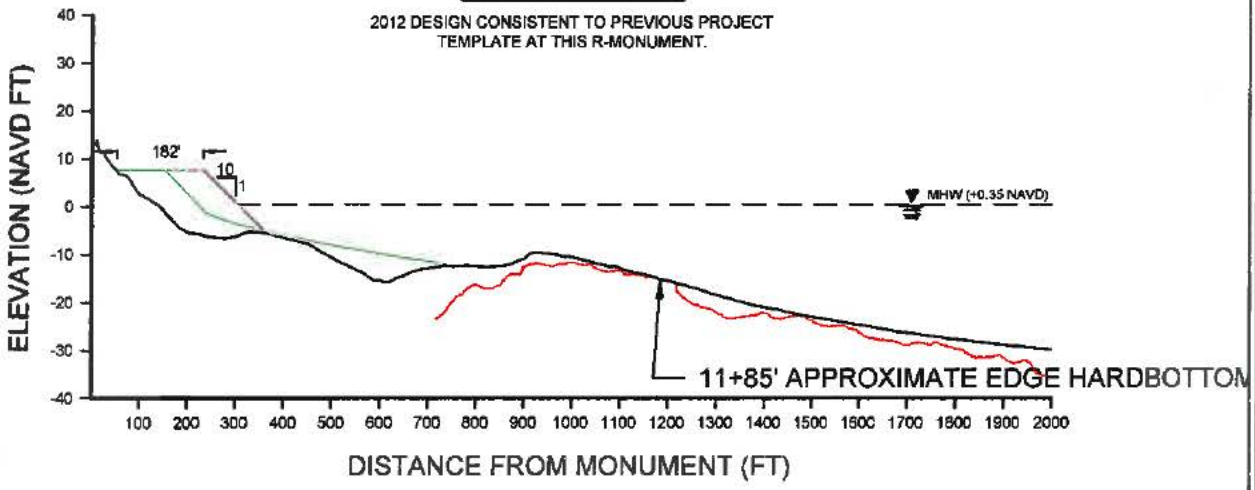
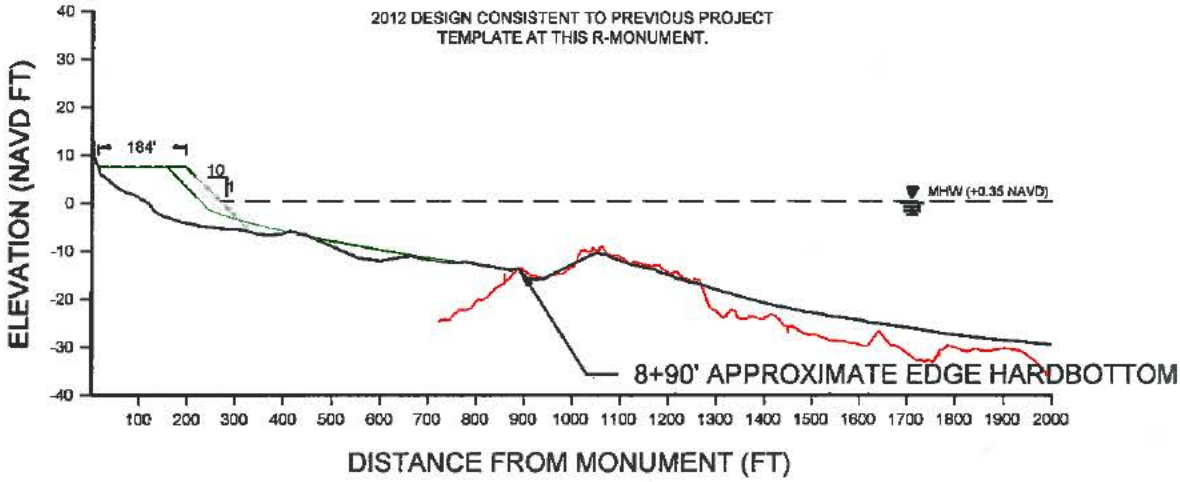
Florida License Number 58072

R-99 PROFILE



R-100 PROFILE



LEGEND
*2012 SURVEY PROFILE
SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 15

JOB NUMBER: 12-2398

ISSUE DATE: 11-05-12

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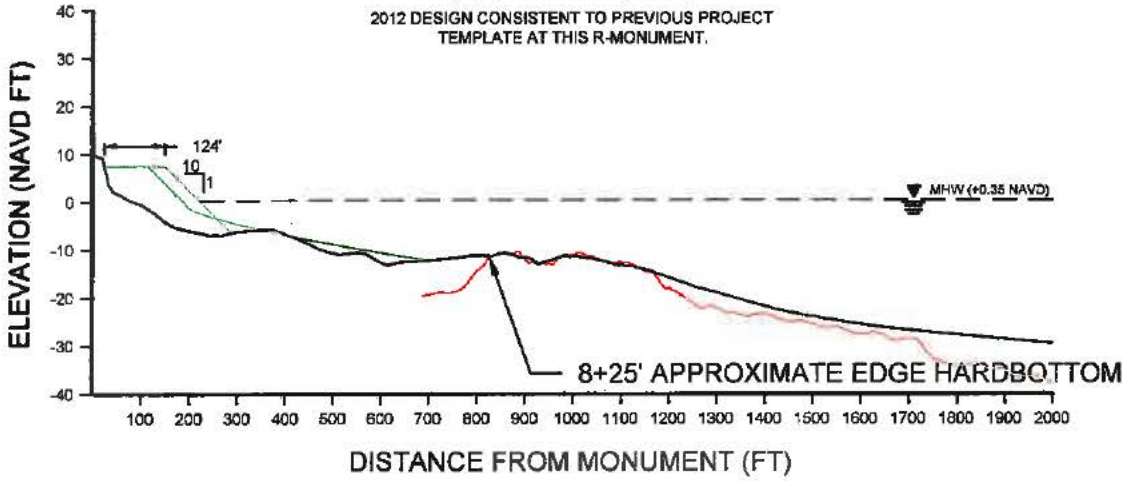
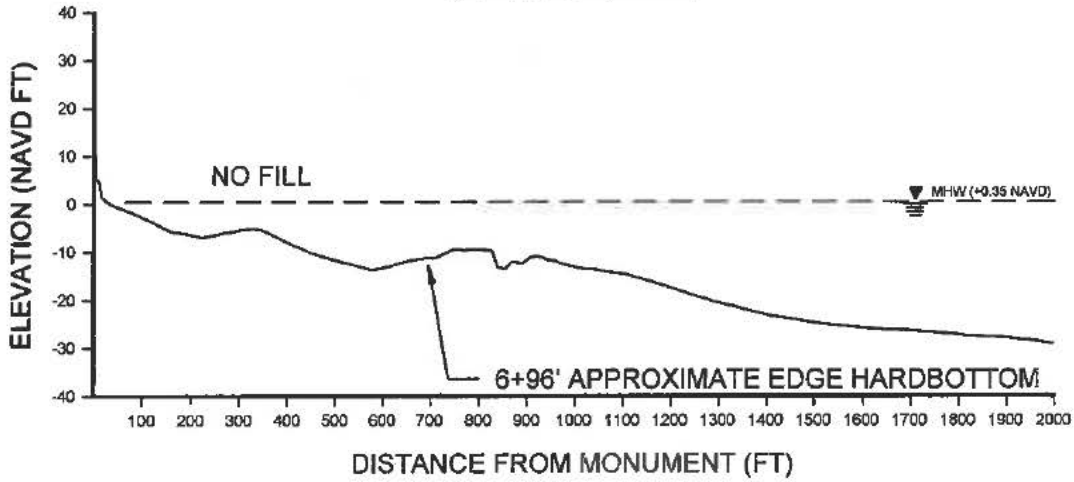
R-101 PROFILE



R-102 PROFILE



LEGEND
*2012 SURVEY PROFILE
SUB-BOTTOM SURVEY (HARDBOTTOM)
PREVIOUS TEMPLATE
CONSTRUCTION TEMPLATE
EQUILIBRIUM TOE OF FILL

* PROFILES TAKEN FROM SURVEY PERFORMED BY SEA DIVERSIFIED INC. IN SEPTEMBER 2012.

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Mid-Town Design Profile View

2012 Mid-Town Nourishment Project Design

Figure 16

JOB NUMBER: 12-2398

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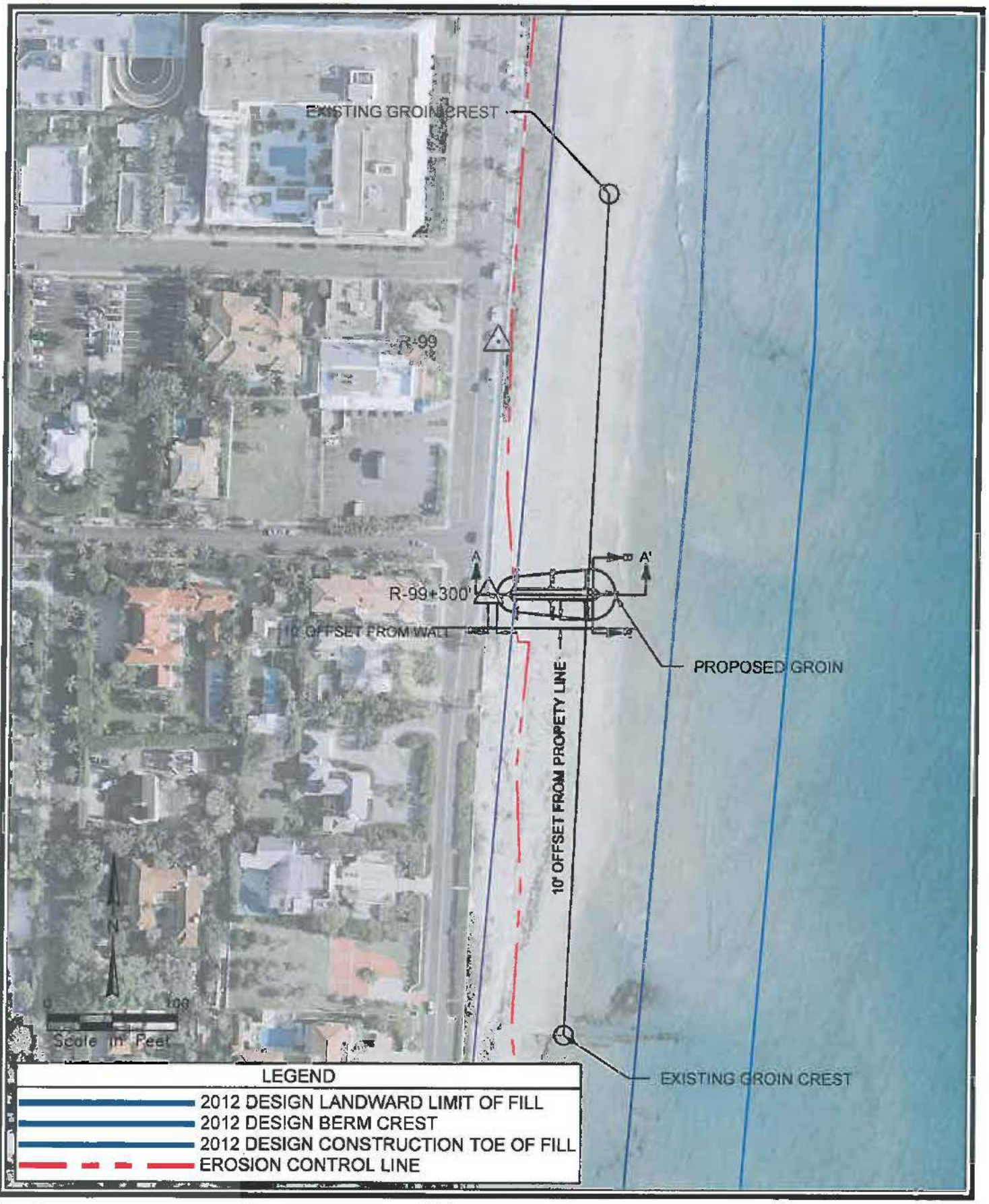

