



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

## NOTICE TO PROCEED

**PERMITTEE**

Gary McAlpin, Manager  
Coastal Zone Management  
Collier County Government  
2800 North Horseshoe Drive  
Naples, Florida 34104

**PROJECT:** Collier County Beach  
Nourishment

**PERMIT NUMBER:** 0222355-001-JC

**PERMIT EXPIRES:** January 12, 2015

You are hereby granted final authorization to proceed with the construction or activities authorized by the permit number referenced above. Authorized work must conform with the detailed project description, approved permit drawings, and all conditions including preconstruction requirements included in the permit. A brief description of the authorized work follows.

**PROJECT DESCRIPTION:**

The second nourishment event involves the placement of approximately 419,121 cubic yards of beach-quality sand within five hotspot locations. Nourishment includes Vanderbilt Beach (R-21 to R-31) with a gap between R-22+300 and R-25+500, Park Shore Beach (R-48 to R-55), Naples Beach (R-58 to R-79) with gaps from R-64+500 to R-68+200 and from R-72+600 to R-79, and Northern Park Shore Beach (R-43.5 to R-48) with a gap from R-47+500 to R-50. Pelican Bay (R-31 to R-37) is not part of the 2013/2014 nourishment event. If dredges are selected as the desired construction method, a portion of Borrow Area T1 will be used to supply beach fill material. If the project is conducted by truck haul, one or more of three operating sand mines will be used to supply beach fill material. A berm cap will be constructed on the upper berm crest at Park Shore Beach from R-44 to R-45 and at Naples Beach from R-58A to R-5 to add an additional one foot of elevation to the berm in these areas.

**PROJECT LOCATION:**

The offshore borrow area is located approximately thirty-three (33) miles to the north and offshore of the placement area, outside of State waters. The upland borrow site is the E.R. Jahna Ortona or Immokalee Mines. The beach fill areas are located along the shorelines of Vanderbilt Beach, Park Shore Beach, Naples Beach, Pelican Bay, and Northern Park Shore, in Collier County, Sections 29 and 32, Township 48 South, Range 25 East, Sections 5, 8, 16, 21 and 28, Township 49 South, Range 25 East and Sections 4 and 9, Township 50 South, Range 25 East, Gulf of Mexico, Class III Waters.

Questions regarding the permit or this notice should be directed to the undersigned at:

10/03/2013 /  
Date of Notice

Liz Yongue, ES II

Beaches, Inlets & Ports Program  
2600 Blair Stone Road, Mail Station 3544  
Tallahassee, Florida 32399-3000  
Telephone (850) 414-7798

Post Conspicuously on the Site

**From:** [McAlpinGary](#)  
**To:** [HambrightGail](#)  
**Subject:** FW: Collier County NTP (File No. 0222355-001-JC)  
**Date:** Thursday, October 03, 2013 5:05:05 PM  
**Attachments:** [image003.png](#)  
[Collier 2013 NTP.pdf](#)

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**From:** Yongue, Elizabeth [mailto:Elizabeth.Yongue@dep.state.fl.us]

**Sent:** Thursday, October 03, 2013 4:25 PM

**To:** McAlpinGary

**Cc:** 'Keehn, Stephen'; 'Sharp, Nicole'; HillerGeorgia; JCP Compliance; Hand, Charlotte; Seeling, Martin; Iglehart, Jon; Reed, Alex (Jillian); George, Vincent; Dow, Roxane; Kosmynin, Vladimir; Cowart, Jennifer; Peterson, Jennifer M.; Coor, Jennifer; Malakar, Subarna; CE Review; Clark, Ralph; Brantly, Robert; 'Davis, Luke'; 'MarineTurtle@myfwc.com'; 'FWCConservationPlanningServices@myfwc.com'; 'fcmpmail@myfwc.com'; ' (Tunis.W.McElwain@usace.army.mil)'; (Jeffrey\_Howe@fws.gov); 'Minimushomines@aol.com'; 'MARCIA CRAVENS'; Warden, Stan; Miller, Dee Ann

**Subject:** Collier County NTP (File No. 0222355-001-JC)

Gary McAlpin, Manager  
Coastal Zone Management  
Collier County Government  
2800 North Horseshoe Drive  
Naples, Florida 34104

**NOTICE TO PROCEED**

Permit No. 0222355-001-JC, Collier County  
Permittee: Collier County  
Project: Collier County Beach Nourishment

Dear Mr. McAlpin:

The Permittee has complied with the permit conditions required to issue the notice to proceed. All construction or other activities are strictly limited to those described in the final order and approved permit drawing.

Please read the permit and permit conditions including both the General and Specific Conditions closely before starting construction. Specific Condition 11 pertains to written reports that must be submitted to the Department of Environmental Protection under the signature and seal of a professional engineer at specified times.

Your cooperation in ensuring compliance with all conditions of the permit is appreciated. If I may be of any further assistance, please contact me at 2600 Blair Stone Road, Mail Station 3544, Tallahassee, Florida 32399-3000 or by telephone at (850) 414-7798.

Sincerely,



Liz Yongue, Environmental Specialist II  
Beaches, Inlets and Ports Program

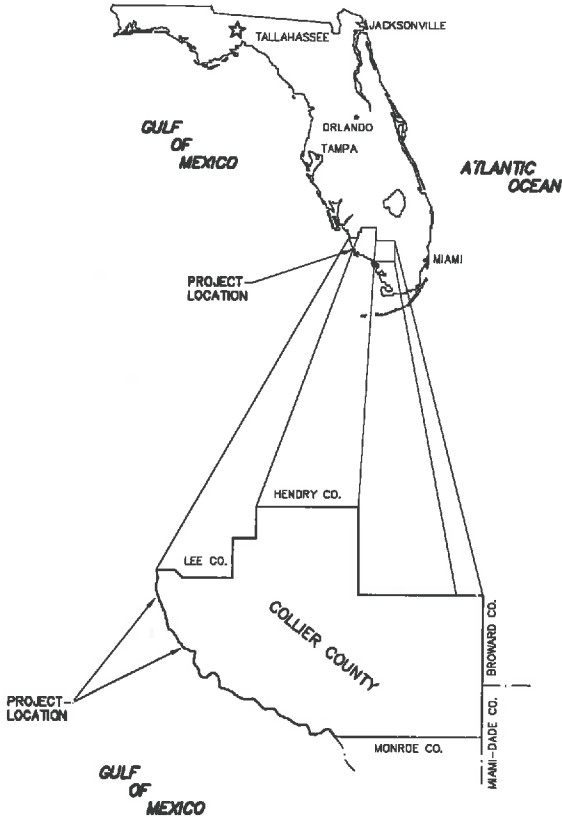
Division of Water Resource Management  
(850) 414-7798

Attachment: Notice to Proceed Posting

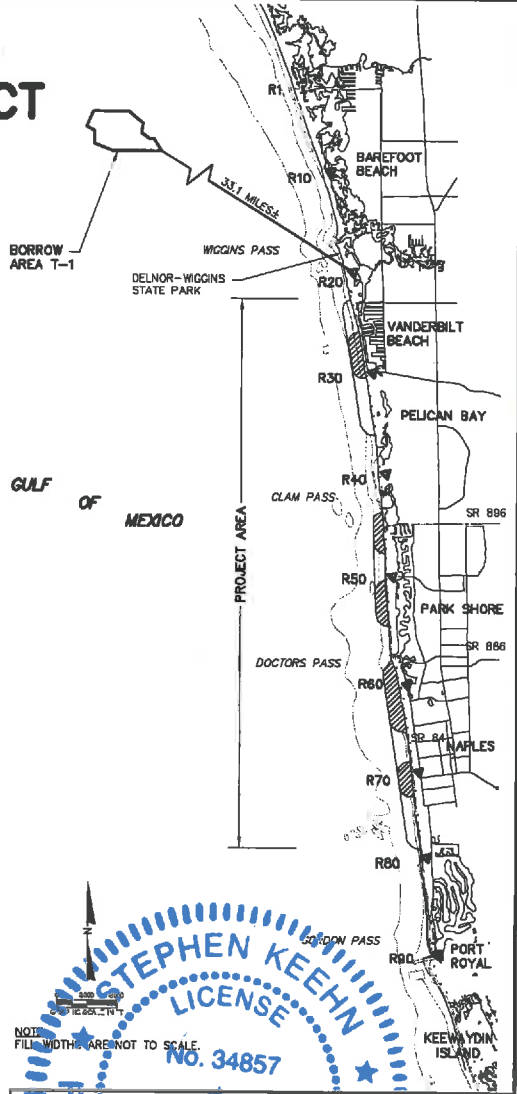
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Under Florida Law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by telephone or in writing.

# COLLIER COUNTY BEACH RENOURISHMENT PROJECT COLLIER COUNTY, FLORIDA



INDEX TO SHEETS	
1	COVER SHEET
2-20	PROJECT PLAN VIEWS
21-28	TYPICAL FILL CROSS SECTIONS
29	BORROW AREA T1 BATHYMETRY
30	BORROW AREA T1 ISOPACH
31	BORROW AREA T1 CROSS SECTIONS
32-36	DREDGE PIPELINE CORRIDORS



NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

STEPHEN KEEHN  
LICENSE  
No. 34857

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

STEPHEN KEEHN P.E. NO. 34857

**COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
P.O. (954) 394-8102  
FAX (954) 394-8116  
C.O.A. FL 4028  
C.O.A. FL 2651

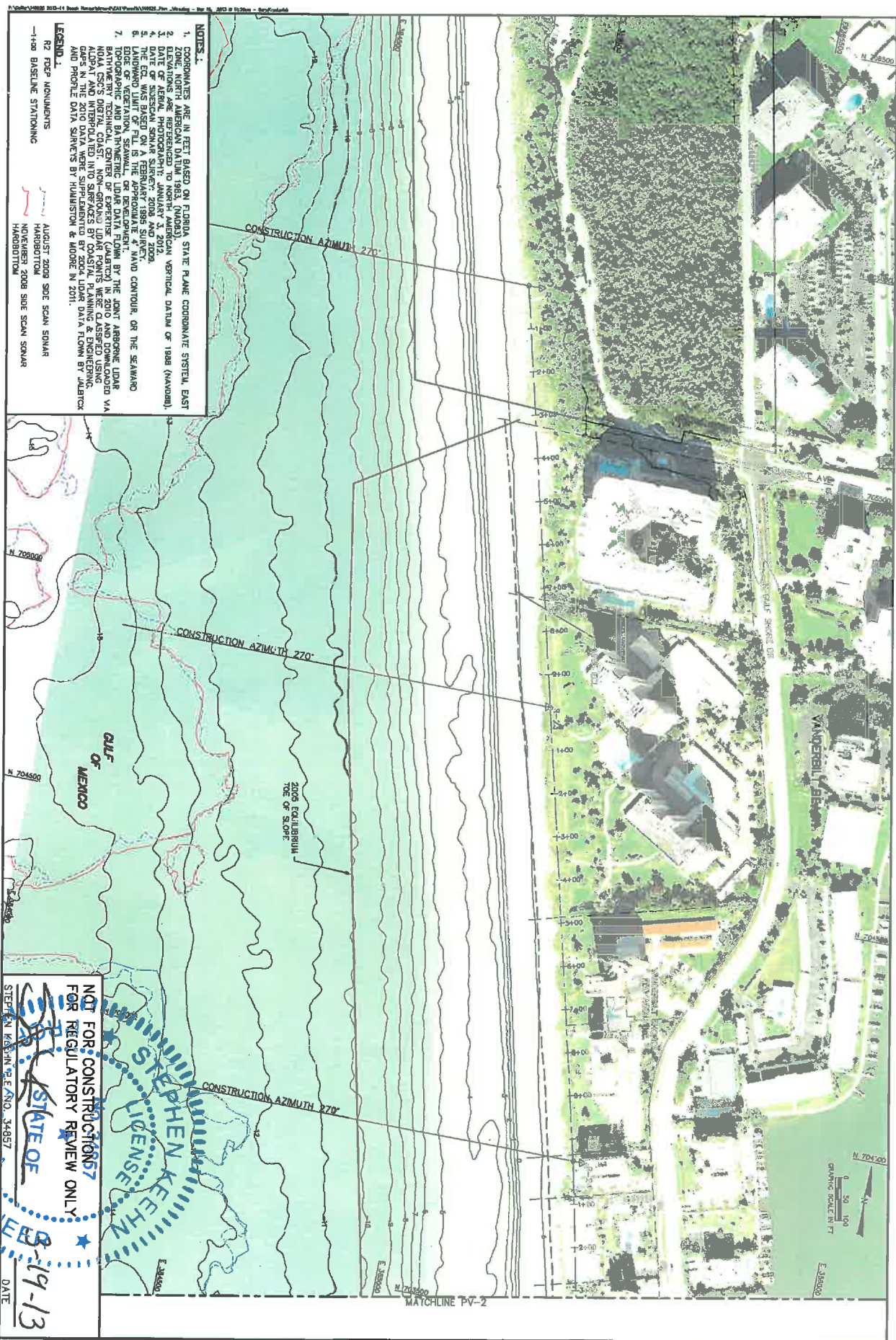
www.CoastalPlanning.com

NO.	DESCRIPTION	DATE	BY	CHECKED BY

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
COVER SHEET

DRAWING NO. CS-1  
SHEET 1 OF 36

PERMIT # 222 355 012



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST
  2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD8).
  3. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  4. DATE OF SIDE SCAN SONAR SURVEY: 2008 AND 2009.
  5. DATE OF SURVEY DATA: 2008 AND 2009.
  6. LANDWARD LIMIT OF TLL IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  7. BATHYMETRIC AND BATHYMETRIC LOAR DATA FROM THE JOINT AIRBORNE LOAR DATA AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING. DATA IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LOAR DATA FROM BY JALBTCX AND PROFILE DATA SURVEYS BY THAMSTON & MOORE IN 2011.