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Proposed Groin Plan View

2012 Mid-Town Nourishment Project Design

Figure 17

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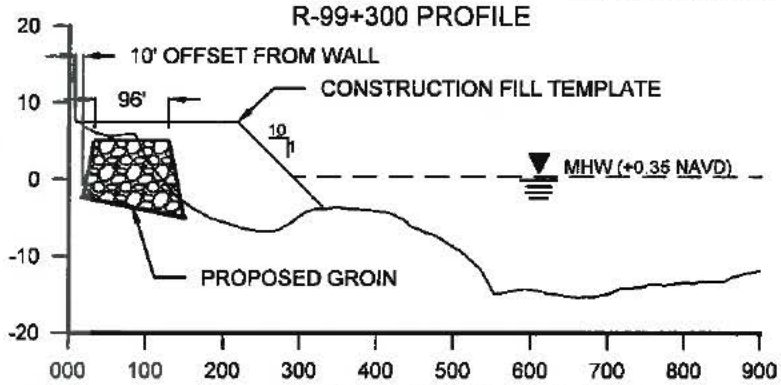
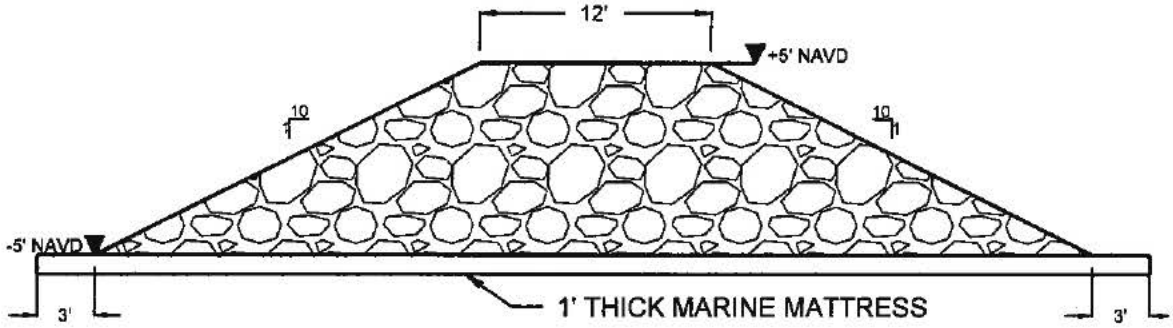
NOTE: VERTICAL EXAGGERATIVE TO SHOW DETAIL



A-A' GROIN PROFILE VIEW

NTS



B-B' GROIN SECTION VIEW

NTS

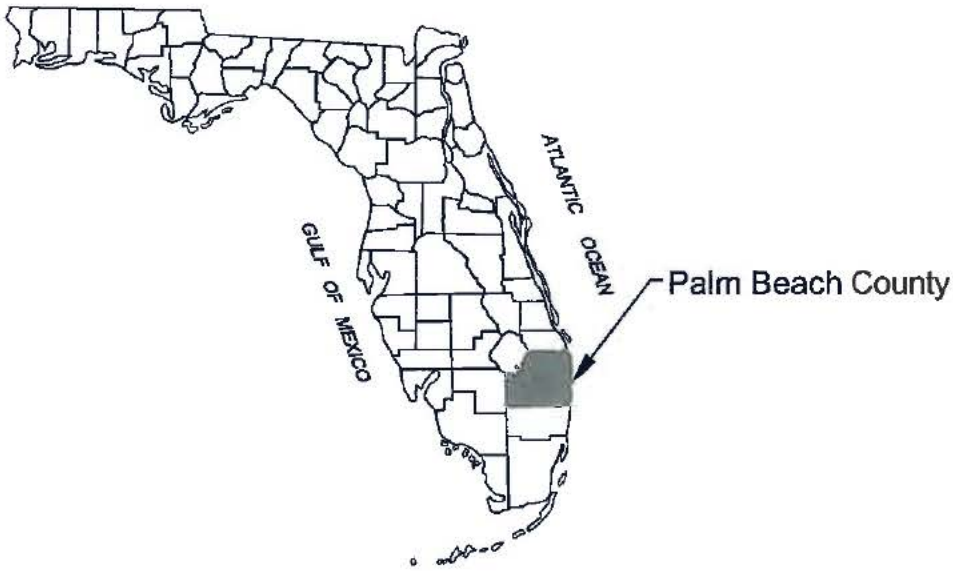
ATM 2047 Vista Parkway, Suite 201 West Palm Beach, FL 33411 (561) 659-0041 Certificate of Authorization #4669	Proposed Groin Profile/Section View 2012 Mid-Town Nourishment Project Design	Figure 18 JOB NUMBER: 12-2398 ISSUE DATE: 11-05-12	Michael Jenkins Ph.D., P.E. Florida License Number 58072 2/12/13

Appendix A-

Phipps Ocean Park Nourishment Drawings

Phipps Ocean Park Beach Restoration

Town of Palm Beach, Florida



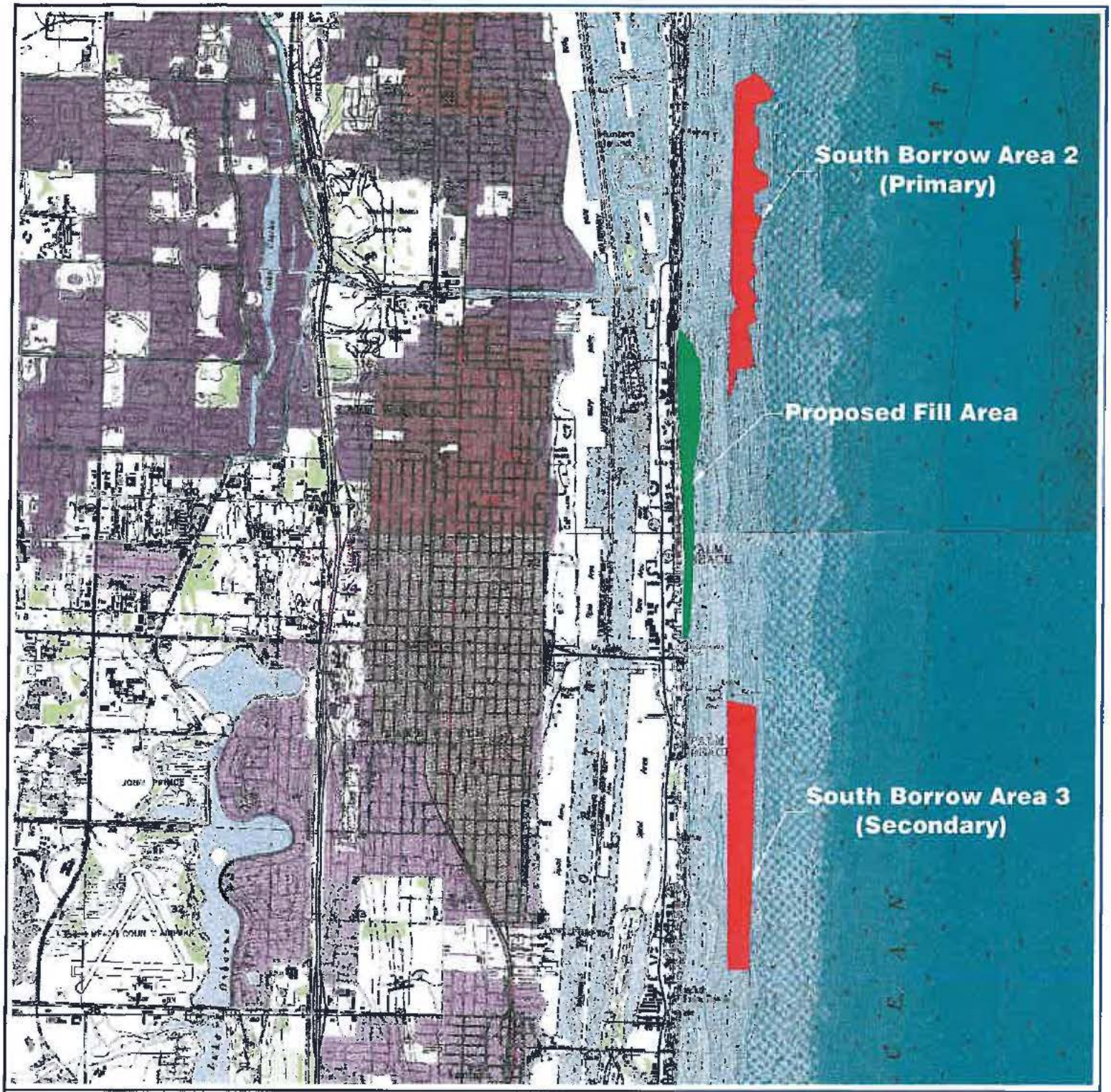
INDEX OF SHEETS

SHEET	DESCRIPTION
1	Cover Sheet
2	Location Map - Fill Area & Offshore Borrow Areas
3	Plan View - Proposed Fill Area
4	Profiles - Proposed Fill Area
5	Profiles - Proposed Fill Area
6	Profiles - Proposed Fill Area
7	Profiles - Proposed Fill Area
8	Profiles - Proposed Fill Area
9	Plan View - South Borrow Area 2
10	Cross-Section A-A' & E-E' - South Borrow Area 2
11	Plan View - South Borrow Area 3
12	Cross-Section A-A' - South Borrow Area 3
13	General Notes

Michael P. Walther 4/30/13

MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH	Cover Sheet	ENGR	DRAWN	SHEET 1
Certificate of Authorization Number: 00004195 3625 20th Street, Vero Beach, Florida 32960 VERO BEACH SARASOTA MELBOURNE AUSTIN	Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	MPW	AQN	OF 13 SHEETS
		LAST REVISION	DATE 04/30/2013	JOB NO. 28115.06



Notes:

1. Digital Raster Graphics (DRG) obtained from Labins.
2. Location of Proposed Borrow Areas adapted from "Figure 4b & Figure 4c" of "Town of Palm Beach Offshore Sand Search Investigations South Area Summary Report" dated April 2012 by ATM.

4000 0 2000 4000
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Michael P. Walther 4/30/13

MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH Certificate of Authorization Number: 00004195 3625 20th Street, Vero Beach, Florida 32960 VERO BEACH SARASOTA MELBOURNE AUSTIN	Location Map - Fill Area & Offshore Borrow Areas Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	ENGR MPW LAST REVISION	DRAWN AQN DATE 04/30/2013	SHEET 2 OF 13 SHEETS JOB NO. 28115.06

Notes:

1. Existing Groins, Seawalls & Revetment locations from (a) drawing titled "Groin and Armoring Inventory Atlantic Ocean Frontage Town of Palm Beach, Palm Beach County Florida" by Isiminger & Stubbs Engineering, INC 2010 and (b) "Palm Beach County Atlas Shoreline Maintenance Plan" by Olsen & Associates 1987.
2. Aerials provided by Town of Palm Beach; aerial date is October 2011.
3. Hardbottom digitized by Coastal Tech from 1999 aerial photographs.

Legend:

- Existing Seawall
- 1999 Existing Hardbottom
- Mean High Water Line Dec. 2012
- DEP Reference Monuments
- Proposed Beach Fill

0 400 800
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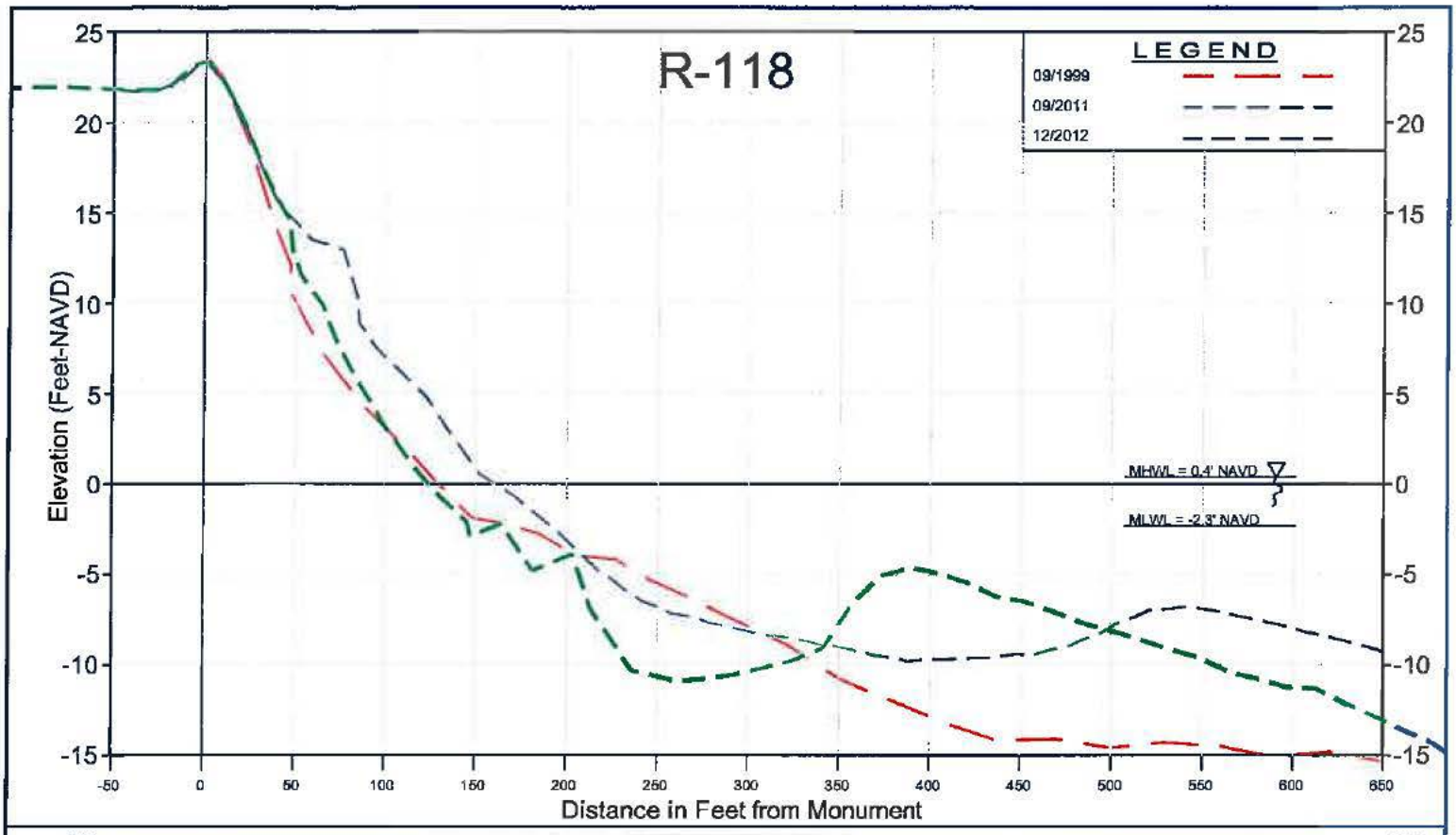
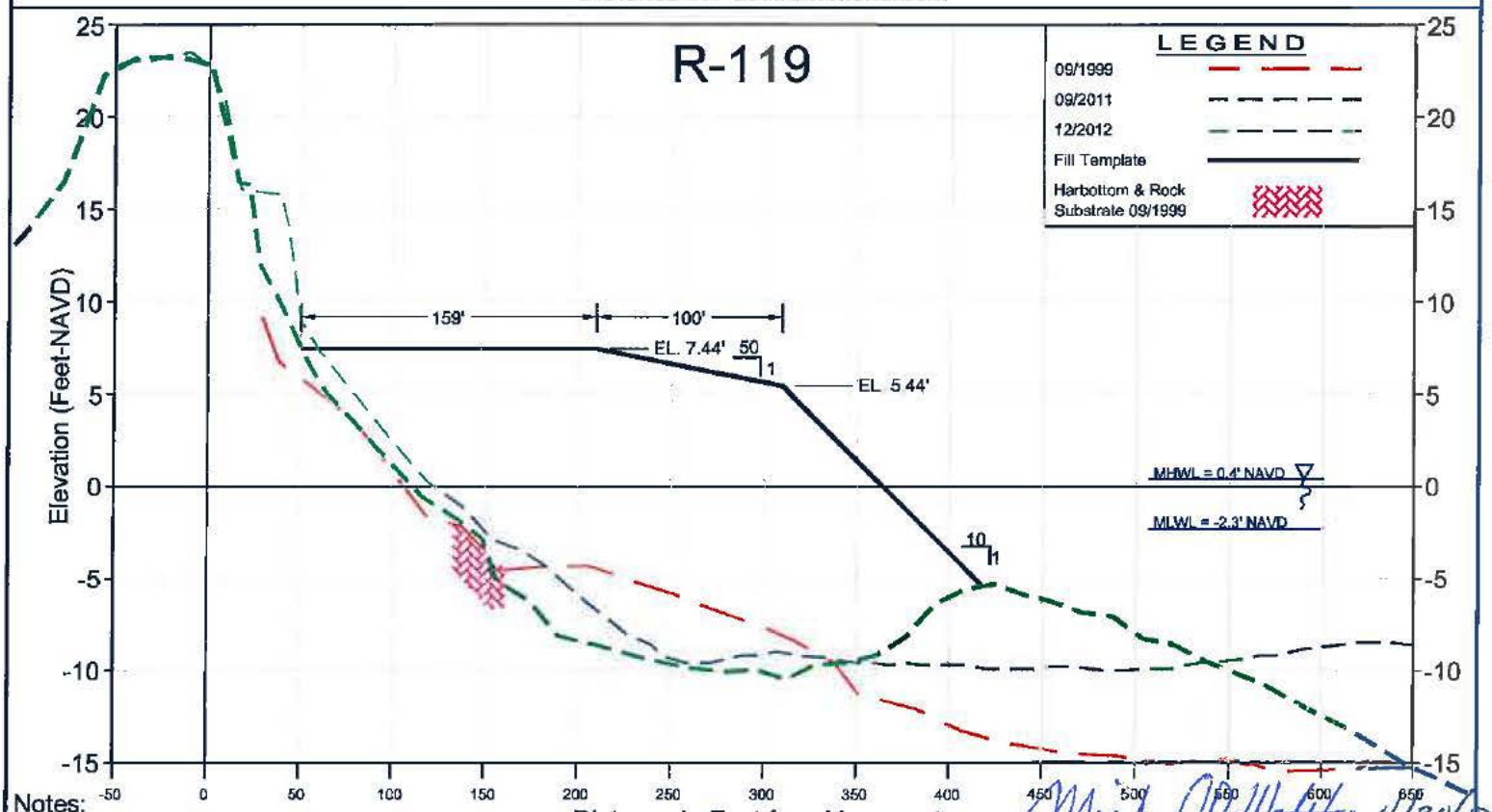
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Plan View - Proposed Fill Area

Phipps Ocean Park Beach Restoration
Town of Palm Beach, Florida

ENGR	DRAWN	SHEET
MPW	AQN	3 OF 13 SHEETS
LAST REVISION	DATE	JOB NO.
	04/30/2013	28115.06





Notes:

1. September 1999 profile data from M&E.
2. September 2011 & 2012 profile data from Sea Diversified.
3. Hardbottom digitized by Coastal Tech from 1999 aerial photographs.