**LEGEND:**

R2 FCDF MONUMENTS  
 -1900 BASELINE STATIONING

AUGUST 2009 SIDE SCAN SONAR  
 NOVEMBER 2008 SIDE SCAN SONAR  
 HANDBOBTOM  
 HANDBOBTOM

NOT FOR CONSTRUCTION  
 FOR REGULATORY REVIEW ONLY

STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

STEPHEN KEHN, P.E. AND, 34857

8-19-13

DATE

COLLIER COUNTY  
 BEACH REOURNISHMENT PROJECT

PLAN M5W

DRAWING NO.  
 PV-1

SHEET 2 OF 28

Revised By	Revised Date	Description
Created by AMB		
Drawn by SK		
Checked by NS		
Submitted by SK		
Scale 7/25/12		
Cont. No. 14525		
Rev. No. AS NOTED		

**COASTAL PLANNING & ENGINEERING, INC.**

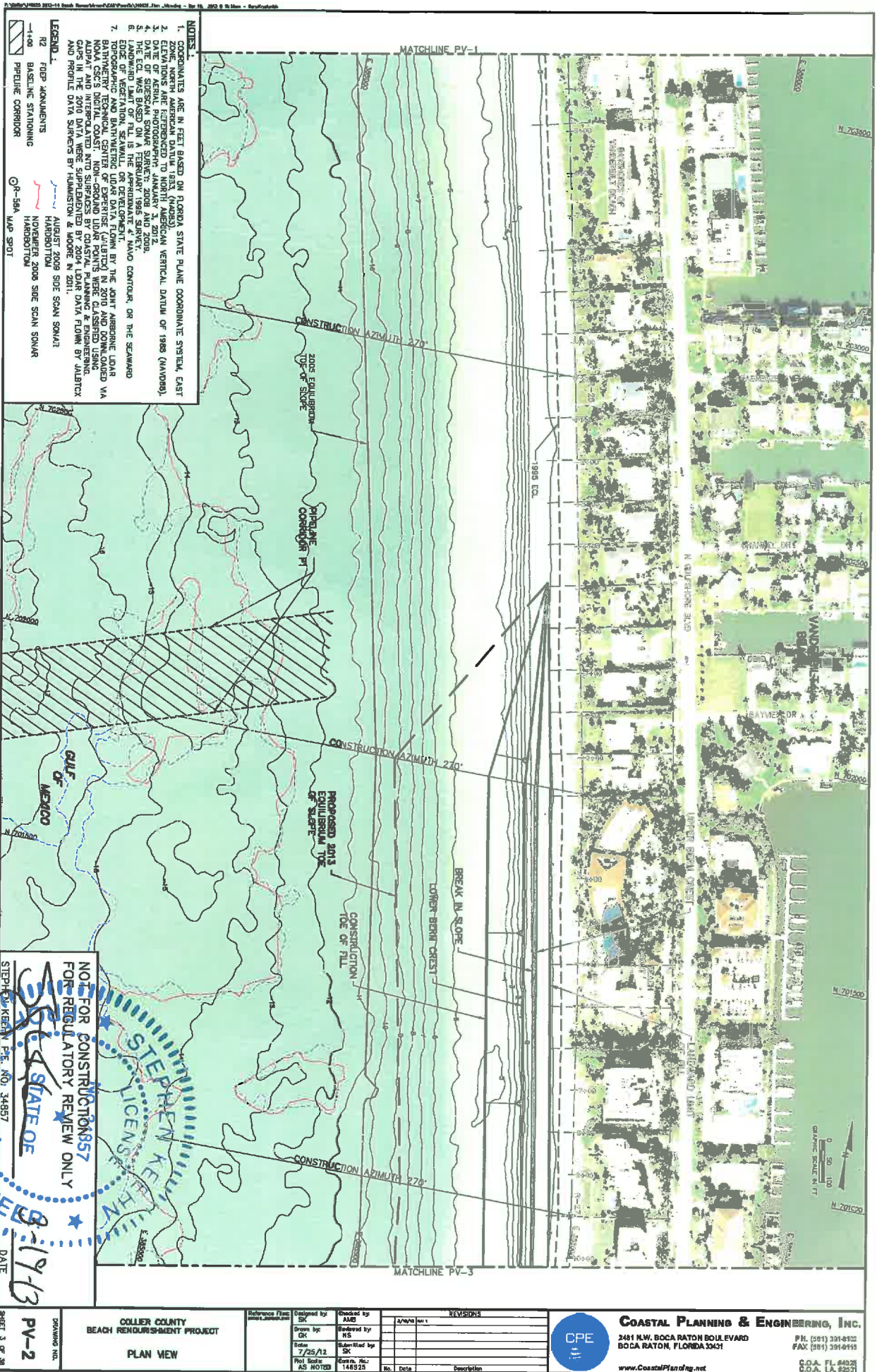
2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431

PH: (561) 391-8102  
 FAX: (561) 391-8110

C.O.A. FL 84028  
 E.O.A. LK 82511

[www.CoastalPlanning.net](http://www.CoastalPlanning.net)

PERMIT # 222 355 012



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST
  2. ELEVATIONS ARE FROM MEAN SEA LEVEL TO THE NEAREST TENTH OF A FOOT (NAD83)
  3. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012
  4. DATE OF SIDE SCAN SONAR SURVEY: 2008 AND 2009
  5. DATE OF SURVEY DATA: 2008 AND 2009
  6. LANDWARD LIMIT OF ALL IS THE PERPENDICULAR DISTANCE FROM THE CENTERLINE OF THE CHANNEL TO THE EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  7. TOPOGRAPHIC AND BATHYMETRIC DATA FLOWN BY THE JOINT AMBROSE LOAR NOAA CENTER OF COASTAL AND ESTUARINE SCIENCE IN 2001 AND DOWNLOADED VIA NOAA'S DIGITAL COAST AND OCEANIC DATA CENTER. THE 2001 DATA WAS ADAPTED AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING AND PROFILE DATA SURFACES BY HANMISTON & MOORE IN 2011.
- LEGEND:**
- R2 FIPR DOCUMENTS
  - 1-100 BASELINE STATIONING
  - PRELUDE CORRIDOR
  - AUGUST 2008 SIDE SCAN SONAR
  - NOVEMBER 2008 SIDE SCAN SONAR
  - HARBOR TOW
  - GR-50A MAP SPOT

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 FOR REGULATORY REVIEW ONLY

STEPHEN KEELER  
 PROFESSIONAL ENGINEER  
 STATE OF FLORIDA  
 LICENSE NO. 34857

8-19-13  
 DATE

COLLIER COUNTY  
 BEACH RENOURISHMENT PROJECT

PLAN W-E

DRAWING NO.  
 PV-2

SHEET 3 OF 30

Reference Files		Designed by		Checked by		REVISIONS	
AS NOTED	AS NOTED	AK	AK	AK	AK		
		Drawn by	Reviewed by	Drawn by	Reviewed by	No.	Date
		AK	AK				
		Date	7/25/12	Date			
		Plot Scale	AS NOTED	Scale			
		Code No.	148525	Code No.			

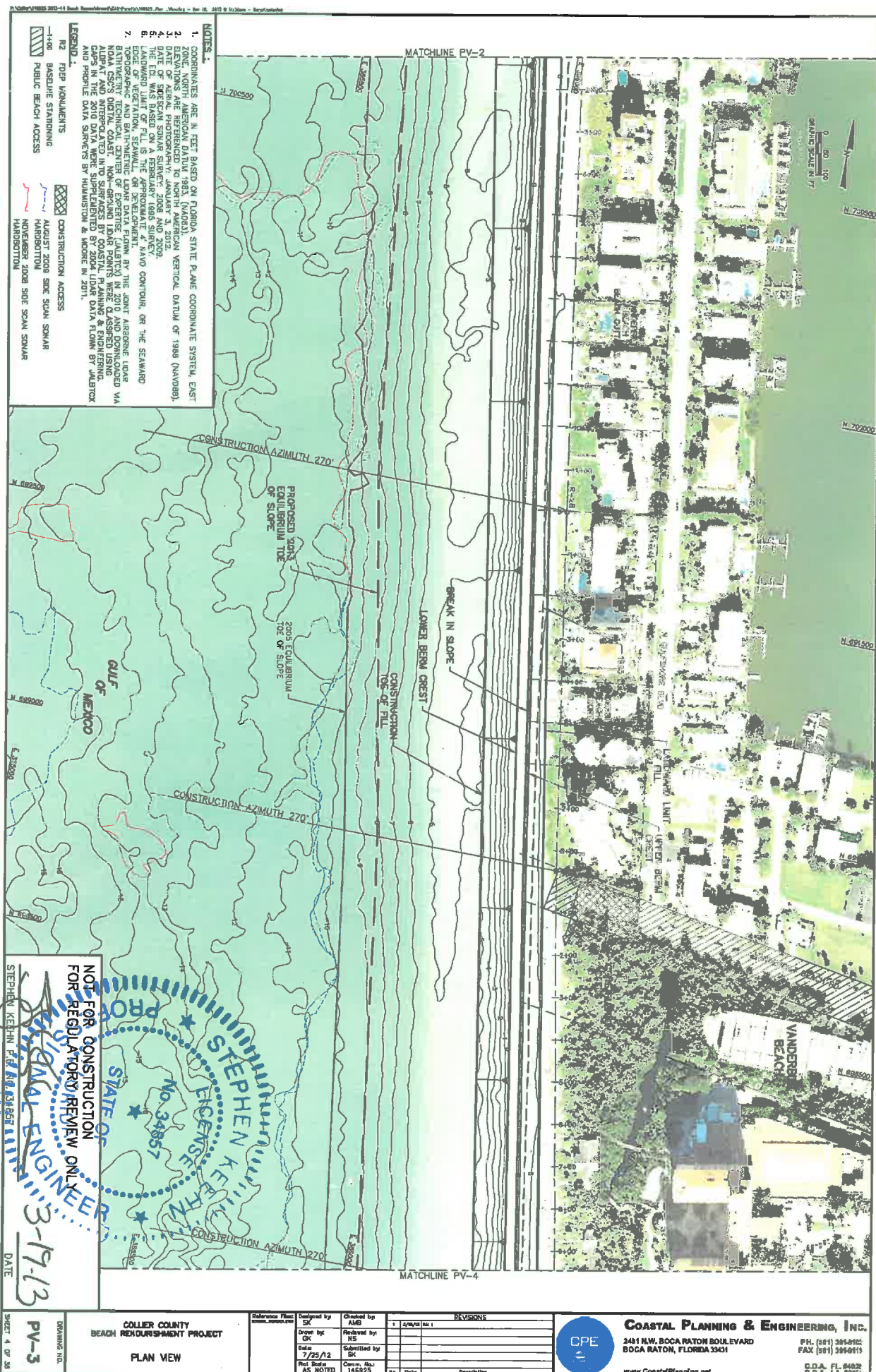
**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431

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 FAX: (561) 391-0415

C.O.A. FL. 84028  
 C.O.A. LA. 92671

[www.CoastalPlanEng.net](http://www.CoastalPlanEng.net)

PERMIT # 222 355 012



**NOTES:**

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83).
2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1989 (NAVD89).
3. DATE OF SURVEY: SURVEY 2008 AND 2009.
4. THE ETL WAS BASED ON A FEBRUARY 1998 SURVEY.
5. ADVANCED LIMIT OF FILL IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE SEAWARD ELEVATION LIMIT OF THE SURVEY.
6. HYDROLOGICAL AND BATHYMETRIC LEAD DATA FROM THE JOINT AIRBORNE LEAD BATHYMETRY TECHNICAL CENTER OF EXPERIENCE (CALTECH) IN 2010 AND DOWNLOADED VIA AUMI (AUGUST 2009) FROM THE SURVEY DATA CENTER.
7. TOPOGRAPHIC AND BATHYMETRIC LEAD DATA FROM THE JOINT AIRBORNE LEAD BATHYMETRY TECHNICAL CENTER OF EXPERIENCE (CALTECH) IN 2010 AND DOWNLOADED VIA AUMI (AUGUST 2009) FROM THE SURVEY DATA CENTER.
8. CAPS IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LEAD DATA FROM ST. JALBERTX AND PROFILE DATA SURVEYS BY HANMISTON & MOORE IN 2011.

**LEGEND:**

- R2 FDP MONUMENTS
- 1-100 BASELINE STATIONING
- PUBLIC BEACH ACCESS
- CONSTRUCTION ACCESS
- AUGUST 2009 SIDE SCAN SONAR HANDDOTTED
- NOVEMBER 2008 SIDE SCAN SONAR HANDDOTTED

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FOR REGULATORY REVIEW ONLY

STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
STEPHEN KEENAN  
No. 34857  
DATE 3-19-13

COLLER COUNTY  
BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.  
PV-3

SHEET 4 OF 35

Revision		By		Date		Description	
1		AMG					
2							
3							
4							
5							
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9							
10							

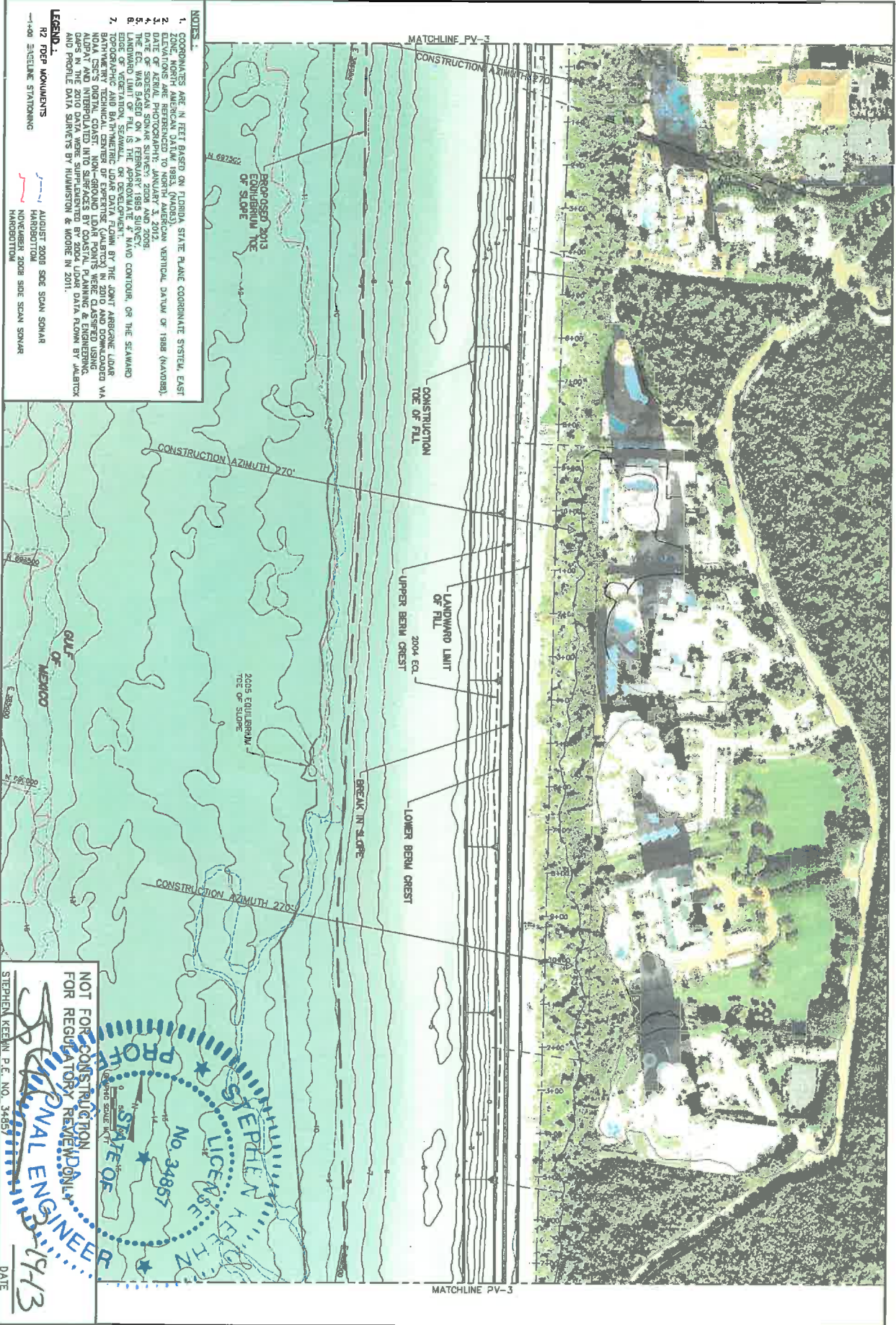
**COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
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PH: (561) 394-8100  
FAX: (561) 394-8115

C.D.A. FL. 84628  
C.D.A. LA. 82851

www.CoastalPlanEng.net

PERMIT # 222355012



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83).
  2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
  3. DATA FROM SURVEY OF 1989 (NAVD83) AND SURVEY OF 2004 (NAVD83).
  4. DATE OF SURVEY: SURVEY OF 1989 (NAVD83) 2008 AND 2009.
  5. THE E.C. WAS BASED ON A FERRYWAY 1989 SURVEY.
  6. END OF CONSTRUCTION IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE STAIRWAY END OF CONSTRUCTION.
  7. TOPOGRAHY AND BATHYMETRIC DATA FROM THE JOINT ARCADIAN LIDAR BATHYMETRY TECHNICAL CENTER OF EXPERTISE (JALTEX) IN 2010 AND DOWNLOADED VIA LIDAR DATA CENTER. NON-GROUND LIDAR POINTS WERE CLASSIFIED USING SURFACE AND GROUND FILTERS. SURFACE DATA WAS CLASSIFIED USING SURFACE AND GROUND FILTERS. SURFACE DATA WAS CLASSIFIED USING SURFACE AND GROUND FILTERS. SURFACE DATA WAS CLASSIFIED USING SURFACE AND GROUND FILTERS. SURFACE DATA WAS CLASSIFIED USING SURFACE AND GROUND FILTERS.