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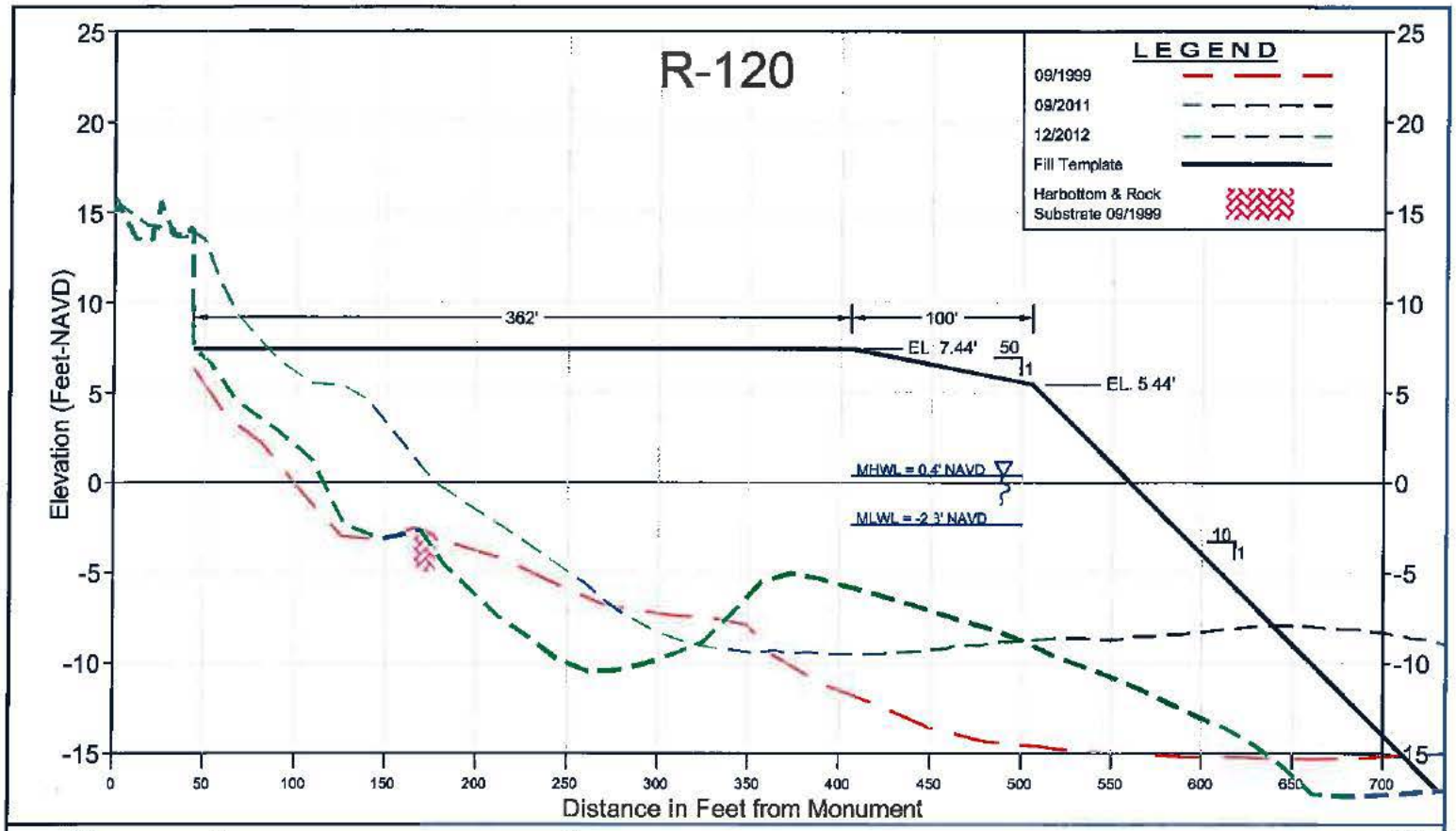
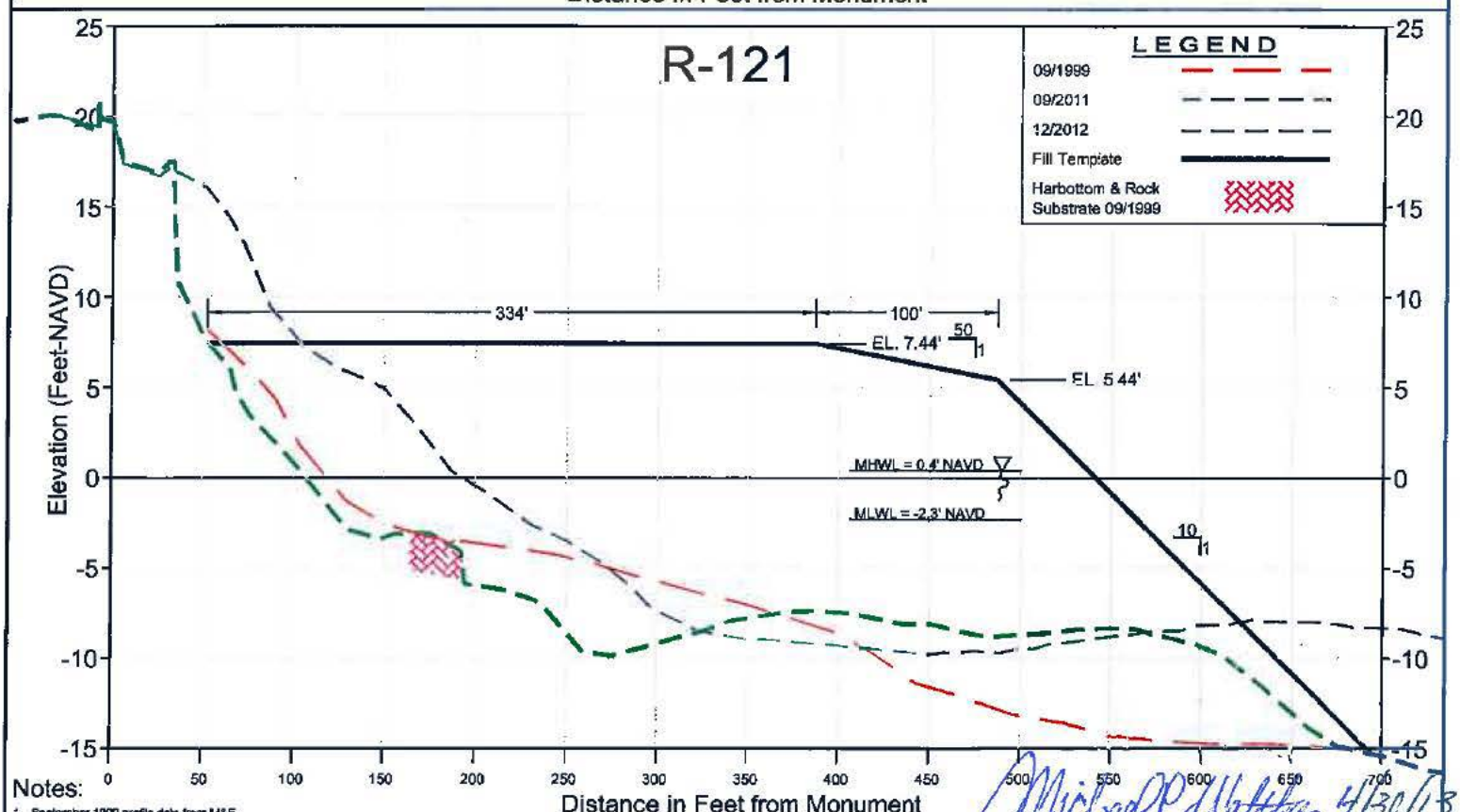
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Profiles - Proposed Fill Area

Phipps Ocean Park Beach Restoration
Town of Palm Beach, Florida

ENGR	DRAWN	SHEET
MPW	AQN	4 OF 13 SHEETS
LAST REVISION	DATE	JOB NO.
	04/30/2013	28115.06





Notes:

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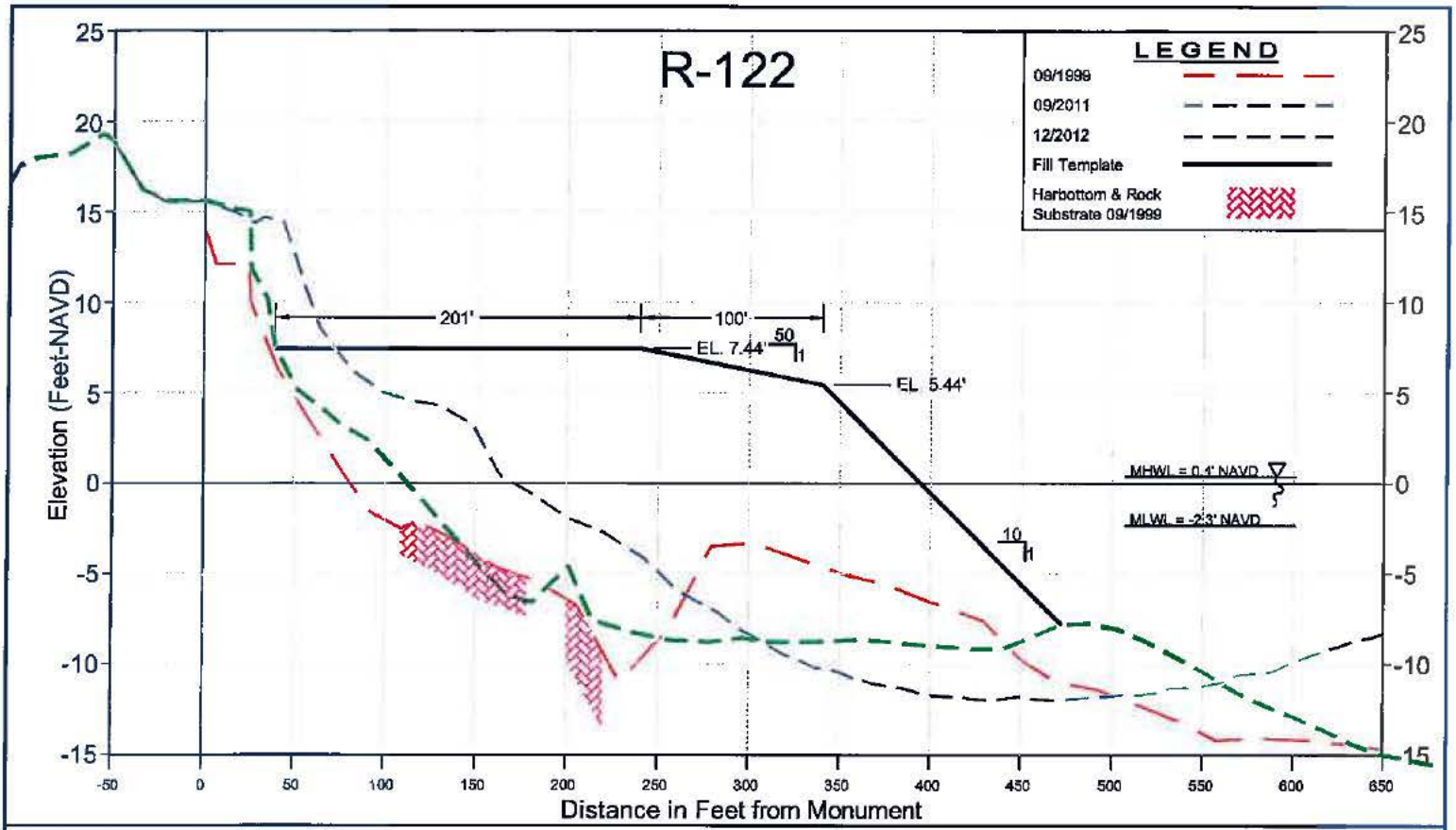
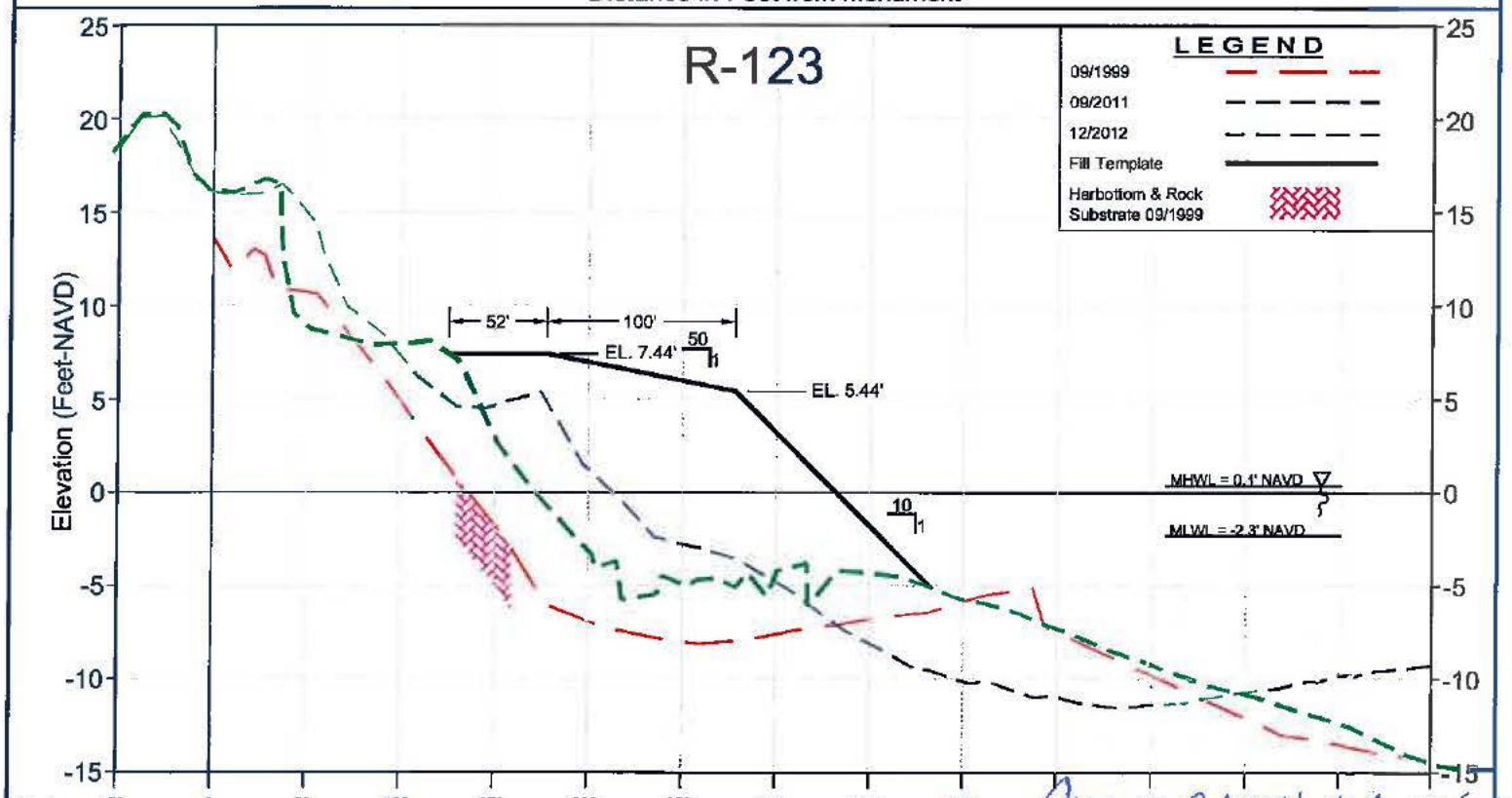
COASTAL TECH Certificate of Authorization Number: 00004195 3625 20th Street, Vero Beach, Florida 32960 VERO BEACH SARASOTA MELBOURNE AUSTIN	Profiles - Proposed Fill Area Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	ENGR MPW LAST REVISION	DRAWN AQN DATE 04/30/2013	SHEET 5 OF 13 SHEETS JOB NO. 28115.06





Notes:

1. September 1999 profile data from M&E.
2. September 2011 & 2012 profile data from Sea Diversified.
3. Hardbottom digitized by Coastal Tech from 1999 aerial photographs.