**LEGEND:**

- R2 PROP MONUMENTS
- 100' ELEVATION STATIONING
- AUGUST 2008 SOC SCAN SONAR HARBOUR TOW
- NOVEMBER 2008 SIDE SCAN SONAR HARBOUR TOW

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

**STEPHEN KEELIN**  
Professional Engineer  
No. 34867  
STATE OF FLORIDA

DATE: 11/13

COLLIER COUNTY  
BEACH REDEMPTION PROJECT  
PLAN VIEW

DRAWING NO. PV-4  
SHEET 5 OF 30

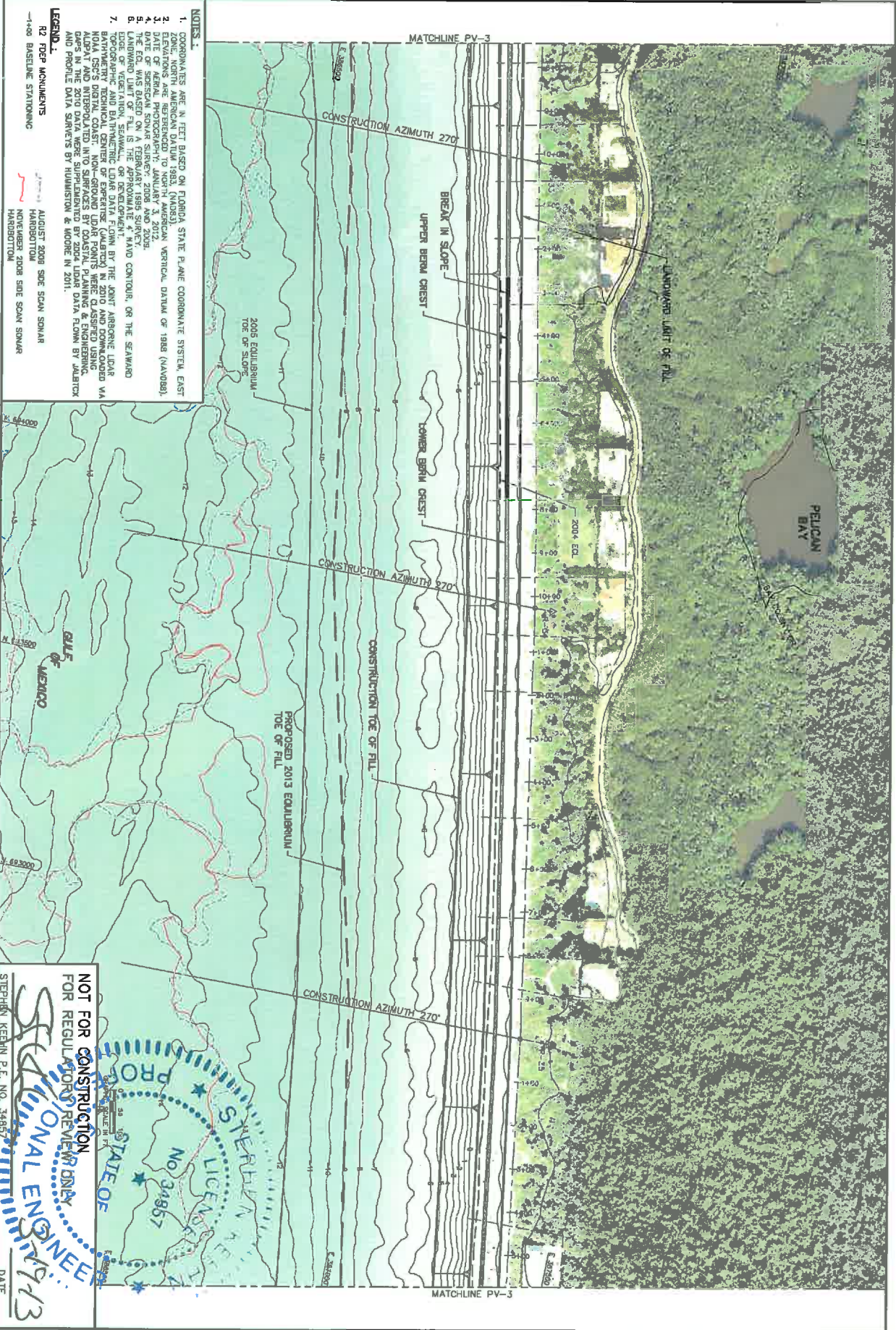
Reference	Design	Created	Revised
1	SK	AMS	11/15/2010
	DK	MS	
	7/25/12	SK	
	AS NOTED	148925	

**COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPlanning.net

PH: (561) 354-6962  
FAX: (561) 354-6718  
C.O.P. FL 00028  
E.O.A. TX 00011

PERMIT # 222 355 012





- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ELEVATIONS ARE BASED ON NGVD 83 (NAD83) VERTICAL DATUM OF 1988 (MAMD83).
  2. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  3. DATE OF SIDE SCAN SONAR SURVEY: 2008 AND 2009.
  4. DATE OF SIDE SCAN SONAR SURVEY: 2008 AND 2009.
  5. UNIMPROVED TOE OF FILL APPROXIMATE SURFACE AND CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  6. TOPOGRAPHIC AND BATHYMETRIC LIDAR DATA FLOWN BY THE JOINT AIRBORNE LIDAR NATIONAL CENTER OF EXCELLENCE (JANUARY IN 2010 AND DOWNLOADED VIA NOAA'S DISSEMINATION CENTER) AND LIDAR DATA FLOWN BY COASTAL PLANNING & ENGINEERING, AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING. LIDAR DATA IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LIDAR DATA FLOWN BY JALBTX AND PROFILE DATA SURVEYS BY HANWISTON & MOORE IN 2011.
- LEGEND:**
- 12 PCEP MONUMENTS
  - 1400 BASELINE STATIONING
  - AUGUST 2008 SIDE SCAN SONAR
  - NOVEMBER 2008 SIDE SCAN SONAR
  - HANDBOTTOM
  - HANDBOTTOM

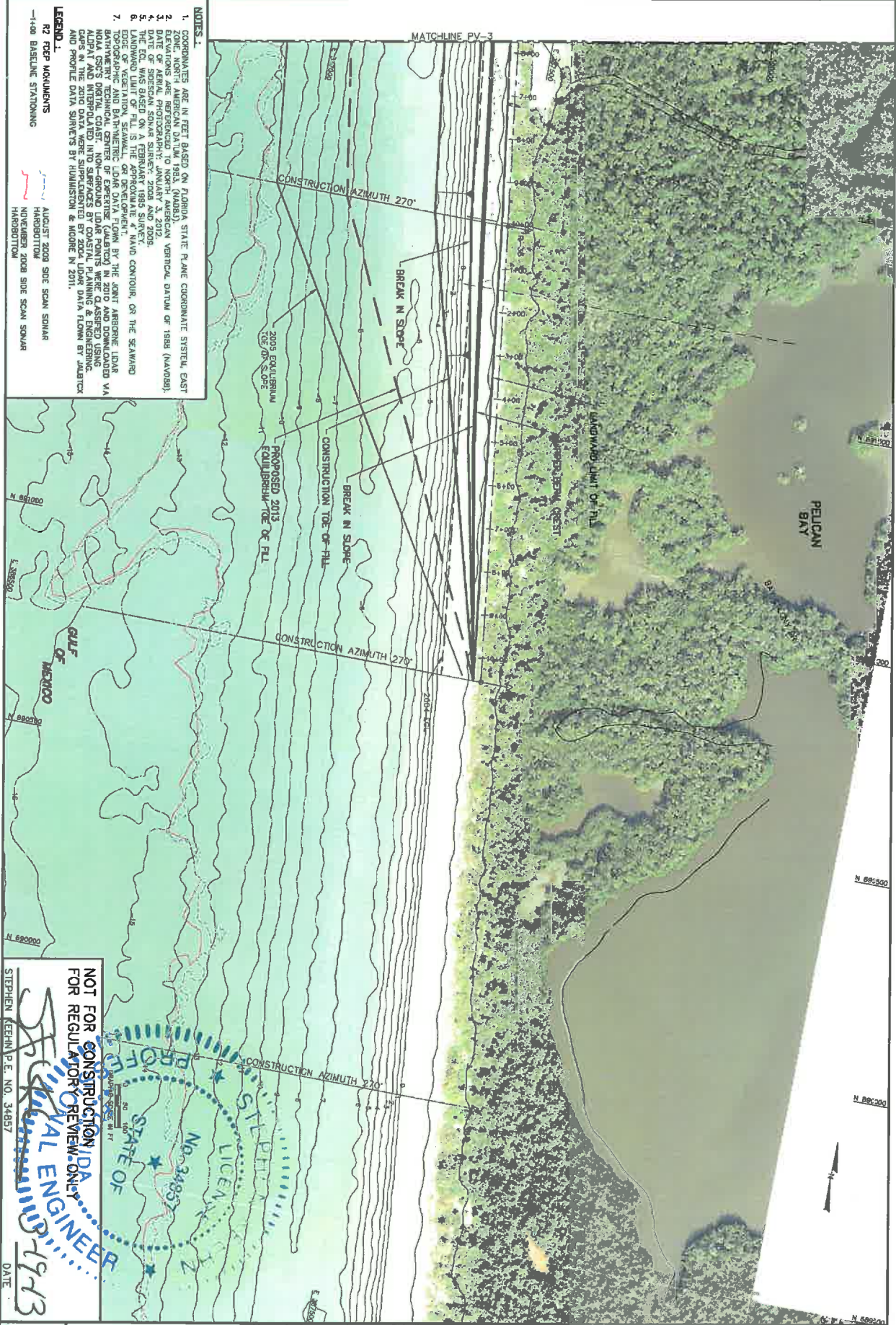
**NOT FOR CONSTRUCTION**  
 FOR REGULATORY REVIEW ONLY  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 No. 34957  
 STEPHEN KEVIN P.E. NO. 34957  
 DATE

COLLIER COUNTY  
 BEACH RENOURISHMENT PROJECT  
 PLAN VIEW  
 DRAWING NO.  
 PV-5  
 SHEET 6 OF 26

Reference Plan	Designed by	Checked by	REVISIONS	
14002	SK	AMB	1	1/24/13
	Drawn by SK	Reviewed by NS		
	Date: 7/25/13	Site/Field by SK		
	Plot Scale: AS NOTED	Comm. No: 140025	By:	Date:
			Iss.:	Date:

**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 P.L.L. (2011) 334-2102  
 FAX: (201) 334-0198  
 C.O.C. FL. 00028  
 C.E.C. FL. 92251  
 www.CoastalPlanning.com

**PERMIT # 222 355 012**



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE FRAME COORDINATE SYSTEM, EAST DATUM. POINTS ARE REFERENCED TO THE NATIONAL VERTICAL DATUM OF 1988 (NAVD83).
  2. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  3. DATE OF ROBERTSON SOUND SURVEY: 2008 AND 2009.
  4. DATE OF ROBERTSON SOUND SURVEY: 2008 AND 2009.
  5. LANDING LIMIT OF FILL IS TERMINATION SURVEY AND CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  6. LANDING LIMIT OF FILL IS TERMINATION SURVEY AND CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  7. TOPOGRAPHIC AND BATHYMETRIC DATA FLOW BY THE JOINT AERONAUTIC LEAD DATA CENTER AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING. GAPS IN THE 2010 DATA WERE SUPPLEMENTED BY 2008 LIDAR DATA FLOW BY JALBTCX AND PROFILE DATA SURVEYS BY HUMPHRIS & MOORE IN 2011.

**LEGEND:**

- R2 PCEP MONUMENTS
- 1400 BASELINE STATIONING
- AUGUST 2009 SIDE SCAN SONAR
- NOVEMBER 2008 SIDE SCAN SONAR
- HANDBOBTOM
- HANDBOBTOM

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**STEPHEN KEENIN, P.E. NO. 34857**

**STATE OF FLORIDA**

**PROFESSIONAL ENGINEER**

**1913**

DATE

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.  
**PV-6**

SHEET 7 OF 28

Prepared by		Checked by		REVISIONS	
SK	AMB	1	3/25/12		
Drawn by	Revised by				
SK	SK				
Date	Submitted by				
7/25/12	SK				
Plot Scale	Comp. No.				
AS NOTED	148295				
		No.	Date	Description	

**COASTAL PLANNING & ENGINEERING, INC.**

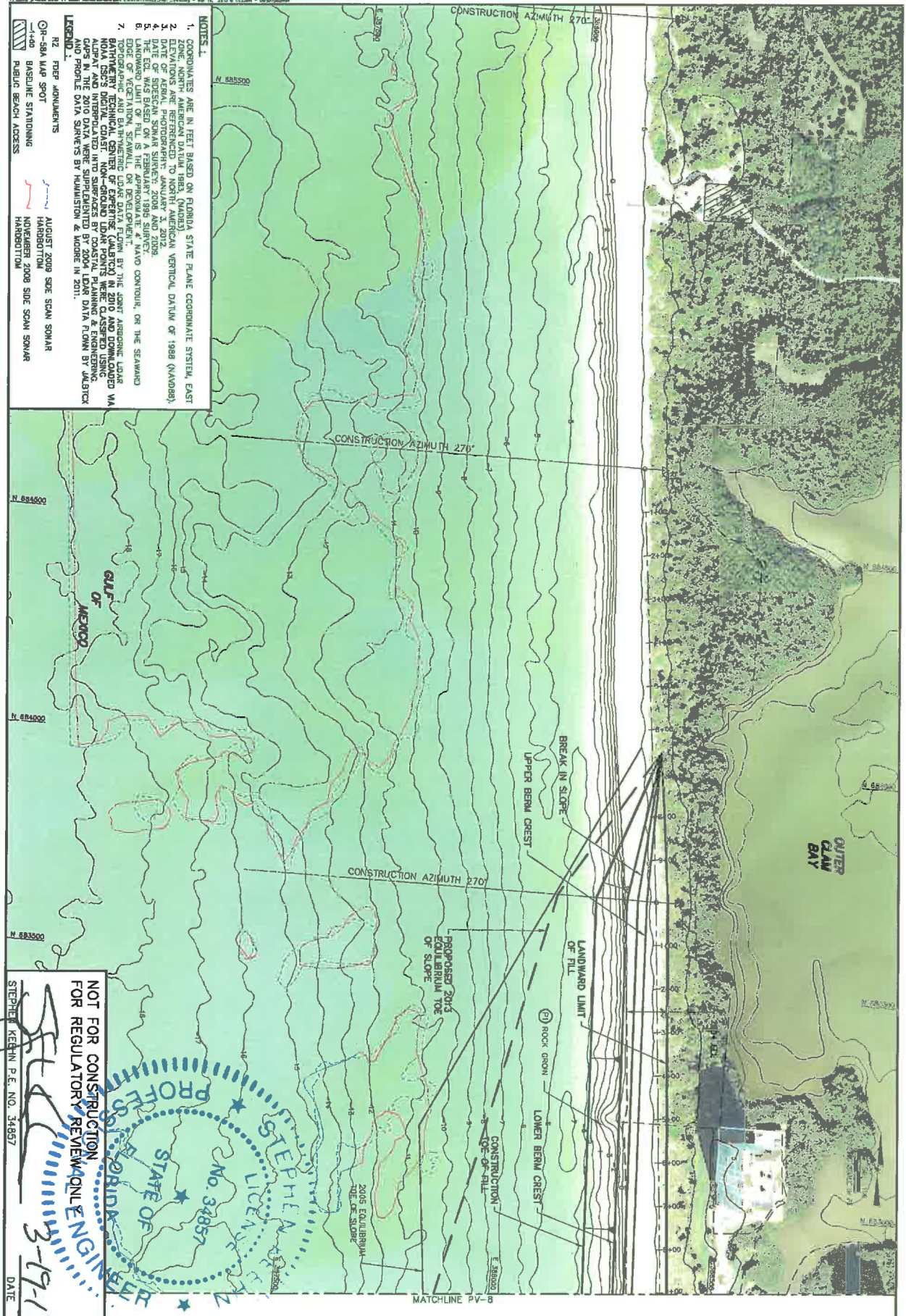
2401 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

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C.O.A. FL 84523  
C.O.A. LA 8257

**CPE**

www.CoastalPlanEng.net

**PERMIT # 222 355 012**



NOT FOR CONSTRUCTION  
 FOR REGULATORY REVIEW ONLY  
**STEPHEN KERN, P.E.**  
**NO. 32857**  
**3-19-13**  
 DATE

COLLIER COUNTY  
 BEACH RENOURISHMENT PROJECT  
 PLAN VIEW

Reference File#	Assigned by	Created by	REVISIONS		
	SK	AMB	1	2/28/13	1
	Drawn by	Reviewed by			
	SK	SK			
	Date	Submitted by			
	7/25/13	SK			
	Plot Scale	Drawn, No.			
	AS NOTED	145225			
			Rev.	Date	Description

STEPHEN KERN, P.E., NO. 32857  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
**3-19-13**

DATE

DATE

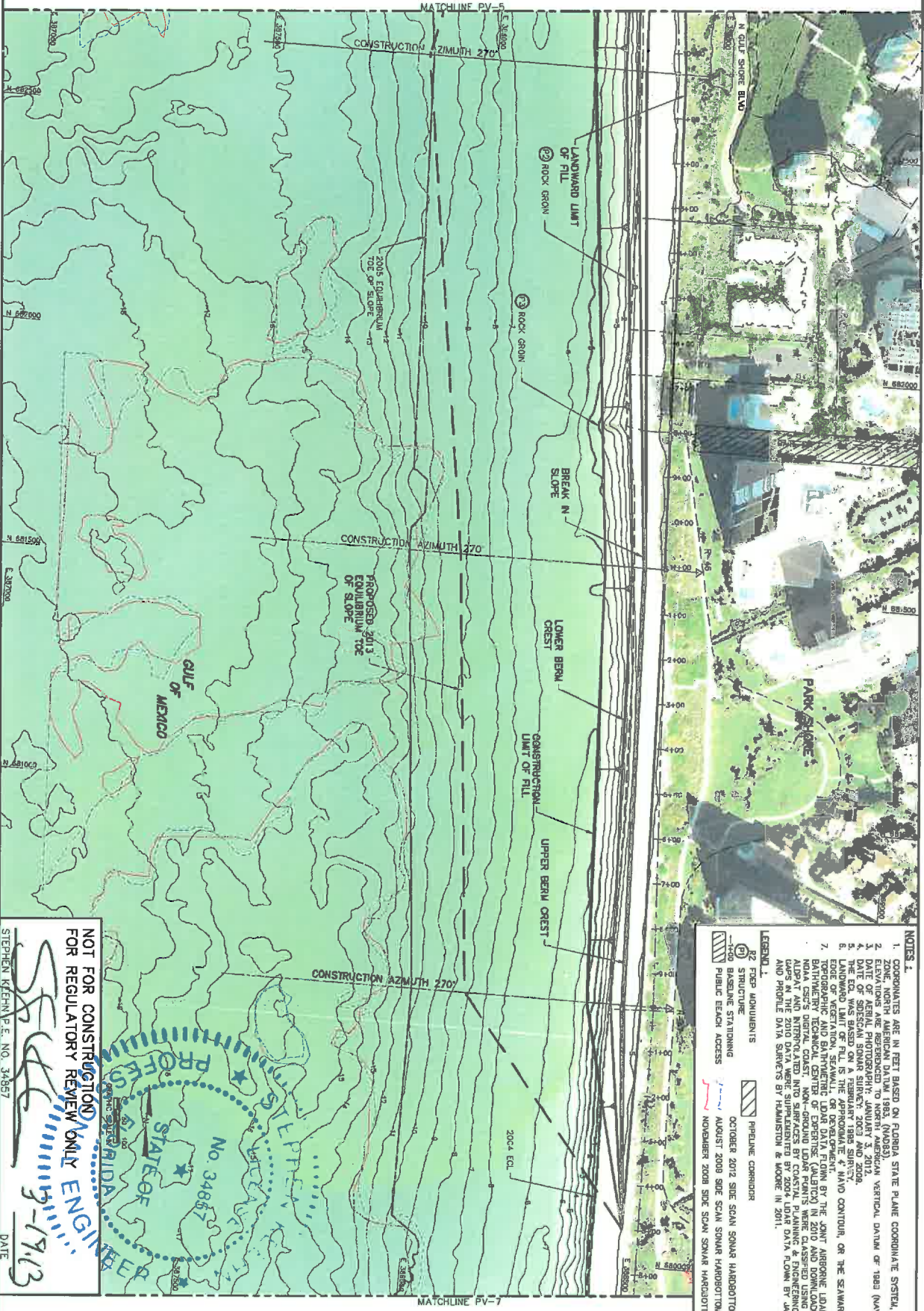
PROPOSED 2013  
 EQUILIBRIUM TOE  
 OF SLOPE  
 2005 EQUILIBRIUM  
 TOE OF SLOPE

UPPER BERM CREST  
 BREAK IN SLOPE  
 LOWER BERM CREST  
 LANDWARD LIMIT  
 OF FILL  
 ROCK PILE  
 CONSTRUCTION  
 OF FILL

**COASTAL PLANNING & ENGINEERING, INC.**  
 3451 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 www.CoastalPlanEng.net

PH (561) 361-8982  
 FAX (561) 365-6456  
 C.O.A. P.E. #8428  
 C.O.A. L.A. #3531

PERMIT # 222 355 012



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON GLOBAL STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83). ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1989 (NAVD89).
  2. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  3. THE ECG WAS BASED ON A SURVEY OCCURRED IN 2008.
  4. LANDWARD LIMIT OF FILL IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  5. BATHYMETRY TECHNICAL CENTER OF THE U.S. ARMY CORPS OF ENGINEERS, VICKSBURG, MISSISSIPPI, PROVIDED THE DATA FROM WHICH THIS PLAN WAS DERIVED. THE DATA WAS OBTAINED VIA ALBATROSS AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING, INC. AND PROVIDED TO US BY TRANSMISSION IN 2011.
  6. AND PROFILE DATA SURFACES BY TRANSMISSION IN 2011.
- LEGEND:**
- PROPOSED CONSTRUCTION
  - PRELIME CORRIDOR
  - NO. BASELINE STATIONING
  - NOVEMBER 2008 SIDE SCAN SONAR HATCH BOTTOM
  - PUBLIC BEACH ACCESS
  - OCTOBER 2012 SIDE SCAN SONAR HATCH BOTTOM
  - AUGUST 2009 SIDE SCAN SONAR HATCH BOTTOM
  - NOVEMBER 2008 SIDE SCAN SONAR HATCH BOTTOM

NOT FOR CONSTRUCTION  
 FOR REGULATORY REVIEW ONLY  
 ENGINEER  
 STEPHEN KENNEDY, P.E. NO. 34857  
 DATE 3-19-13

DRAWING NO.  
**PV-8**  
 SHEET 9 OF 28

COLLIER COUNTY  
 BEACH RENOURISHMENT PROJECT  
 PLAN VIEW

Revised by		Checked by		Reviewed by	
Date	Reason	Date	Reason	Date	Reason
7/25/18	AS NOTED				

**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
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 FX (561) 361-8118  
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 C.O.A. LA 82511

**CPE**  
 www.CoastalPlanEng.net

PERMIT # 222 355 012

- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983, (NAD83).
  2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1888 (NAVD88).
  3. DATE OF SURVEY: SCAN SQUARE 2008 AND 2009.
  4. THE ECL WAS BASED ON A FEBRUARY 1985 SURVEY.
  5. LANDWARD LIMIT OF FILL IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE SEAWARD BATHYMETRIC AND BATHYMETRIC LEAD DATA FROM BY THE JOINT AIRBORNE LEAD BATHYMETRY TECHNICAL CENTER OF EXPERTISE (JALBTEX) IN 2010 AND DOWNLOADED VIA NOAA COTS DIGITAL COAST, IN NO-GROUND LEAD POINTS WERE CLASSIFIED USING DATA IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LEAD DATA FROM BY JALBTEX AND PROFILE DATA SURVEYS BY HAMMISTON & MOORE IN 2011.
- LEGEND:**
- R2 POPE MONUMENTS
  - 1:000 BASELINE STATIONING
  - AUGUST 2008 SDC SCAN SQUARE HARBOURTON
  - NOVEMBER 2008 SDC SCAN SQUARE HARBOURTON



NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY

STEPHEN KEENE, P.E. NO. 34987

DATE 7/9/13

REGISTERED PROFESSIONAL ENGINEER STATE OF FLORIDA

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO. PV-9

SHEET 10 OF 38

Reference Files		Designed by		Checked by		REVISIONS	
Drawn by	BK	Designed by	SK	Checked by	AMS	1	7/25/13
Reviewed by	SK	Reviewed by	SK	Submitted by	SK		
Date	7/25/12	Drawn by	BK	Checked by	AMS		
Plot Scale	AS NOTED	Checked by	AMS	Drawn by	BK		
Scale	AS NOTED	Drawn by	BK	Checked by	AMS		

**COASTAL PLANNING & ENGINEERING, INC.**

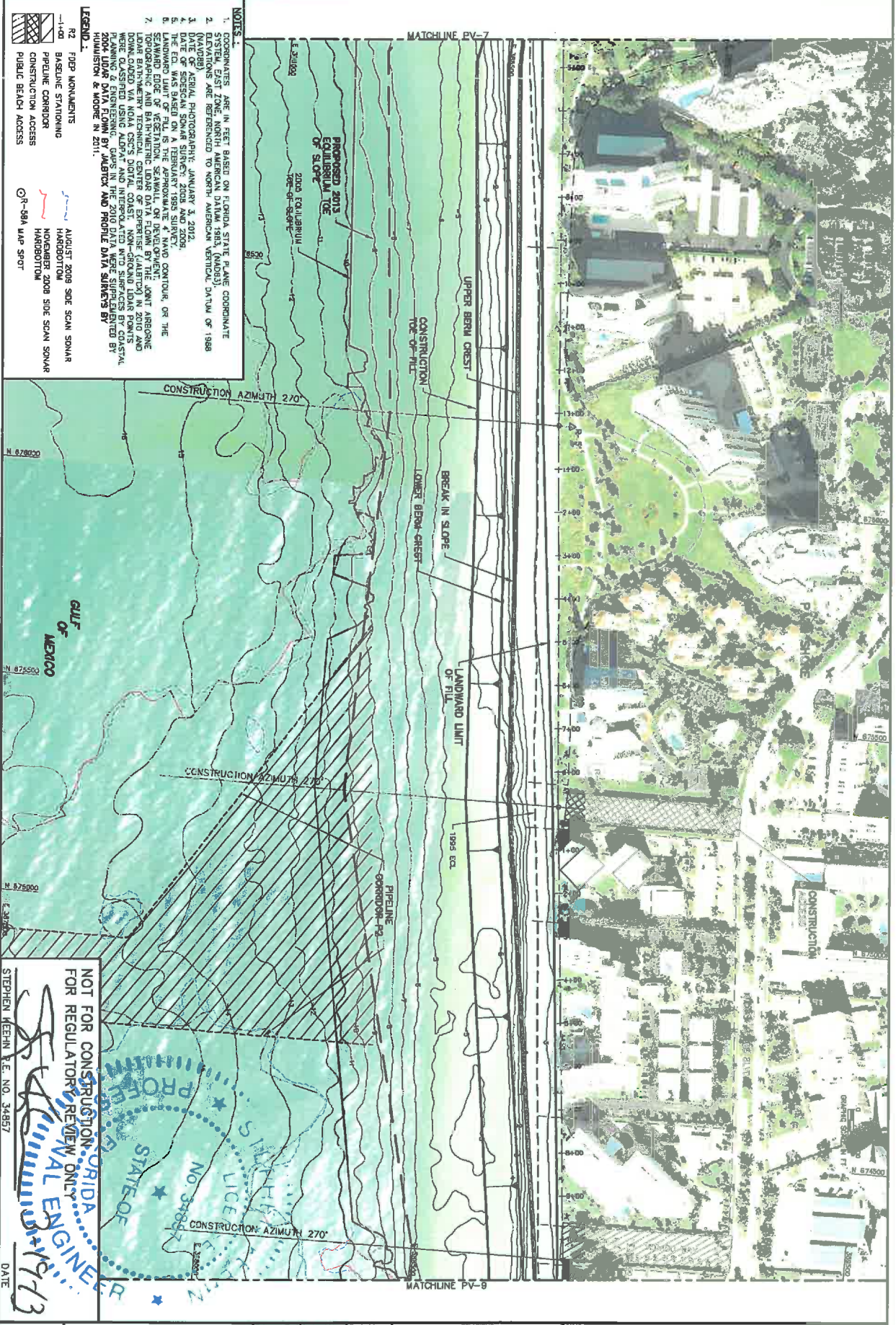
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH: (561) 394-0100  
FAX: (561) 394-0110

C.O.A. FL 94028  
C.O.A. LA 82511

www.CoastalPlanning.net

PERMIT # 222 355 012



**NOTES:**

- COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83). ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988.
- DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
- DATE OF SISECAN SOUND SURVEY: 2008 AND 2009.
- THE ECI WAS BASED ON A FEBRUARY 1995 SURVEY.
- SEAWARD EDGE OF VEGETATION, SEAWALL, OR BEACH GRIP.
- TOPOGRAPHIC AND BATHYMETRIC LEAD DATA FROM THE JOINT ARGONNE LEAD BATHYMETRY TECHNICAL CENTER OF EXPERTISE (LATEX) IN 2010 AND 2011.
- PLANNING & ENGINEERING, OASIS IN THE 2010 DATA WERE SUPPLEMENTED BY 2008 LEAD DATA FROM JALBTXQ AND 2010 DATA WERE SUPPLEMENTED BY JALBTXQ & MOORE IN 2011.