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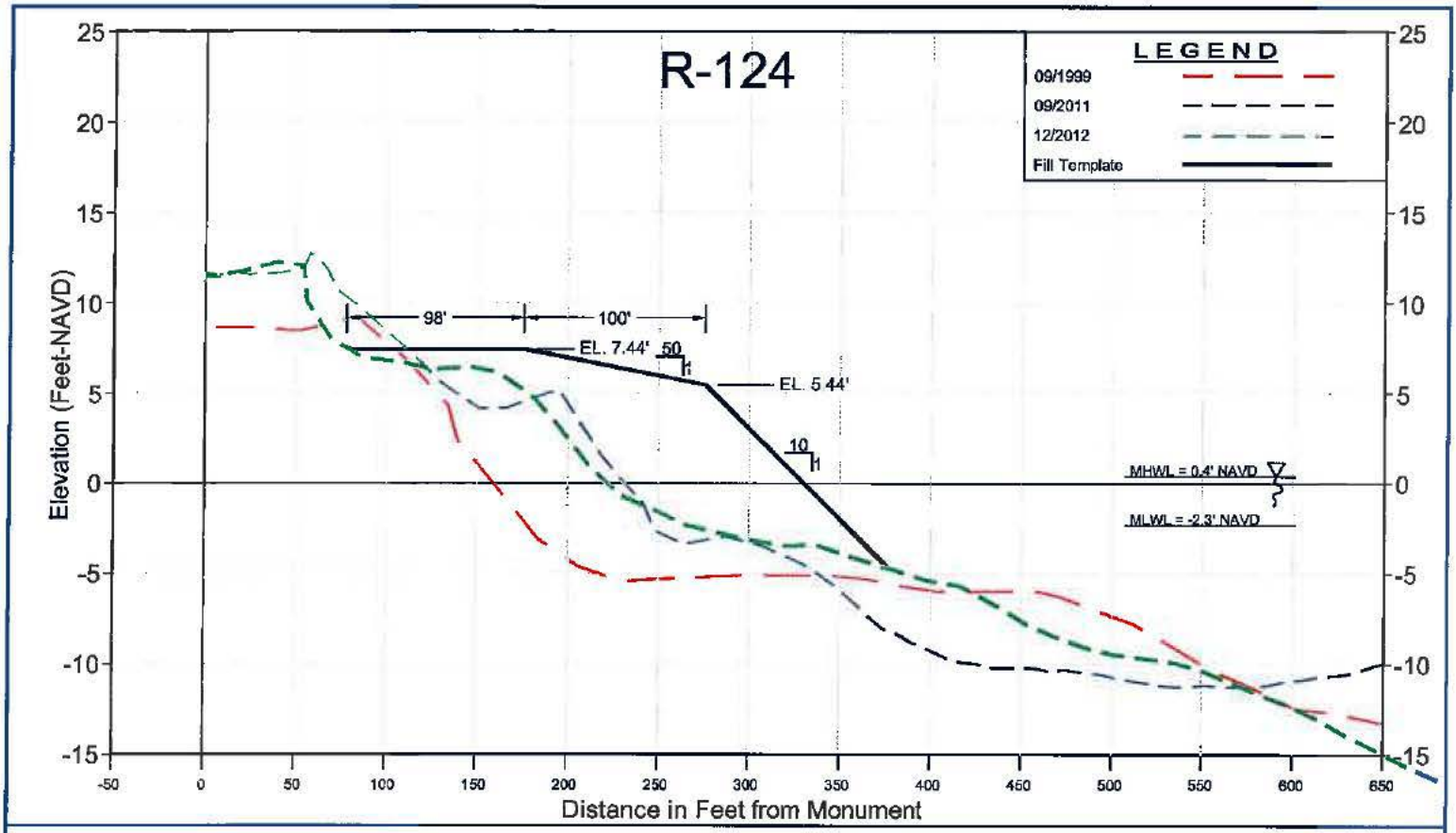
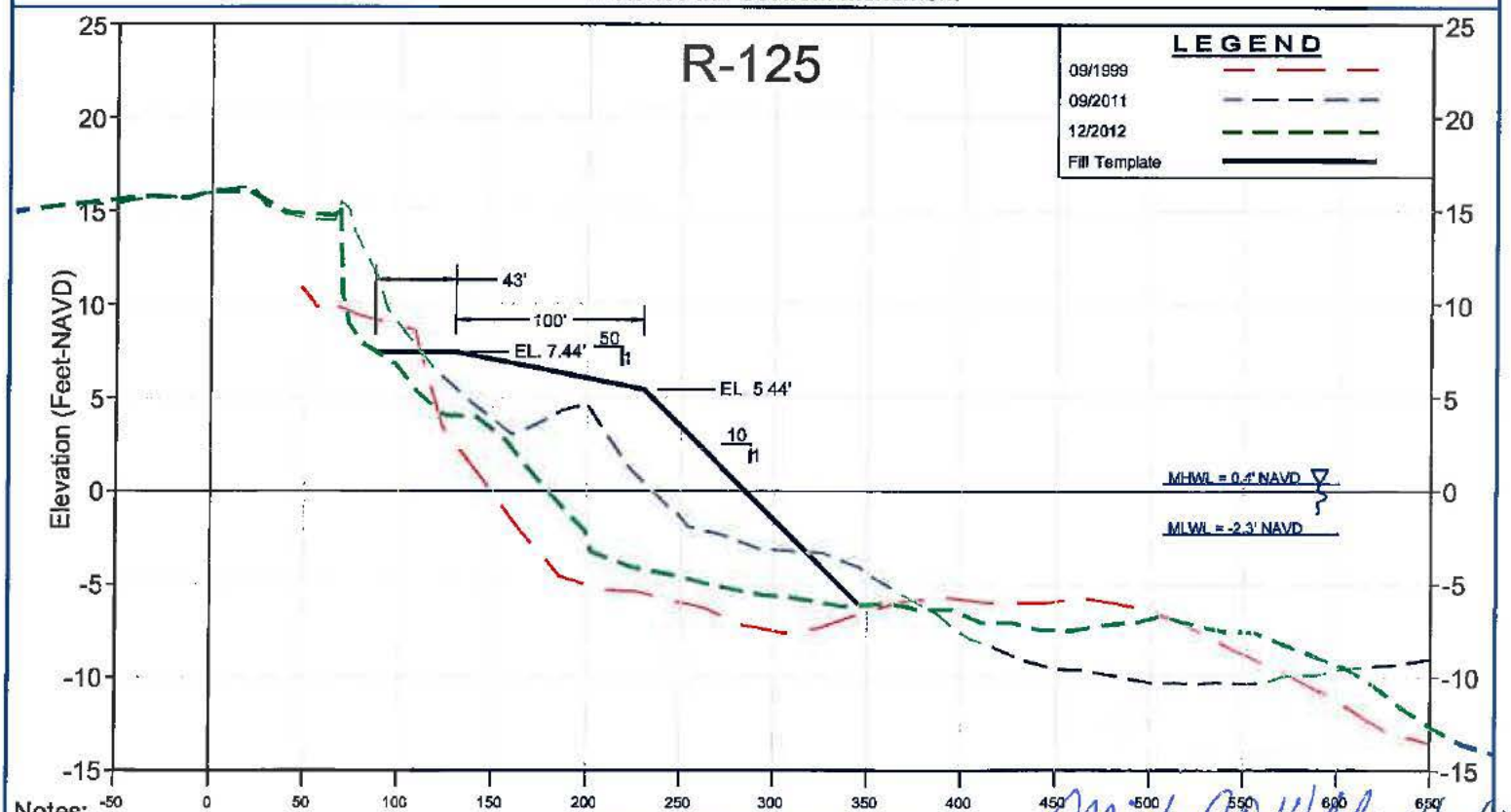
Certificate of Authorization Number 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Profiles - Proposed Fill Area

Phipps Ocean Park Beach Restoration
Town of Palm Beach, Florida

ENGR	DRAWN	SHEET
MPW	AQN	6 OF 13 SHEETS
LAST REVISION	DATE	JOB NO.
	04/30/2013	28115.06





Notes:
1. September 1999 profile data from M&E.
2. September 2011 & 2012 profile data from Sea Diversified.

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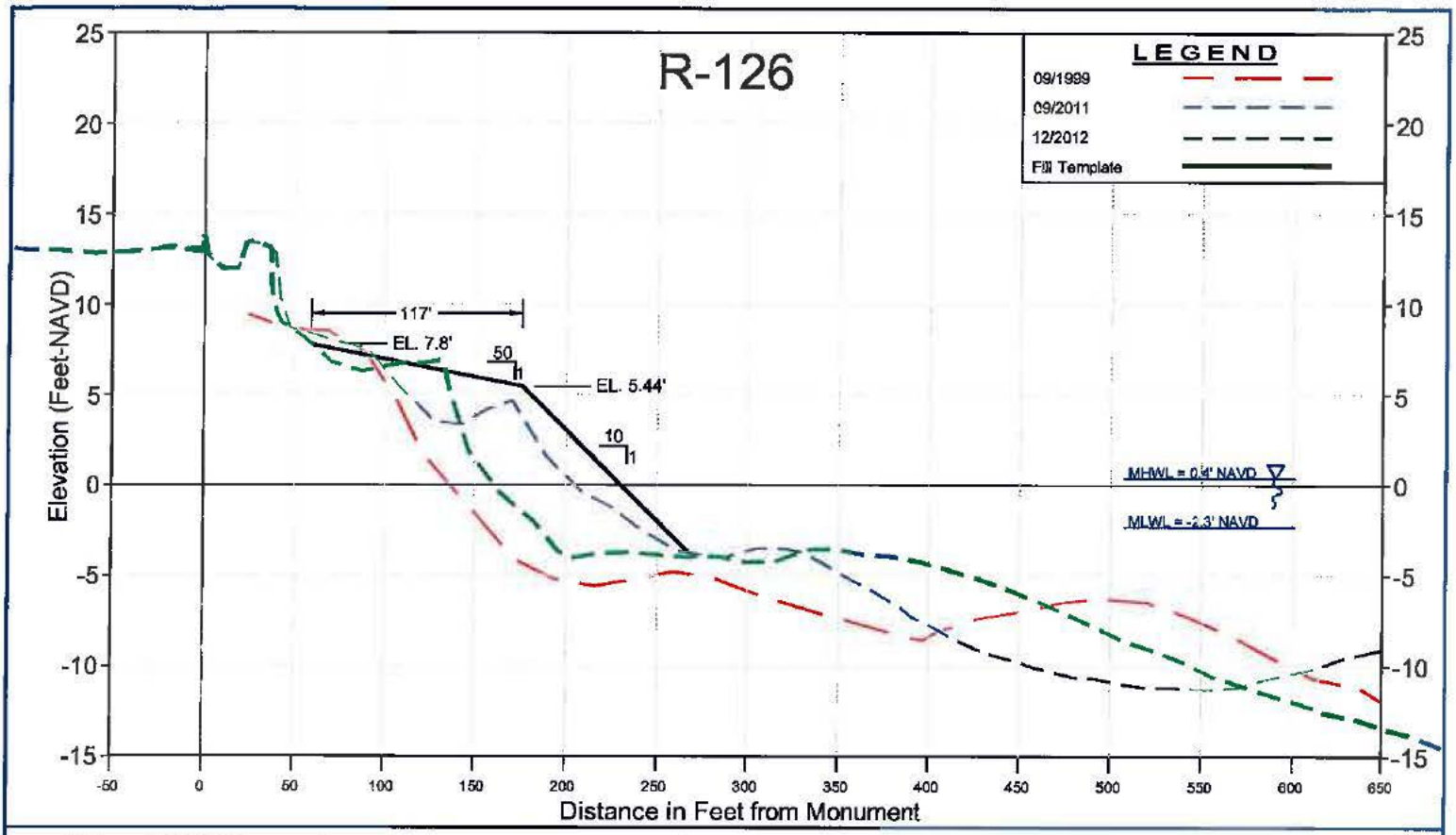
Michael P. Walther, 4/30/13
MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