**LEGEND:**

- R2 FIBER MONUMENTS
- 140— BASELINE STATIONING
- CONSTRUCTION CORRIDOR
- CONSTRUCTION ACCESS
- PUBLIC BEACH ACCESS
- AUGUST 2009 SIDE SCAN SONAR HARBORBOTTOM
- NOVEMBER 2008 SIDE SCAN SONAR HARBORBOTTOM
- CR-594 MAP SPOT

NOT FOR CONSTRUCTION REVIEW ONLY  
FOR REGULATORY REVIEW ONLY

STEPHEN WEHREN, P.E. NO. 34857

DATE

PROFESSIONAL ENGINEER  
STATE OF FLORIDA  
LICENSE NO. 34857

PERMIT # 222 355 012

DRAWING NO. PV-10

SHEET 11 OF 38

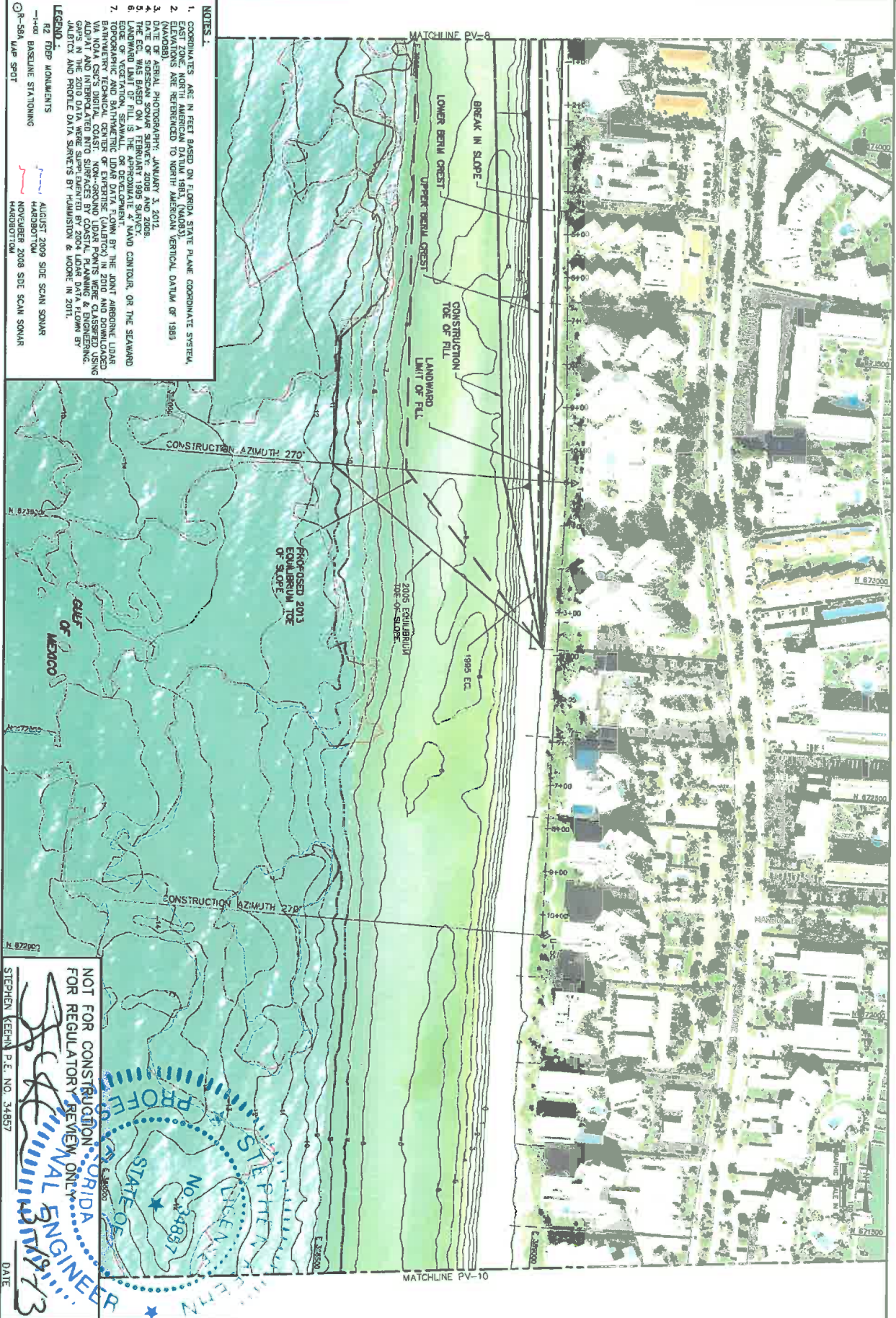
COLLIER COUNTY BEACH RENOURISHMENT PROJECT

PLAN VIEW

REVISIONS	
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**COASTAL PLANNING & ENGINEERING, INC.**  
2401 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPlanEng.com

PH: (561) 394-6100  
FAX: (561) 394-6116  
C.O.A. FL 64538  
C.O.A. LA 62531



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83).
  2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1985.
  3. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  4. DATE OF SPENSAN SQUARE SURVEY: 2008 AND 2009.
  5. THE ECL WAS BASED ON A FEBRUARY 1995 SURVEY.
  6. THE ECL WAS BASED ON THE ORIGINAL NAVY CONTOUR, OR THE STWARD ECL FROM VARIATION EAS AND THE CONTOUR, NAVY CONTOUR, OR THE STWARD ECL FROM VARIATION EAS.
  7. TOPOGRAPHIC AND BATHYMETRIC LIDAR DATA FLOWN BY THE JOINT HARBOUR LIDAR BATHYMETRY TECHNICAL CENTER OF EXPERIENCE (JALTEX) IN 2010 AND DOWNLOADED AND INTERPOLATED INTO SURFACES BY JALTEX. POINTS WERE CLASSIFIED USING GAUSS IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LIDAR DATA FLOWN BY JALTEX AND PROFILE DATA SURVEYS BY HUMMISTON & MOORE IN 2011.
- LEGEND:**
- R2 TBM MONUMENTS
  - 1+00 BASELINE STATIONING
  - OR-58A WAVE SPOT
  - AUGUST 2009 SIDE SCAN SONAR HARBOUR TOW
  - NOVEMBER 2008 SDE SCAN SONAR HARBOUR TOW

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

STEPHEN KEHN, P.E., NO. 34857

DATE

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO. PV-11

SHEET 12 OF 38

DESIGNED BY		CHECKED BY		REVISIONS	
SK	SK	AMB	AMB	1	2/25/12
Origin by: SK	Reviewed by: NS				
Date: 2/25/12	Submitted by: SK				
Plot Scale: AS NOTED	Client No: 148925				
	No. Date Description				

**COASTAL PLANNING & ENGINEERING, INC.**

2451 NW BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

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FAX: (561) 391-0181

C.O.A. FL 84028  
C.O.A. LA 62531

www.CoastalPlan.org.net

PERMIT # 222 355 012



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983. (NAD83).
  2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988.
  3. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  4. DATE OF SPOTCHECK SURVEY: 2008 AND 2009.
  5. THE BEACH WAS BASED ON A FERNANDA 1989 SURVEY.
  6. THE BEACH WAS BASED ON A FERNANDA 1989 SURVEY.
  7. TOPOGRAPHIC AND BATHYMETRIC LIDAR DATA FLOWN BY THE JOINT AIRBORNE LIDAR SURVEY CONTRACTOR CENTER OF EXCELLENCE (LASCER) IN 2010 AND COMBINED WITH BATHYMETRIC LIDAR DATA FLOWN BY THE JOINT AIRBORNE LIDAR SURVEY CONTRACTOR CENTER OF EXCELLENCE (LASCER) IN 2010 AND COMBINED WITH AERIAL PHOTOGRAPHY AND SPOTCHECK SURVEY DATA TO DEVELOP A BEACH PROFILE AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING. DATA IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LIDAR DATA FLOWN BY GATREX AND PROFILE DATA SURVEYS BY HUMPHREY & MOORE IN 2011.

- LEGEND:**
- R2 FEET MONUMENTS
  - B-S LINE STATIONING
  - STRUCTURE
  - 584 MAP SPOT
  - PUBLIC BEACH ACCESS
  - AUGUST 2009 SDE SCAN SQUARE HATCH
  - NOVEMBER 2008 SDE SCAN SQUARE HATCH
  - NOVEMBER 2008 SDE SCAN SQUARE HATCH

**NOT FOR CONSTRUCTION**  
**FOR REGULATORY REVIEW ONLY**  
**STEPHEN KEENE P.E. NO. 34857**  
**DATE**  
**3/13/13**

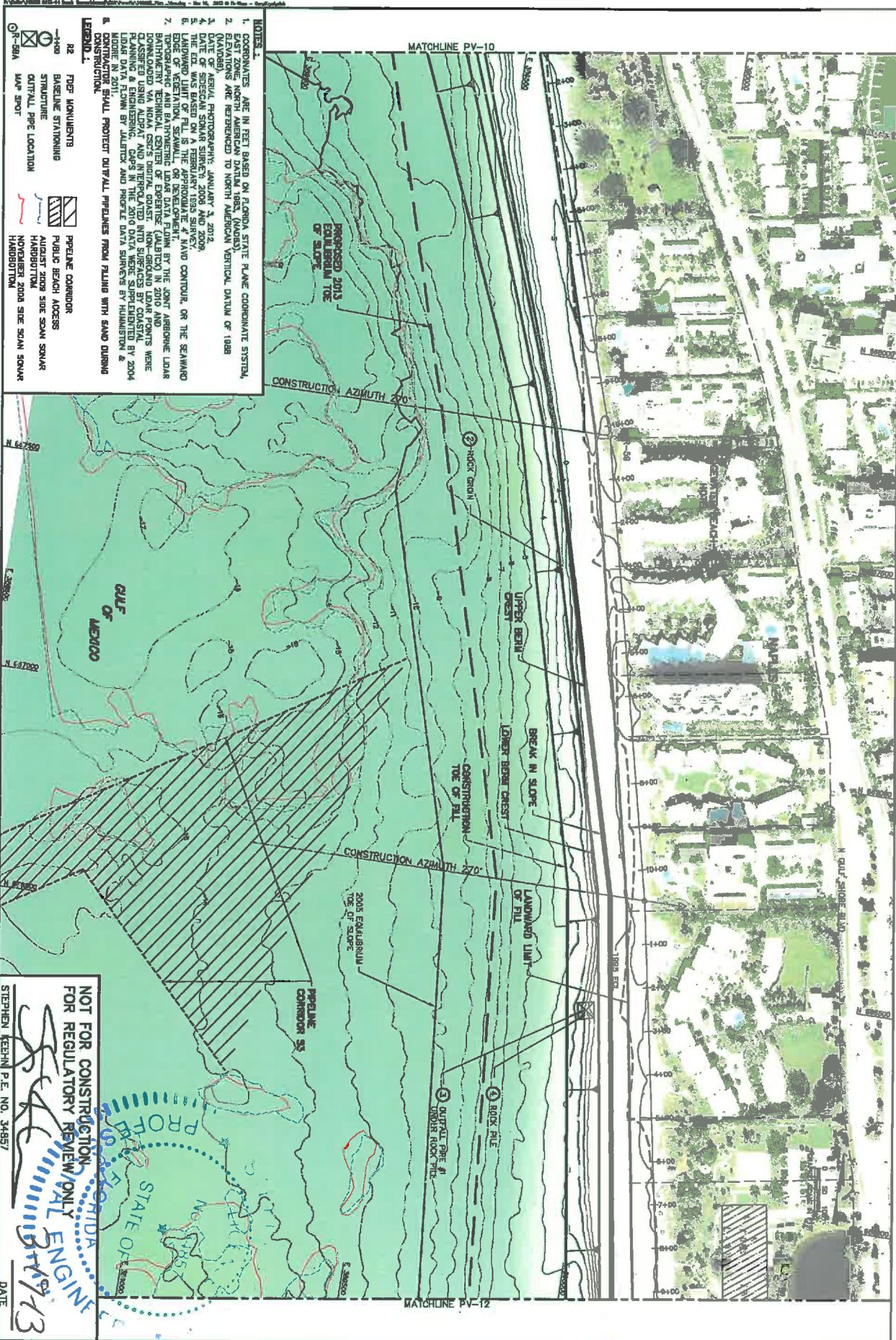
COLLIER COUNTY  
 BEACH RENOURISHMENT PROJECT  
 PLAN VIEW  
 DWG. NO. PV-12  
 SHEET 13 OF 28

REVISIONS	
1	1/2/10 PLOT 1
2	2/8/12 PLOT 1
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**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
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 FAX: (561) 391-6119  
 C.O.A. FL #4528  
 C.O.A. LA #2571  
 www.CoastalPlanEng.net

**PERMIT # 222 355 012**





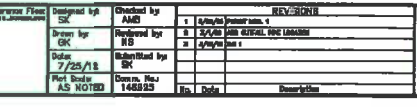
- NOTES:**
1. DIMENSIONS ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE NORTH AMERICAN DATUM 83 (NAD83).
  2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
  3. (LANDING) SERIAL PHOTOGRAPHY, JANUARY 8, 2012.
  4. DATE OF AIRBORNE SIDE SCAN SONAR SURVEY.
  5. THE ELEVATION WAS BASED ON A FEBRUARY 1999 SURVEY.
  6. LANDWARD LIMIT OF FILL IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE SEAWARD TOPOGRAPHIC LIMIT, WHATEVER IS THE MORE SEAWARD.
  7. TOPOGRAPHIC DATA WAS OBTAINED FROM THE JOINT AIRBORNE LIDAR DATA DOWNLOADED VIA NOAA CREST'S DIGITAL COAST, NON-BROOKLYN LIDAR POINTS WERE OBTAINED USING AIRMAP AND INTERPOLATED INTO SURFACES BY COASTAL BY 2004.
  8. LIDAR DATA FROM AIRMAP AND PROFILE DATA SURFACES BY HANMINGTON & MOORE IN 2011.
  9. CONTRACTOR SHALL PROTECT OUTFALL PIPES FROM FILLING WITH SAND DURING CONSTRUCTION.