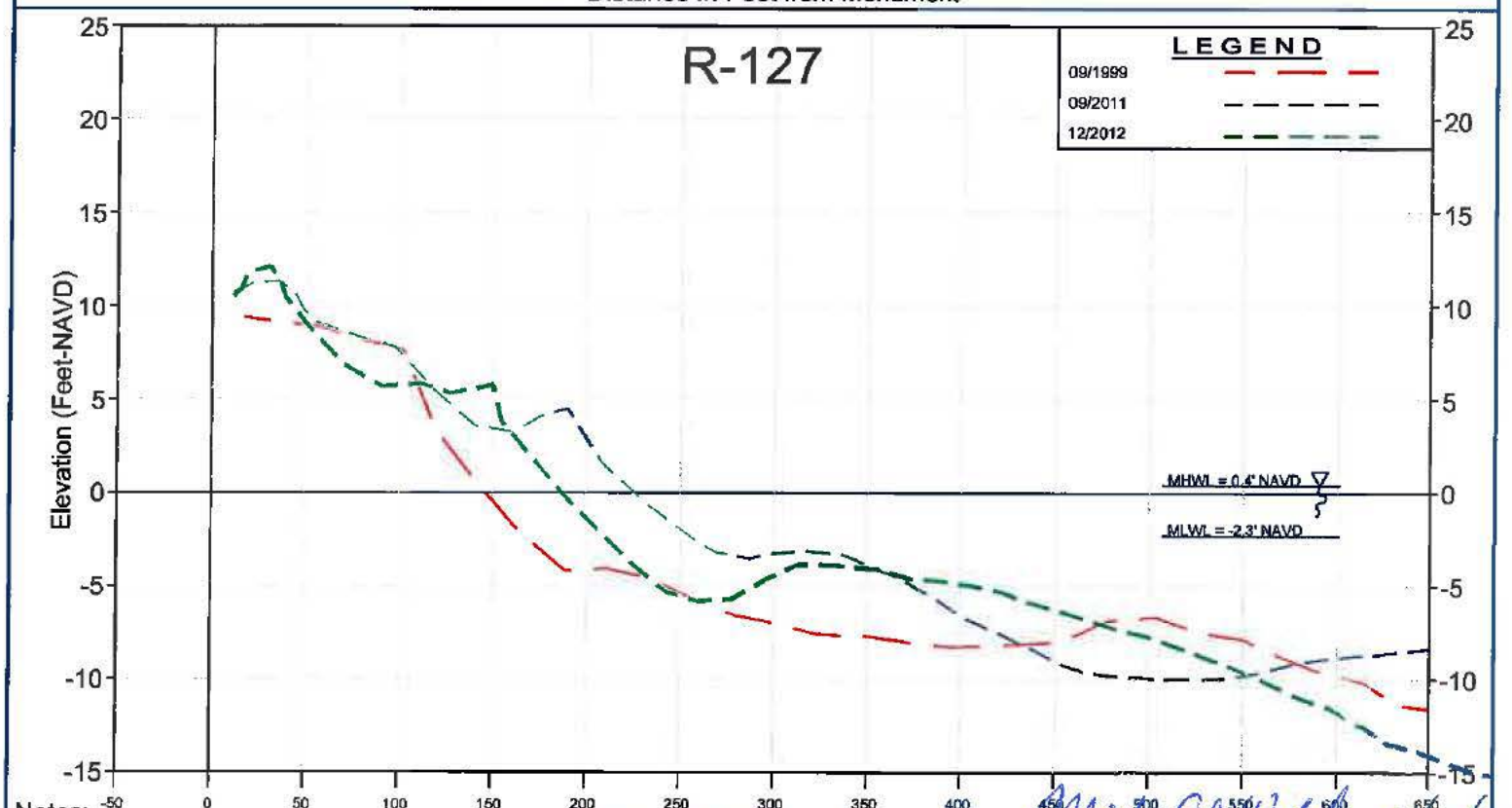
COASTAL TECH
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Profiles - Proposed Fill Area

Phipps Ocean Park Beach Restoration
Town of Palm Beach, Florida

ENGR	DRAWN	SHEET
MPW	AQN	7 OF 13 SHEETS
LAST REVISION	DATE	JOB NO.
	04/30/2013	28115.06





Notes:
1. September 1999 profile data from M&E.
2. September 2011 & 2012 profile data from Sea Diversified.

SCALE IN FEET

Michael P. Walther 4/30/13

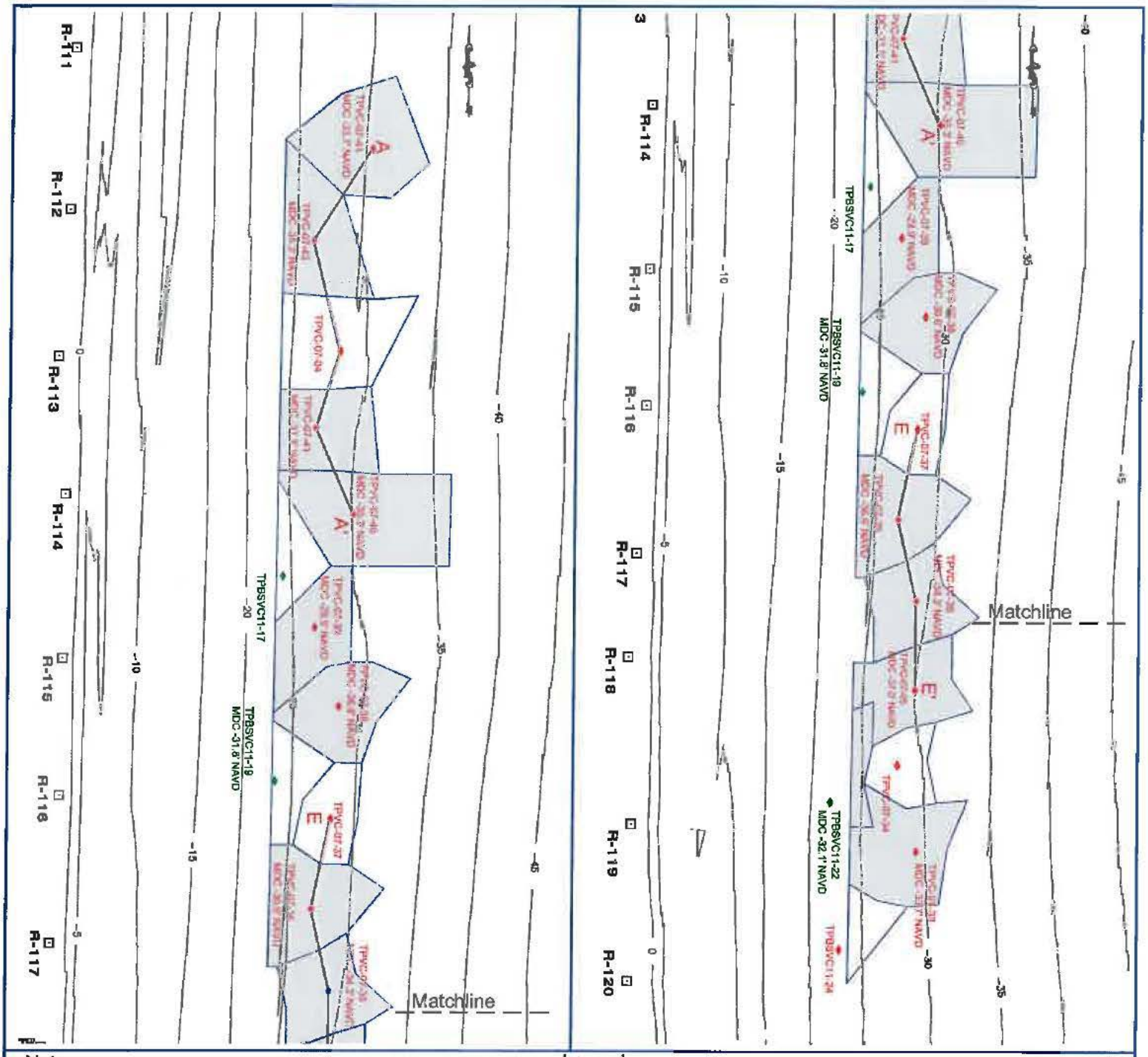
MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Profiles - Proposed Fill Area

Phipps Ocean Park Beach Restoration
Town of Palm Beach, Florida

ENGR	DRAWN	SHEET
MPW	AQN	8 OF 13 SHEETS
LAST REVISION	DATE	JOB NO.
	04/30/2013	28115.06



Notes:

1. Contour elevations referenced to North American Vertical Datum 1988 (NAVD88).
2. South Borrow Area 2 Plan View adapted from "Figure 4b" of "Town of Palm Beach Offshore Sand Search Investigations South Area Summary Report" dated April 2012 by ATM.
3. Bathymetry from survey by Sea Diversified dated November 2011.