- LEGEND:**
- R2 PIPE MONUMENTS
  - STRUCTURE
  - OUTFALL PIPE LOCATION
  - MAP SPOT
  - PRELIME CONDUIT
  - PUBLIC BEACH ACCESS
  - AUGUST 2008 SIDE SCAN SONAR HARDBOTTOM
  - NOVEMBER 2008 SIDE SCAN SONAR HARDBOTTOM

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY  
STEPHEN KEENAN P.E. NO. 34457  
DATE  
STEVEN KEENAN P.E. NO. 34457  
DATE

DESIGNING NO. PV-13  
SHEET 14 OF 20  
COLLIER COUNTY BEACH RENOURISHMENT PROJECT  
PLAN VIEW

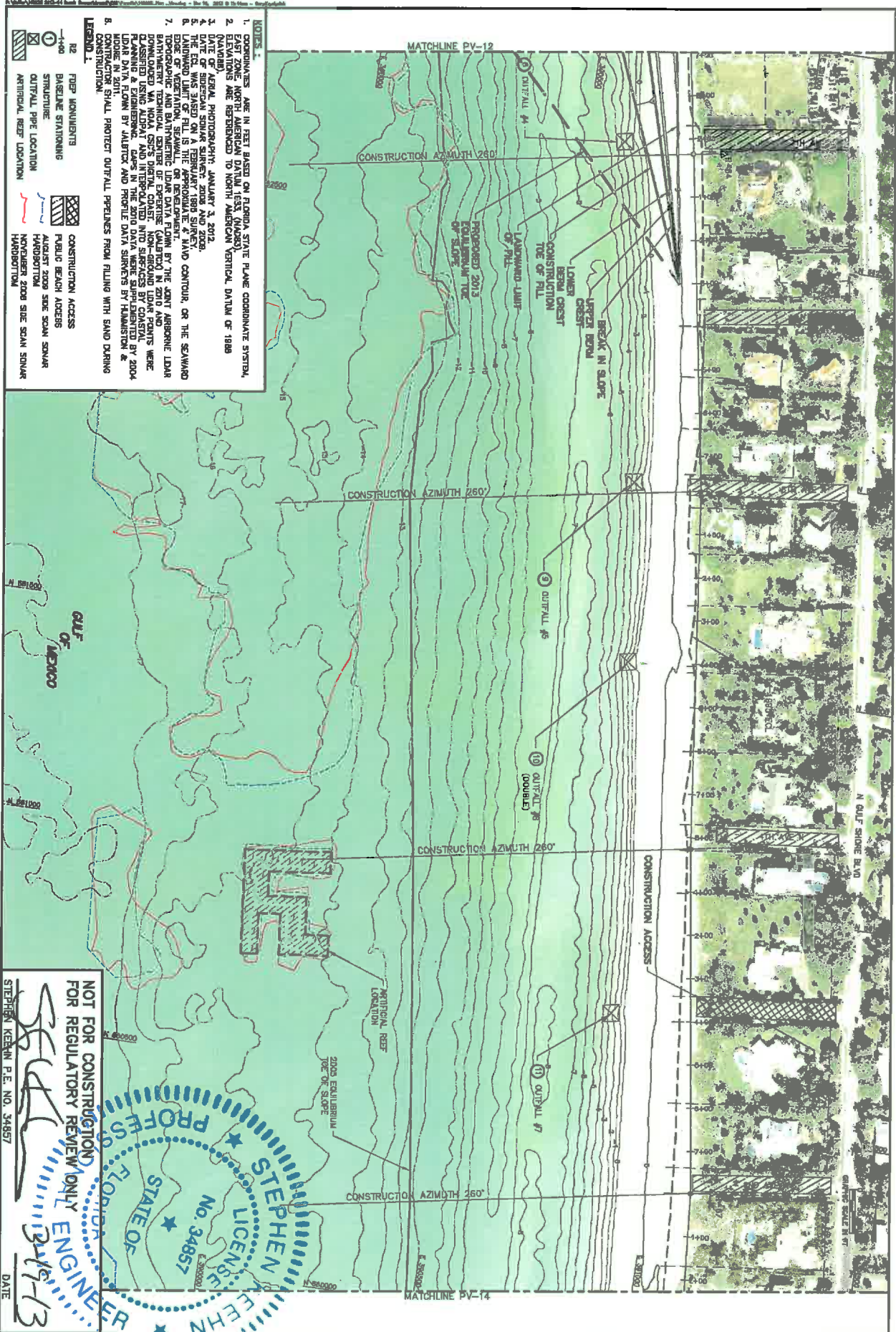
Designed by SK	Checked by MB	1	REVISED
Drawn by GK	Reviewed by RB	2	
Date 7/25/13	Designed by SK	3	
Plot Date AS NOTED	Date 14/08/13	4	
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**COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
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FAX (951) 391-0116  
C.O.A. FL 84428  
C.S.A. LA 83251  
www.CoastalPlanning.net

**PERMIT # 222 355 012**





- NOTES:**
1. CONTOUR VALUES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EASTING NORTH AMERICAN DATUM 1883 (NAD83). ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1989 (NAVD83).
  2. DATE OF AERIAL PHOTOGRAPHY: JANUARY 2, 2012.
  3. DATE OF SURVEY: JANUARY 2, 2012.
  4. DATE OF SURVEY: JANUARY 2, 2012.
  5. LANDING LIMIT OF FILL IS THE APPROXIMATE 4' HAVO CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  6. DOWNDROGHE AND BATHYMETRIC LEAD DATA FROM THE JOINT MARINE CORPS LEAD DOWNLOADS AND BATHYMETRIC LEAD DATA FROM THE JOINT MARINE CORPS LEAD DOWNLOADS VIA NOAA SVP'S DIGITAL COAST, NON-GROUND LEAD POINTS WERE CLASSIFIED USING AIRPORT AND INTER-OCEANIC INTO SURFACES BY CONVECT, FLANKING & EXHAUSTING. DATA IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 DATA FROM THE JOINT MARINE CORPS LEAD DOWNLOADS BY THAMSTON & MOORE IN 2011.
  7. CONTRACTOR SHALL PROTECT OUTFALL PERIMETERS FROM FILLING WITH SAND DURING CONSTRUCTION.
- LEGEND:**
- RE RIPRAP ARMOURMENT
  - STRUCTURE
  - OUTFALL PIPE LOCATION
  - ATRIUM, REEF LOCATION
  - CONSTRUCTION ACCESS
  - ARREST 2009 SEE SOAN SONAR
  - HARDBOTTOM
  - NOVEMBER 2009 SEE SOAN SONAR
  - HARDBOTTOM

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

STEPHEN KEHN P.E. NO. 34857

DATE 3-19-13



DESIGNED BY BK	CHECKED BY MB	DATE 7/25/12	REVISED BY BK
DRAWN BY BK	REVIEWED BY MB	PROJECT NO. AS R0702	DATE 148925

REVISION	No.	Date	Description
1	1		
2	2		
3	3		

**COASTAL PLANNING & ENGINEERING, INC.**

2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH: (561) 391-6132  
FAX: (561) 391-6118

C.O.A. FL 84238  
C.S.A. LA 82931

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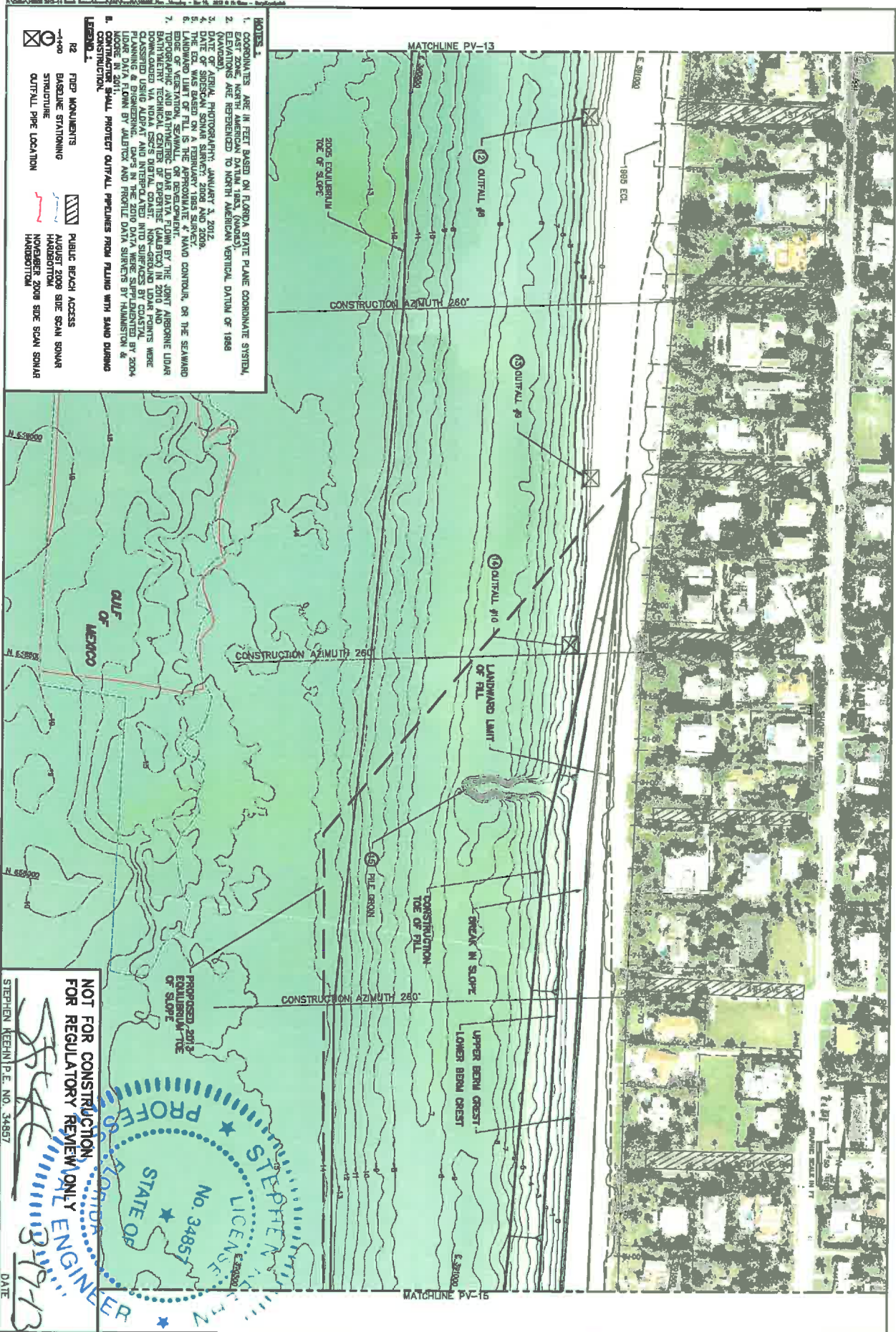
PERMIT # 222 355 012

COLLER COUNTY  
BEACH RENOURISHMENT PROJECT

PLAN VIEW

PV-15

SHEET 16 OF 28



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983. (NAD83). ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
  2. DATE OF AERIAL PHOTOGRAPHY: JANUARY 7, 2012.
  3. DATE OF AIRBORNE SONAR SURVEY: 2008 AND 2009.
  4. LANDWARD LIMIT OF FILL IS THE APPROXIMATE 4' MAND CONTOUR, ON THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  5. TOPOGRAPHIC AND BATHYMETRIC DATA FROM THE JOINT AIRBORNE LIDAR DOWNLOADS AND BATHYMETRIC LIDAR DATA FROM THE JOINT AIRBORNE LIDAR DOWNLOADS VIA NOAA CSRS DIGITAL COAST, NON-GEODATUM LIDAR POINTS WERE CLASSIFIED USING ADAPT AND INTERPOLATED INTO SURFACES BY COASTAL PLANNING & ENGINEERING. COPS IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LIDAR DATA FROM THE STATE OF FLORIDA AND PROFILE DATA SURVEYS BY THOMASTON & MOORE IN 2011.
  6. CONTRACTOR SHALL PROTECT OUTFALL PIPELINES FROM FILLING WITH SAND DURING CONSTRUCTION.

- LEGEND:**
- R2 FIELD MONUMENTS
  - +00 BASELINE STATIONING
  - STRUCTURE
  - OUTFALL PIPE LOCATION
  - PUBLIC BEACH ACCESS
  - AUGUST 2008 SIDE SCAN SONAR HANDBOBTOM
  - NOVEMBER 2008 SIDE SCAN SONAR HANDBOBTOM

NOT FOR CONSTRUCTION.  
FOR REGULATORY REVIEW ONLY.

STEPHEN KEENE, P.E. NO. 34857

DATE: 7/25/12

PROF. ENGINEER  
STATE OF FLORIDA  
No. 34857  
STEPHEN KEENE, P.E.

<p>COLLIER COUNTY BEACH REQUIREMENT PROJECT</p> <p>PLAN VIEW</p> <p>DRAWING NO. PV-16</p> <p>SHEET 17 OF 20</p>	<p>Revised by: [ ]</p> <p>Drawn by: [ ]</p> <p>Scale: 7/25/12</p> <p>Plot Scale: AS NOTED</p>	<p>Checked by: [ ]</p> <p>Reviewed by: [ ]</p> <p>Quantity by: [ ]</p> <p>Drawn by: [ ]</p> <p>Drawn No.: 140828</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>No.</th> <th>Date</th> <th>Description</th> </tr> <tr> <td>1</td> <td>2/20/12</td> <td>Initial issue, rev. 0</td> </tr> <tr> <td>2</td> <td>2/20/12</td> <td>1</td> </tr> </table>	No.	Date	Description	1	2/20/12	Initial issue, rev. 0	2	2/20/12	1
No.	Date	Description										
1	2/20/12	Initial issue, rev. 0										
2	2/20/12	1										