Legend:

- Borrow Area Core Influences
- Borrow Area Core Influences Proposed Cut Area Maximum Depth of Cut (MDC) varies
- TPVC-07-43 — 2007 Core locations
- TPBSVC11-22 — 2011 Core locations
- Elevation NAVD Contour
- DEP Reference-Monuments

0 500 1000
SCALE IN FEET

Michael P. Walther 4/30/13

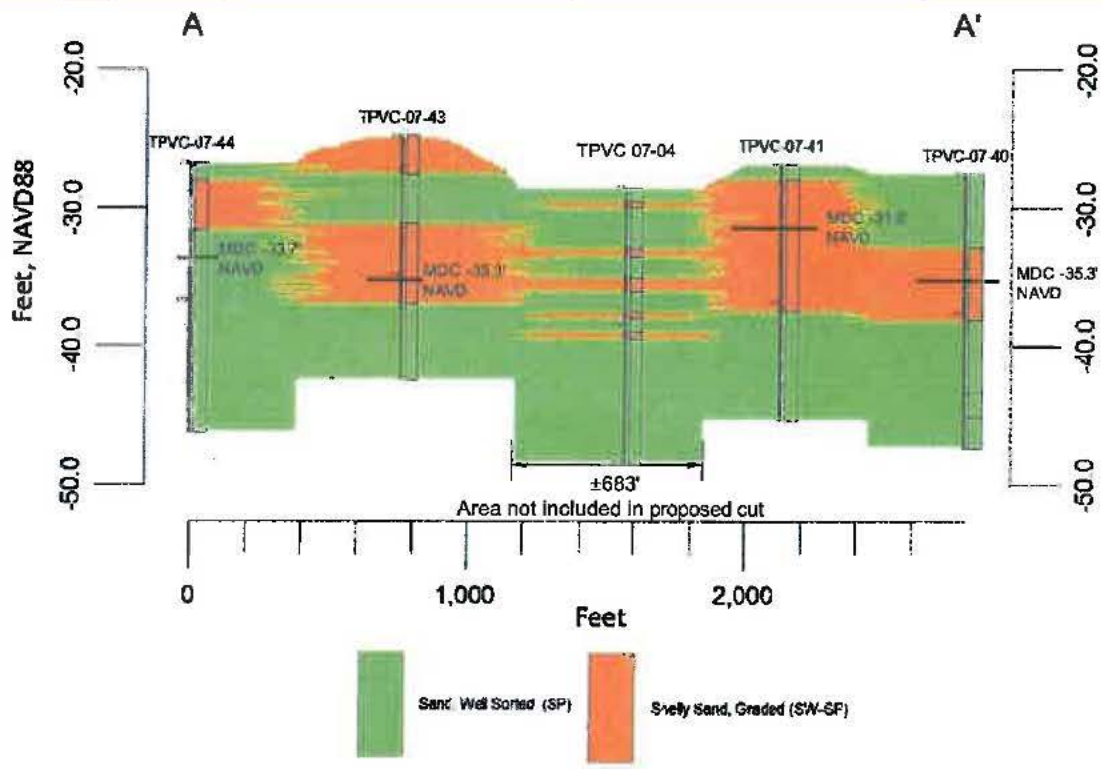
MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

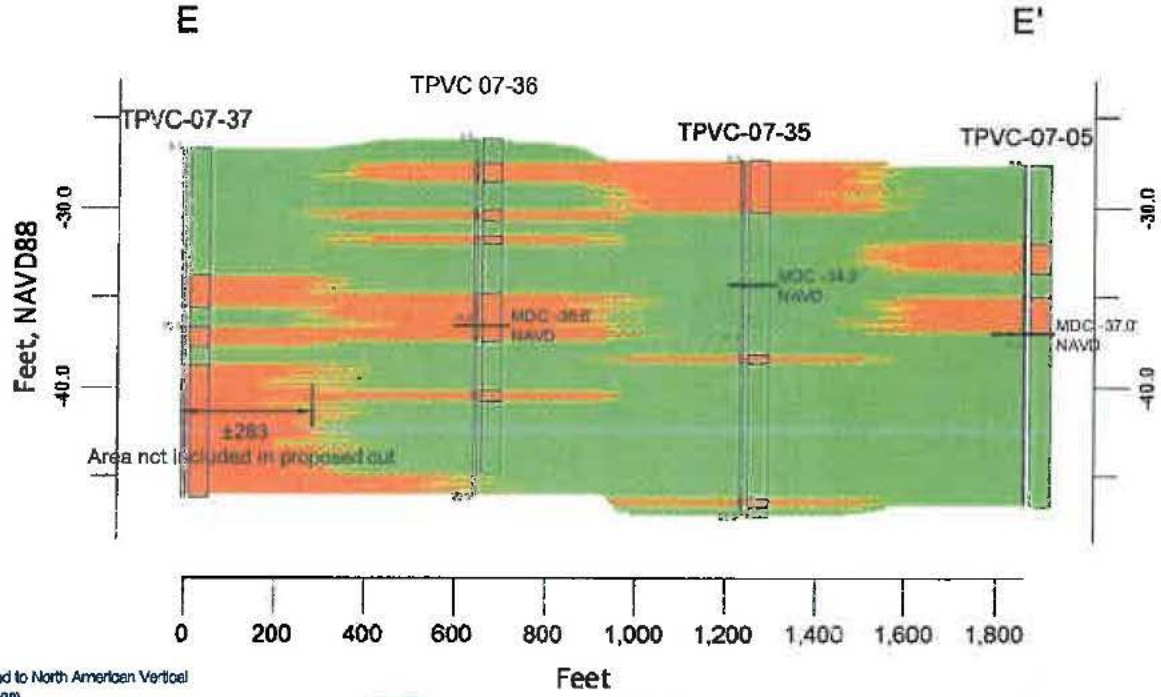
COASTAL TECH
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Plan View - South Borrow Area 2

Phipps Ocean Park Beach Restoration
Town of Palm Beach, Florida

ENGR	DRAWN	SHEET
MPW	AQN	9 OF 13 SHEETS
LAST REVISION	DATE	JOB NO.
	04/30/2013	28115.06





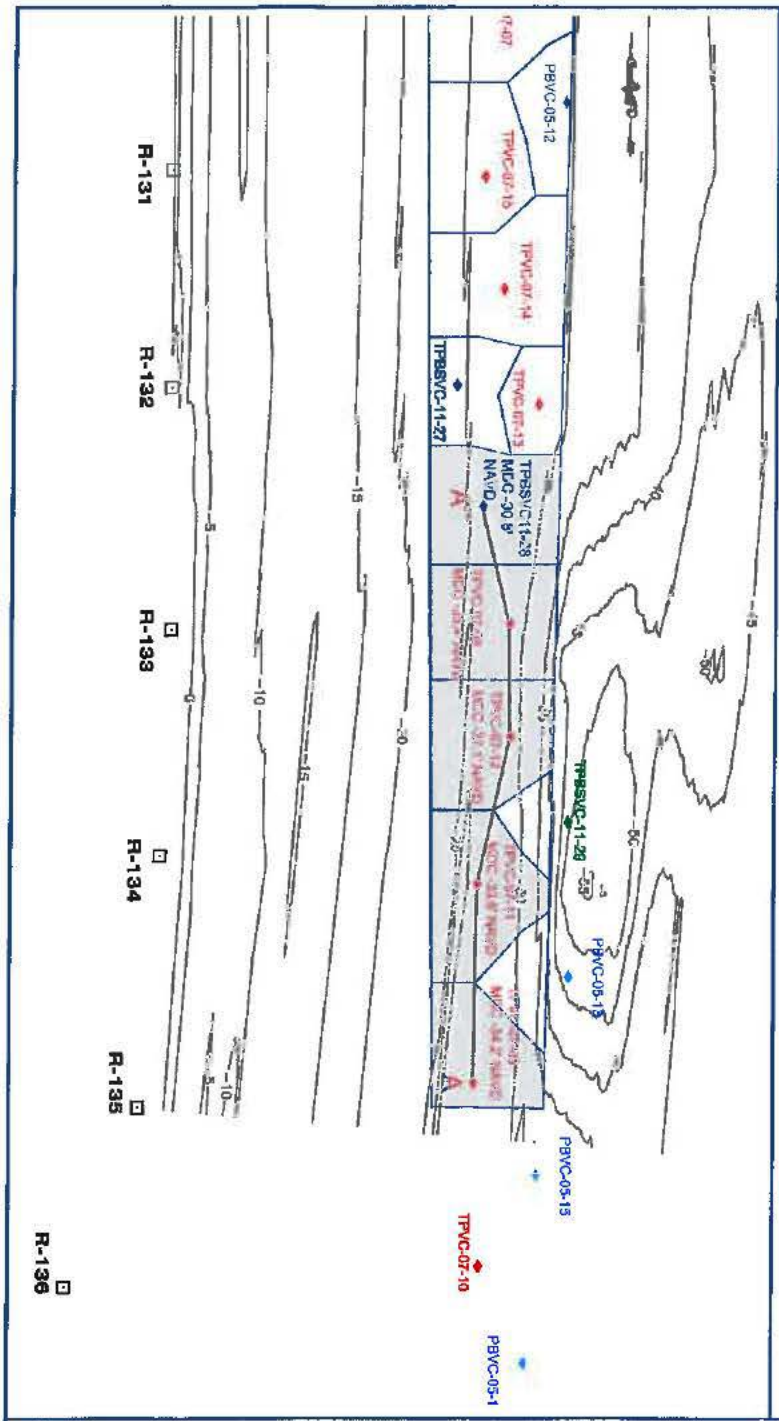
Notes:

1. Elevations referenced to North American Vertical Datum 1988 (NAVD88).
2. Borrow Area geologic sections and proposed cut depths by SEA provided to CTC by ATM (personal communication, J. Waszak, July 12 and July 23, 2012).

Michael P. Walther 4/30/13

MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH Certificate of Authorization Number: 00004195 3625 20th Street, Vero Beach, Florida 32960 VERO BEACH SARASOTA MELBOURNE AUSTIN	Cross-Section A-A' & E-E' - South Borrow Area 2 Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	ENGR MPW LAST REVISION	DRAWN AQN DATE 04/30/2013	SHEET 10 OF 13 SHEETS JOB NO. 28115.06



Notes:

1. Contour elevations referenced to North American Vertical Datum 1988 (NAVD88).
2. South Borrow Area 3 Plan View adapted from "Figure 4c" of "Town of Palm Beach Offshore Sand Search Investigations South Area Summary Report" dated April 2012 by ATM.
3. Bathymetry from survey by Sea Diversified dated November 2011.

Legend:

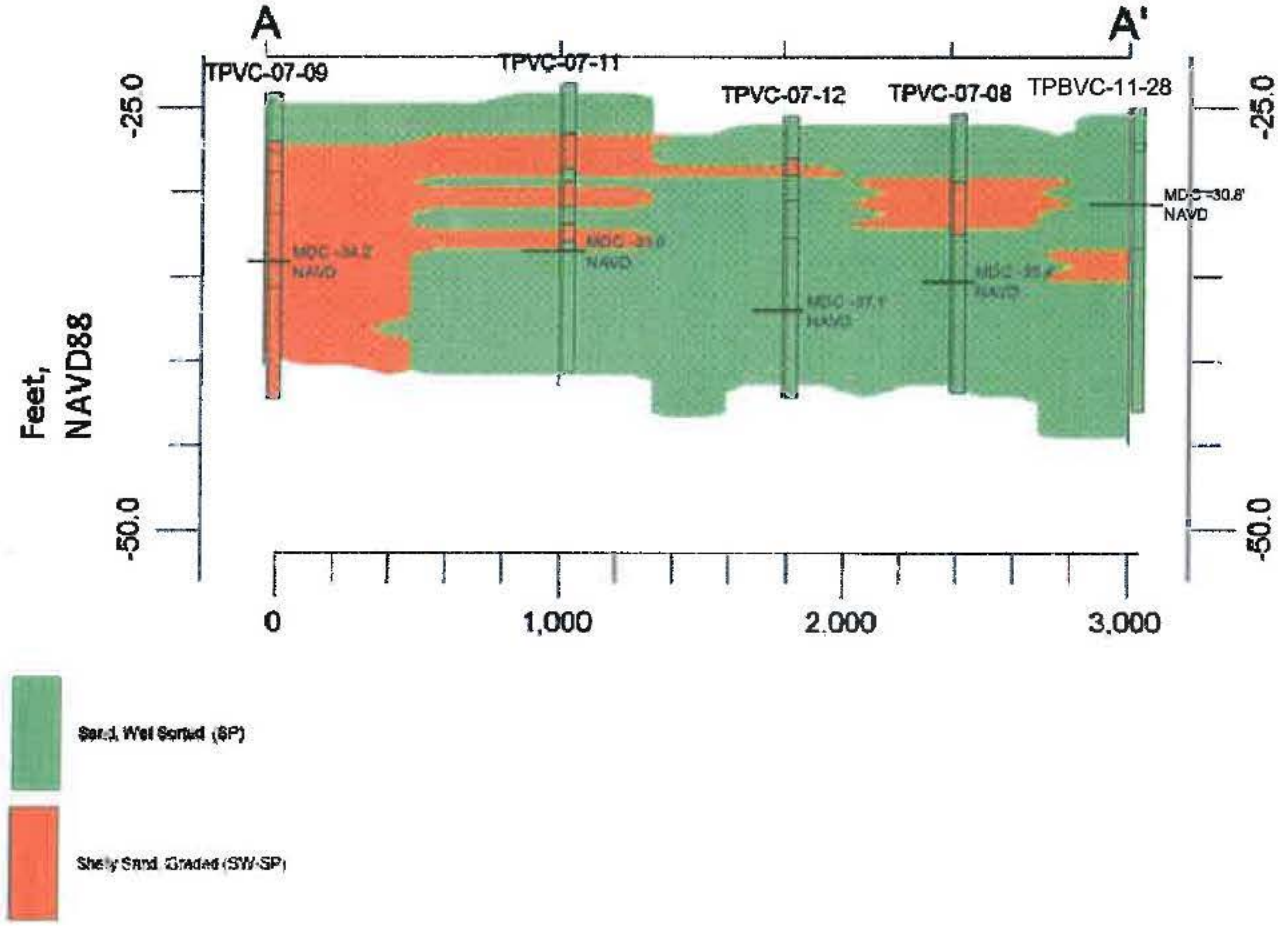
- Borrow Area Core Influences
- Borrow Area Core Influences Proposed Cut Area Maximum Depth of Cut (MDC) varies
- PBVC-05-18 — 2005 Core locations
- TPVC-07-43 — 2007 Core locations
- TPBSVC11-22 — 2011 Core locations
- Elevation NAVD Contour
- DEP Reference-Monuments

0 500 1000
SCALE IN FEET

Michael P. Walther 4/30/13
MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, Florida 32960
VERO BEACH SARASOTA MELBOURNE AUSTIN

Plan View - South Borrow Area 3	ENGR	DRAW	SHEET
	MPW	AQN	11 OF 13 SHEETS
Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	LAST REVISION	DATE	JOB NO.
		04/30/2013	28115.06



Notes:

1. Elevations referenced to North American Vertical Datum 1988 (NAVD88).
2. Borrow Area geologic sections and proposed cut depths by SEA provided to CTC by ATM (personal communication, J. Waszak, July 12 and July 23, 2012).

Michael P. Walther 4/30/13

MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH Certificate of Authorization Number: 00004195 3625 20th Street, Vero Beach, Florida 32960 VERO BEACH SARASOTA MELBOURNE AUSTIN	Cross-Section A-A' - South Borrow Area 3	ENGR MPW	DRAWN AQN	SHEET 12 OF 13 SHEETS
	Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	LAST REVISION	DATE 04/30/2013	JOB NO. 28115.06

GENERAL NOTES

1. These drawings are "Permit Sketches" intended to facilitate the evaluation of the proposed Phipps Ocean Park Beach Restoration (Project) within the Town of Palm Beach, in Palm Beach County, Florida. THESE DRAWINGS ARE NOT FOR CONSTRUCTION.

2. Elevations refer to North American Vertical Datum (NAVD).

3. Based upon the December 2012 survey, approximately 942,518 cubic yards of sand are proposed to be dredged from an offshore sand source and placed onto the beach. Erosion within the Project area is anticipated to continue at the rate of 59,149 cubic yards per year which is expected to increase the amount of sand proposed to be dredged and placed to 1,001,667 in November 2013. The Project Area extends approximately 1.7 miles along the Town of Palm Beach Shoreline from about 500 feet north of FDEP Monument R-119 to R-127.

4. The Contractor shall dredge fill material from the proposed borrow area, transport the material to the Project Fill Area and pump material to the beach through pipelines on the ocean bottom; construction may occur via use of either a hydraulic-pipeline dredge or a hopper dredge. A shore-parallel dike (as required to meet State Water Quality standards) comprised of sand shall be constructed to confine and accommodate settlement of the beach fill material from the pipeline discharge. The dike will be advanced along the beach as the pipeline discharge point advances. The Contractor shall maintain the dike so that at least 100 meters of dike exists ahead of the pipeline discharge point. Proposed equipment may be stored and staged on upland Access/Staging Areas and may include: one construction trailer, bulldozers, front end loaders, and other similar earth moving equipment.

5. The following lists potential Upland Construction Access / Staging Areas to be available to the Contractor:

Access/Staging Area	Reference Monument
Phipps Ocean Beach Park	R-119
Old Ocean Boulevard	R-121

The actual area to be used by the Contractor at each Access/Staging Area will be at the discretion of the Contractor, as approved by the Town at the Pre-Construction Meeting - subject to complete restoration of the site by the Contractor, as approved by the Town and the Engineer.

Prior to and during construction, the Contractor shall implement and maintain all sediment control measures required to retain sediment on-site to prevent violations of State Water Quality standards. In addition, the Contractor shall not damage any existing dune vegetation not directly buried by the Project.

6. The Contractor is allowed to operate 24 hours per day, 7 days a week unless otherwise restricted by the Contract Documents. Actual hours of operation are at the discretion of the Contractor.

Michael P. Walther 4/30/13

MICHAEL P. WALTHER, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 32081

COASTAL TECH	General Notes	ENGR MPW	DRAWN AQN	SHEET 13 OF 13 SHEETS
Certificate of Authorization Number: 00004195 3625 20th Street, Vero Beach, Florida 32960 VERO BEACH SARASOTA MELBOURNE AUSTIN	Phipps Ocean Park Beach Restoration Town of Palm Beach, Florida	LAST REVISION	DATE 04/30/2013	JOB NO. 28115.06

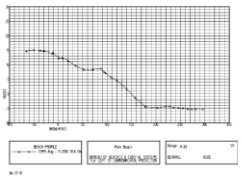
ASSHQGL A-

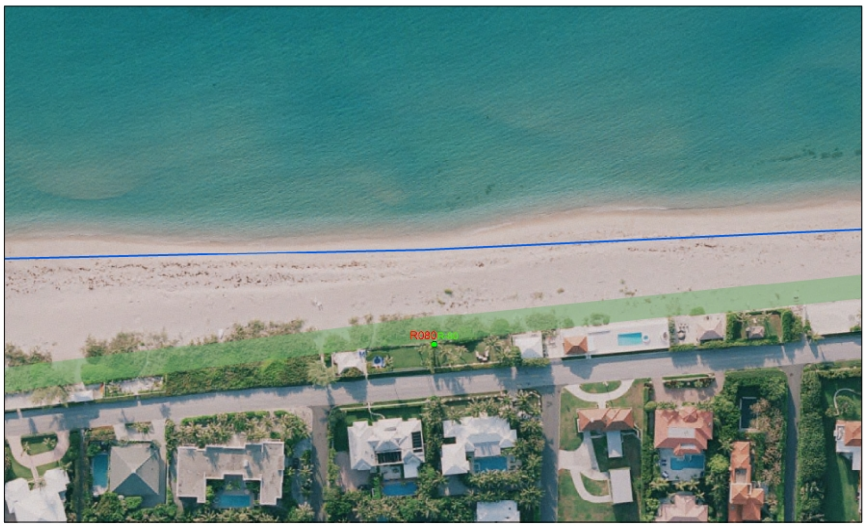
Dune Conditions Table and Exhibits

Table of BMA Cell-wide Dune Conditions

CONDITION AREA	FROM RANGE	FROM PROPERTY	TO RANGE MONUMENT	TO PROPERTY ADDRESS	CONDITION NO.	LENGTH (ft)	MUNICIPALITY
1	R-76	149 East Inlet Dr.	R-81 + 1,150 ft	1100 N. Ocean Blvd.	1	6,737	Town of Palm Beach
2	R-81 + 1,150 ft	1095 N. Ocean Blvd.	R-89	515 N. County Rd.	3	7,833	Town of Palm Beach
3	R-89	473 N. County Rd.	R-94 + 215 ft	1 N. Breakers Row	4	5,800	Town of Palm Beach
4	R-94 + 215 ft	1 S. County Rd.	R-94 + 1,122 ft	1 S. County Rd.	3	907	Town of Palm Beach
5	R-94 + 1,122 ft	1 S. County Rd.	R-102	680 S. Ocean Blvd.	4	8,190	Town of Palm Beach
6	R-102	102 Banyan Rd.	R-102 + 640 ft	720 S. Ocean Blvd.	3	640	Town of Palm Beach
7	R-102 +640 ft	780 S. Ocean Blvd.	R-110 + 240 ft	1472 S. Ocean Blvd.	1	8,775	Town of Palm Beach
8	R-110 + 240 ft	1482 S. Ocean Blvd.	R-111	125 Ocean View Rd.	3	771	Town of Palm Beach
9	R-111	11 Lagomar Rd.	R-116 + 450 ft	1980 S. Ocean Blvd.	2	5,754	Town of Palm Beach
10	R-116 + 450 ft	1 Sloan's Curve Dr.	R-127 + 110 ft	2850 S. Ocean Blvd.	4	10,950	Town of Palm Beach
11	R-127 +110 ft	2882 S. Ocean Blvd.	R-134 +100 ft	10 S. Ocean Blvd.	2	1,880	Town of Palm Beach, City of Lake Worth
12	R-128 +980 ft	3000 S. Ocean Blvd.	R-134 +100 ft	3475 S. Ocean Blvd.	4	6,544	Town of Palm Beach
13	R-134 + 100 ft	3492 S. Ocean Blvd.	R-136 + 660 ft	4500 S. Ocean Blvd.	3	2,800	Town of South Palm Beach
14	R-136 +660 ft	100 N. Ocean Blvd.	R-137 +430 ft	100 N. Ocean Blvd.	3	770	City of Lantana
15	R-137 +430 ft	100 S. Ocean Blvd.	R-145	1440 S. Ocean Blvd.	3	7,780	Town of Manalapan
16	R-145	1460 S. Ocean Blvd.	R-151 + 310 ft	6900 N. Ocean Blvd.	1	6,218	Palm Beach County

DUNE CONDITION 1 - Examples





CONDITION 1 R080

Legend

CONDITION_1

2011_PROFILES

PB_R_MON

SHW_4.6_NAVD 88

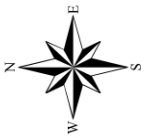
20100701_AERIALS

RGB

Red: Band_1

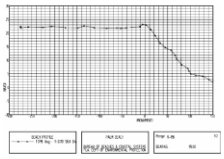
Green: Band_2

Blue: Band_3



0 55 110 220 Feet

DUNE CONDITION 2 - Examples



CONDITION 2 R118

Legend

CONDITION_2

2011_PROFILES

PB_R_MON

SHW_4.6_NAVD 88

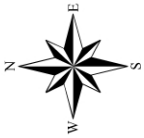
20100701_AERIALS

RGB

Red: Band_1

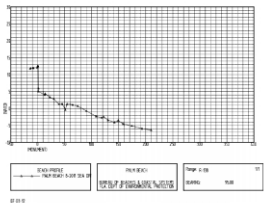
Green: Band_2

Blue: Band_3



0 50 100 200 Feet

DUNE CONDITION 3 - Examples



CONDITION 3 R138

Legend

- 2011_PROFILES
- PB_R_MON
- CONDITION_3
- SHW_4.6_NAVD 88

20100701_AERIALS

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3

0 50 100 200 Feet