PERMIT # 222 355 012

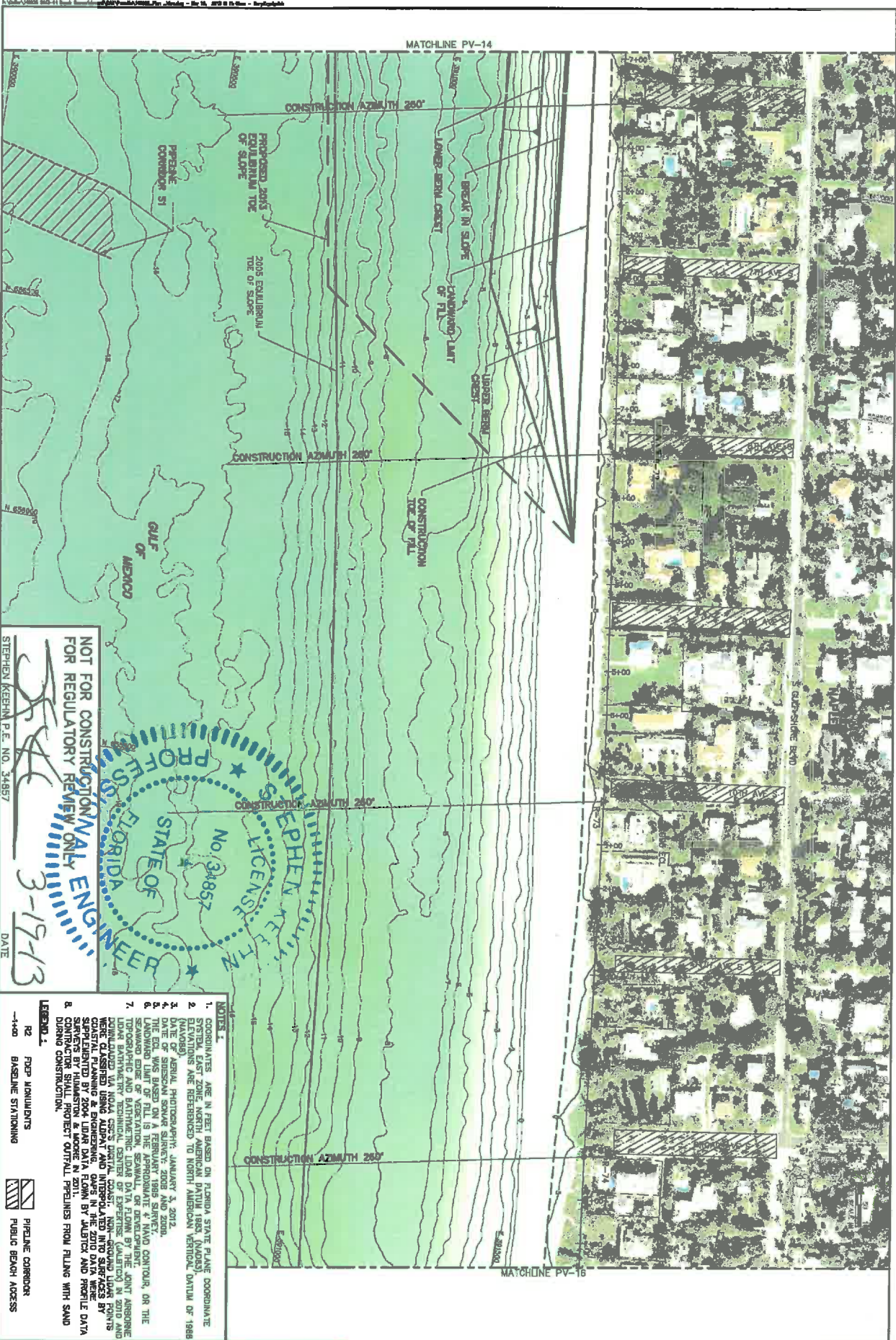
**COASTAL PLANNING & ENGINEERING, INC.**

2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

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FAX: (888) 391-8110

C.O.A. FL 84638  
C.O.A. LA 82271

www.CoastalPlanEng.net



STEPHEN KEHRIN, P.E. NO. 34857

DATE

3-19-13

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

STATE OF FLORIDA  
STEPHEN KEHRIN  
No. 34857  
LICENSED PROFESSIONAL ENGINEER

- NOTES:**
- COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM. NORTH AMERICAN DATUM 1983 (NAD83) (NAD03) DATUM OF 1988 (NAD83) ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
  - DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  - DATE OF SURVEY: NOVEMBER 2008 AND 2009.
  - THE EARTH SURFACE DATA WAS OBTAINED FROM THE AERIAL PHOTOGRAPHY AND BATHYMETRIC DATA FROM THE JOINT AIRBORNE LIDAR SURVEY CONDUCTED BY THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND THE U.S. NAVY (USN) IN 2008 AND 2009. THE DATA WAS CLASSIFIED INTO SURFACES BY CHANAL PLANNING & ENGINEERING, INC. (CPE) AND INTERPOLATED INTO SURFACES BY SURFACES BY HAWKSTON & MOORE IN 2011.
  - CONTRACTOR SHALL PROTECT OUTFALL PRELIMS FROM FILING WITH SAND DURING CONSTRUCTION.

- LEGEND:**
- R2 P&P MONUMENTS
  - +--- BASELINE STATIONING
  - ▨ PIPELINE CORRIDOR
  - ▨ PUBLIC BEACH ACCESS

COLLIER COUNTY  
BEACH REDEMPTION PROJECT  
PLAN VIEW

Reference From	Designed by	Checked by	REVISION
AS NOTED	SK	SK	1. 1/25/12
	SK	SK	2. 7/25/12
	SK	SK	3. 11/15/12
	SK	SK	4. 11/15/12
	SK	SK	5. 11/15/12
	SK	SK	6. 11/15/12
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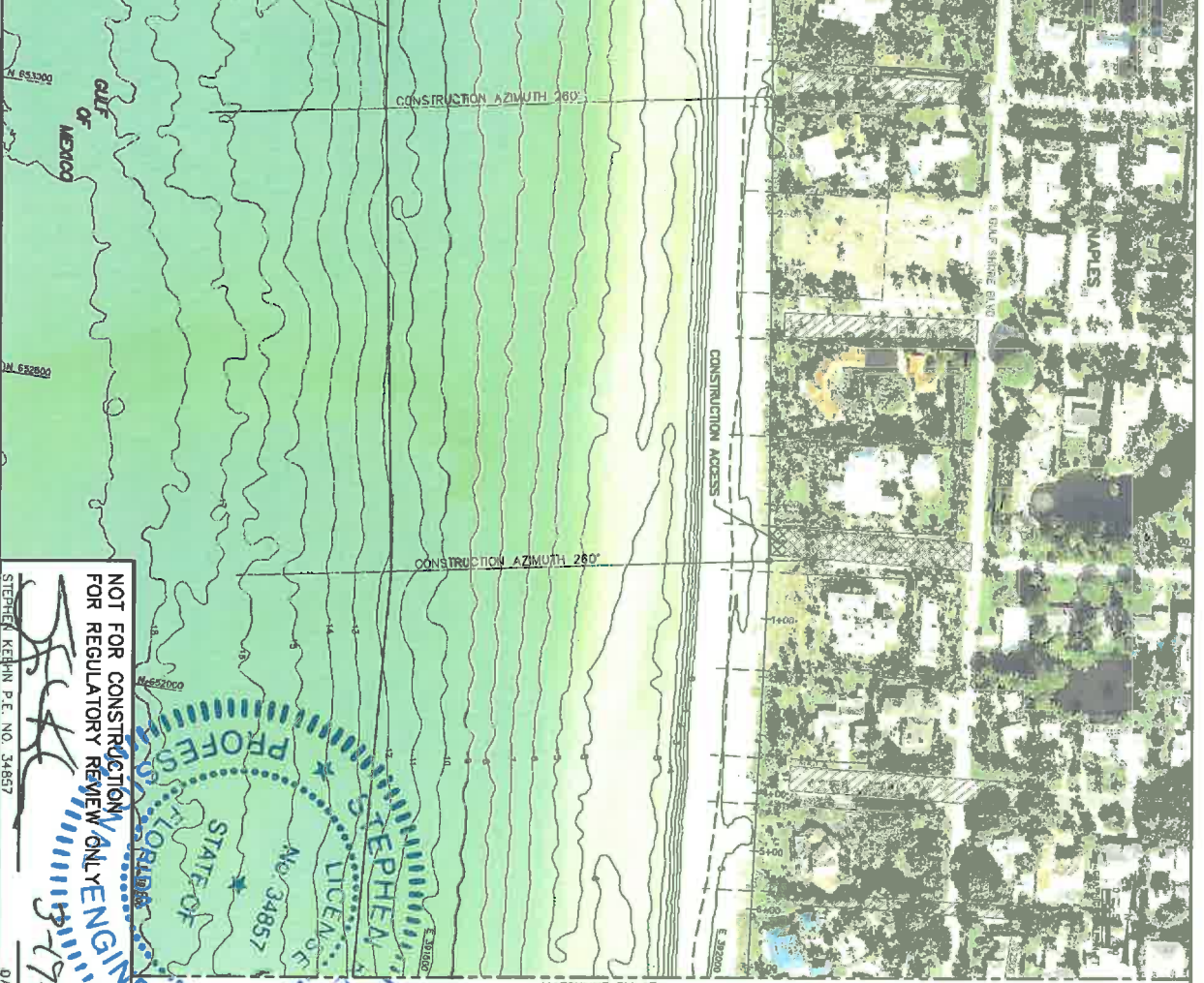
**COASTAL PLANNING & ENGINEERING, INC.**  
 2401 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 P.H. (954) 304-0022  
 FAX (954) 304-0020  
 C.O.A. FL #5816  
 C.O.A. I.A. #2237  
 www.CoastalPlanning.net

PERMIT # 222 355 012

- DATE OF AERIAL PHOTOGRAPH: JANUARY 3, 2012.
- DATE OF SURVEY: 2008 AND 2009.
- THE ECL WAS BASED ON A FEBRUARY 1995 SURVEYED CONTROL ON THE SEAWARD EDGE OF VEGETATION. SEAWARD OF DEVELOPMENT TOPOGRAPHIC AND BATHYMETRIC LEAD DATA FROM BY THE JOINT AIRBORNE LEAD BATHYMETRY AND TECHNICAL CENTER OF EXPERIENCE (JALTECH) IN 2010 AND WERE CLASSIFIED USING AIRPHOT AND INTERPOLATED INTO SPACES BY COASTAL PLANNING & ENGINEERING. GAPS IN THE 2010 DATA WERE SUPPLEMENTED BY 2004 LEAD DATA FROM BY JALTECH AND PROFILE DATA.
- CONTRACTOR SHALL PROTECT COVE IN PIPELINES FROM FILLING WITH SAND DURING CONSTRUCTION.

**LEGEND:**

- R2 DEEP MONUMENTS
- +400 BASELINE STATIONING
- (B) STRUCTURE
- [Hatched Box] CONSTRUCTION ACCESS
- [Hatched Box] PUBLIC BEACH ACCESS



NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY  
ENGINEER

STEPHEN KEHN, P.E. NO. 34857  
DATE: 5/17/13

PERMIT # 222355012

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
PLAN VIEW

DRAWING NO.: PV-18  
SHEET 19 OF 35

Revised By	Checked by	Date	Description
SK	AMB	7/25/12	
SK	NS		
SK	SK		
NS	SK		
NS	NS		
NS	NS		
NS	NS		
NS	NS		
NS	NS		
NS	NS		

**COASTAL PLANNING & ENGINEERING, INC.**  
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FAX: (561) 391-0102  
C.O.A.: FL 84026  
C.O.A., I.A. 82571



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83). DATUM TRANSFORMATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
  2. DATE OF AERIAL PHOTOGRAPHY: JANUARY 3, 2012.
  3. DATE OF SITE SCANNING: JANUARY 3, 2012.
  4. THE SONAR SCANNING WAS CONDUCTED AT A TIDE OF APPROXIMATELY 1.0 METER ABOVE MEAN LOW WATER.
  5. LANDWARD LIMIT OF FILL IS THE APPROXIMATE 4' NAVD CONTOUR, OR THE SEAWARD EDGE OF VEGETATION, SEAWALL, OR DEVELOPMENT.
  6. THE SONAR SCANNING WAS CONDUCTED AT A TIDE OF APPROXIMATELY 1.0 METER ABOVE MEAN LOW WATER.
  7. LIDAR DATA WAS OBTAINED FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION AND BUREAU OF FLORIDA WATER MANAGEMENT DISTRICT. THE DATA WAS DOWNLOADED VIA NOAA COASTAL AND INTERLAKED INTO SURFACES BY SURFACES INTERVIEW & INTERFERENCES. DATA IN THE 2010 DATA WERE SUPPLEMENTED WITH DATA FROM THE 2011 DATA BY SURFACES INTERVIEW & INTERFERENCES. DATA IN 2011 WERE SUPPLIED BY HILMSTON & MOORE IN 2011.
  8. CONTRACTORS SHALL PROTECT OUTFALL PIPELINES FROM FILLING WITH SAND DURING CONSTRUCTION.

- LEGEND:**
- R2 PIPE MONUMENTS
  - 1400 BASELINE STATIONING
  - 1400 STRUCTURE
  - PUBLIC BEACH ACCESS
  - AUGUST 2008 SITE SCAN SONAR MARGINATION

NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY

STEPHEN KEEN, P.E. NO. 34857

3-19-13

DATE

STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
STEPHEN KEEN  
LICENSE NO. 34857

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO. PV-19

SHEET 20 OF 28

Reference Files		Employed by		Checked by		REVISIONS	
AKS	NOTED	AKS	NOTED	AKS	NOTED	1	AKS/AMB
Drawn by:	SK	Drawn by:	AMB	Reviewed by:	SK		
Date:	7/25/12	Submitted by:	SK				
Plot Scale:	AS NOTED	Comp. No.:	145225	No.:	Date:	Description:	

**COASTAL PLANNING & ENGINEERING, INC.**  
2481 NW BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33434

PH: (561) 355-0112  
FAX: (561) 355-0113

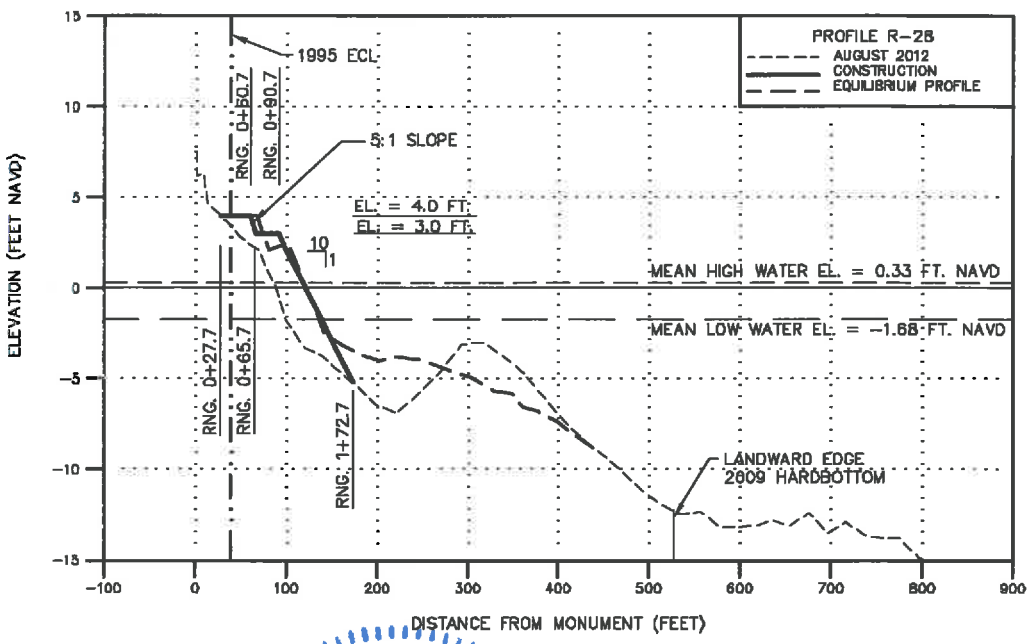
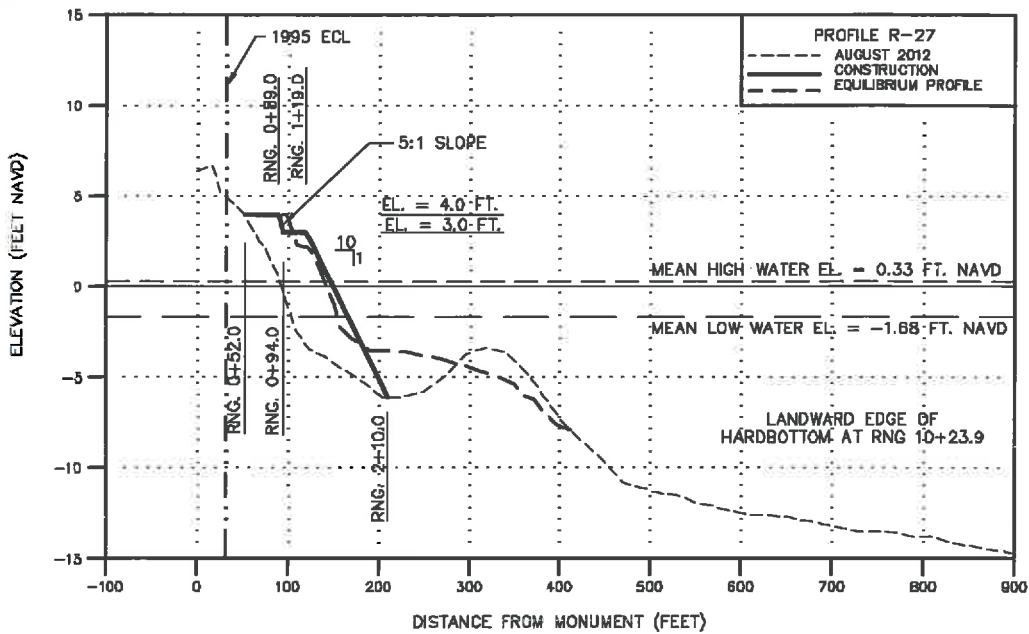
C.O.A. FL 84023  
C.O.A. LA 82511

www.CoastalPlanning.net

PERMIT # 222 355 012

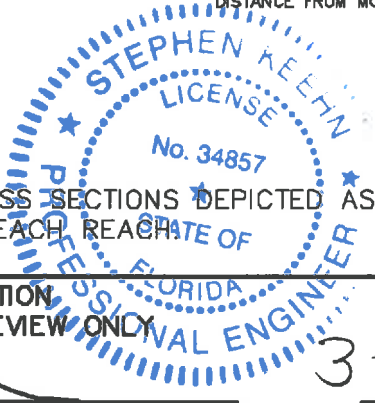
PERMIT # 222355012

COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS



NOTE:

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH



NOT FOR CONSTRUCTION  
 FOR REGULATORY REVIEW ONLY

STEPHEN KEEHN P.E. No. 34857

3-19-13  
 DATE

REVISIONS	
DATE	DESCRIPTION
3/18/13	SK RAI REVISION 1

COASTAL PLANNING & ENGINEERING, INC.  
 A SHAW GROUP COMPANY  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33433  
 PH: (561) 391-4112  
 FAX: (561) 391-4116  
 www.CoastalPlanning.net



DATE:  
7/25/12

BY:  
GK

COMM NO.:  
146925

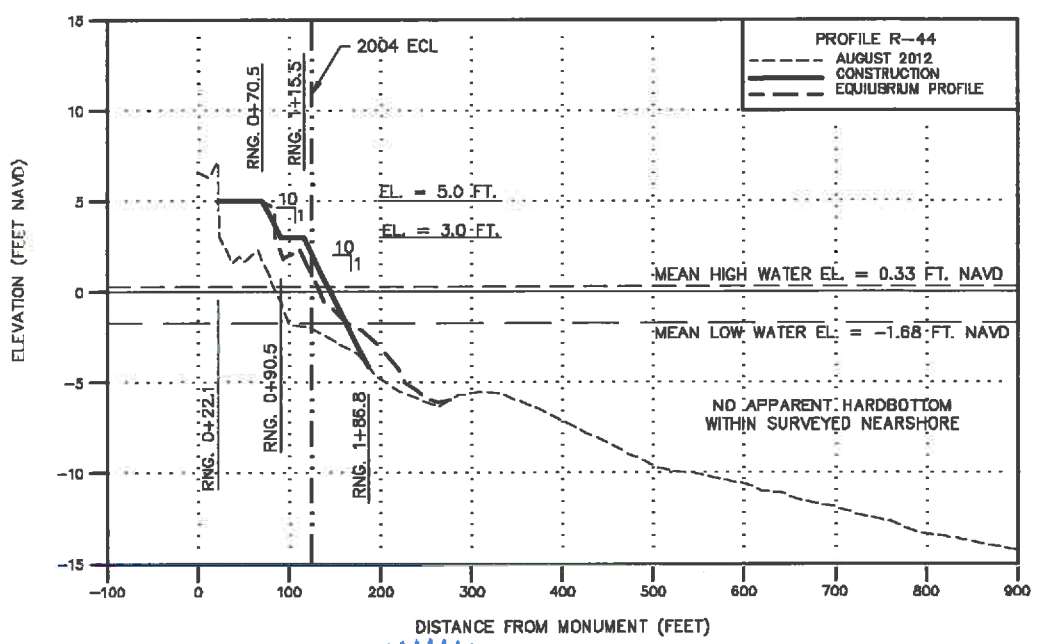
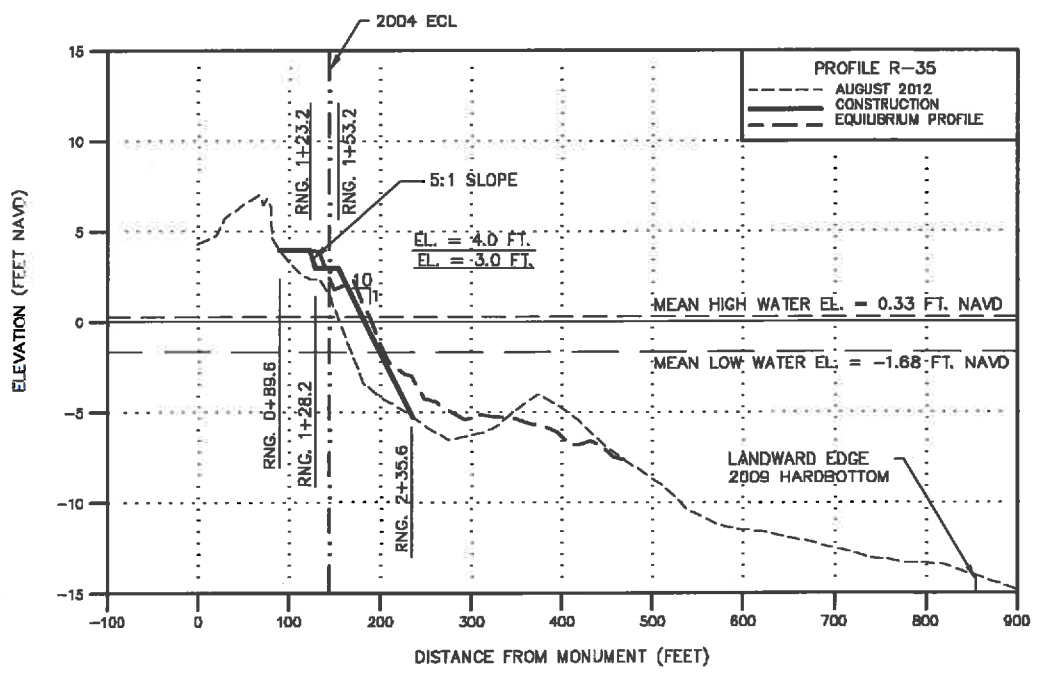
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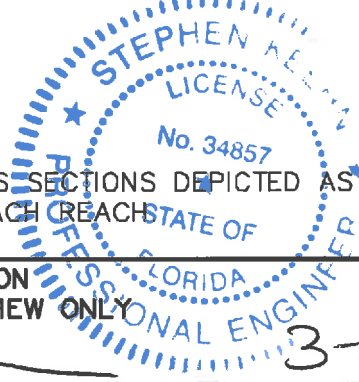
PERMIT # 222355012

**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**



**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH



**NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY**

STEPHEN KEEHN P.E. No. 34857

DATE

3-19-13

REVISIONS		
DATE	BY	DESCRIPTION
3/18/13	SK	RAI REVISION 1

**COASTAL PLANNING & ENGINEERING, INC.**  
A SHAW GROUP COMPANY  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPE.com



DATE:  
7/25/12

BY:  
GK

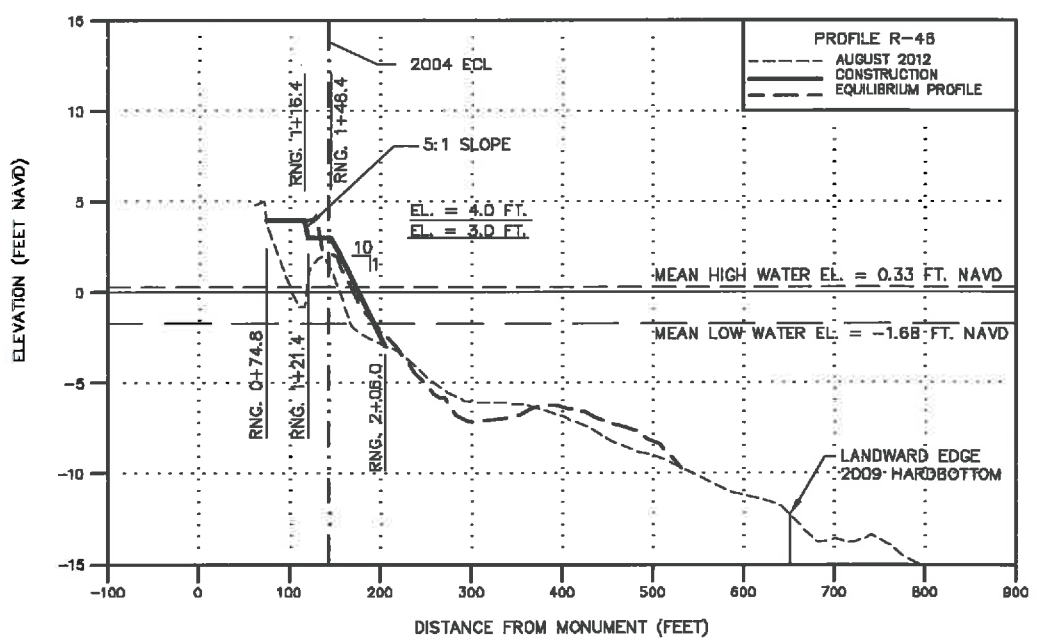
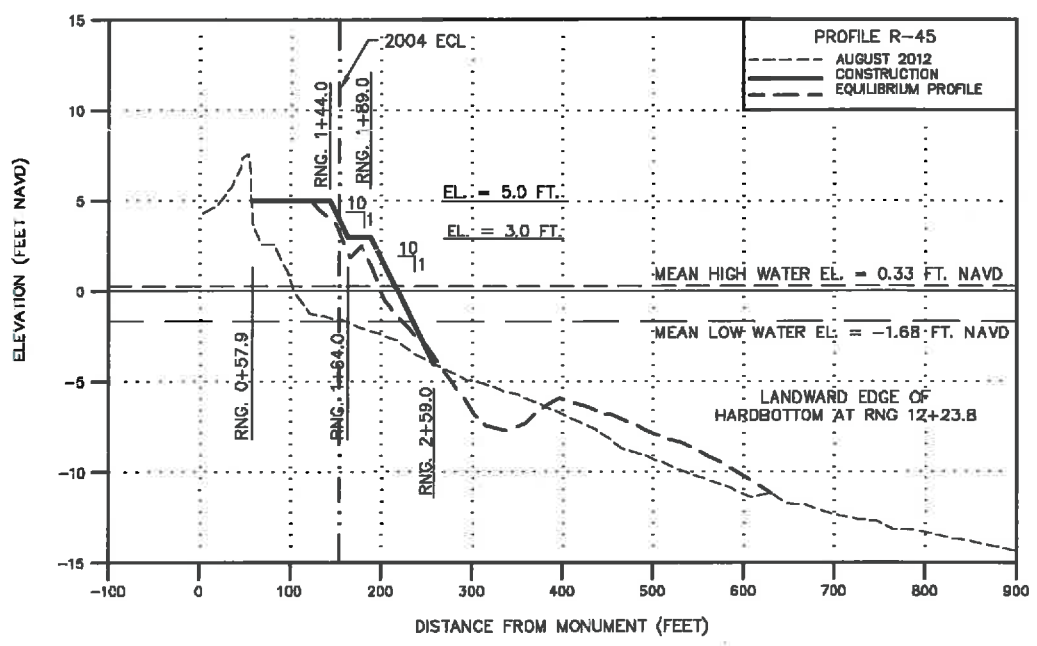
COMM NO.:  
146925

SHEET:  
22 of 36

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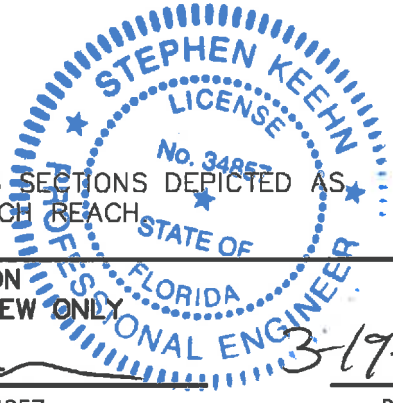
PERMIT # 222 355 012

**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**



**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH.



**NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY**

STEPHEN KEEHN P.E. No. 34857

DATE

3-19-13

REVISIONS	
DATE	DESCRIPTION
3/18/13	SK RAI REVISION 1

**COASTAL PLANNING & ENGINEERING, INC.  
A SHAW GROUP COMPANY**  
2401 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.coastalpe.com



DATE:  
7/25/12

BY:  
GK

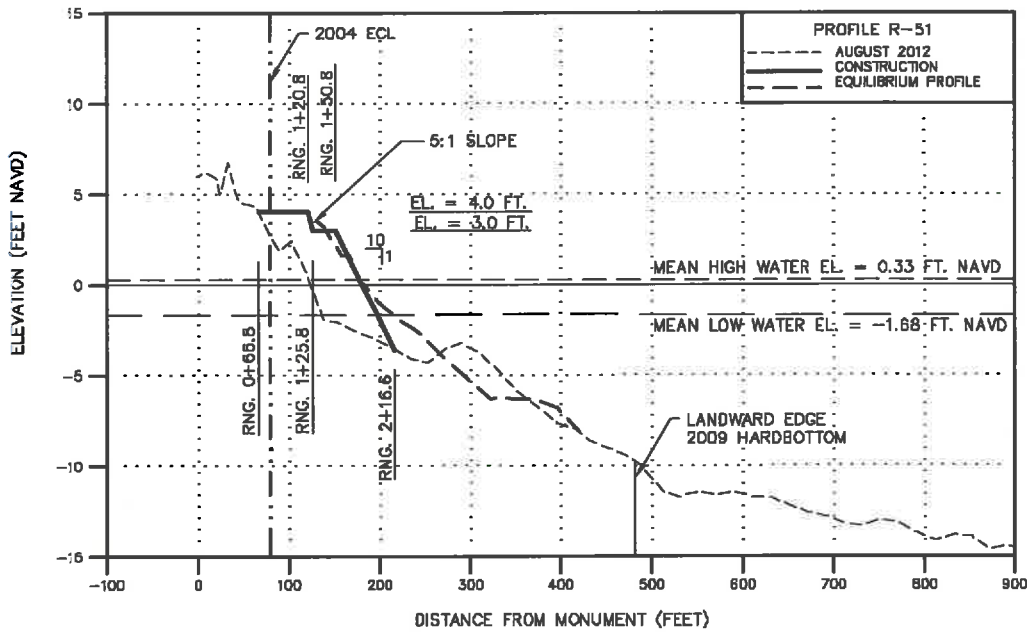
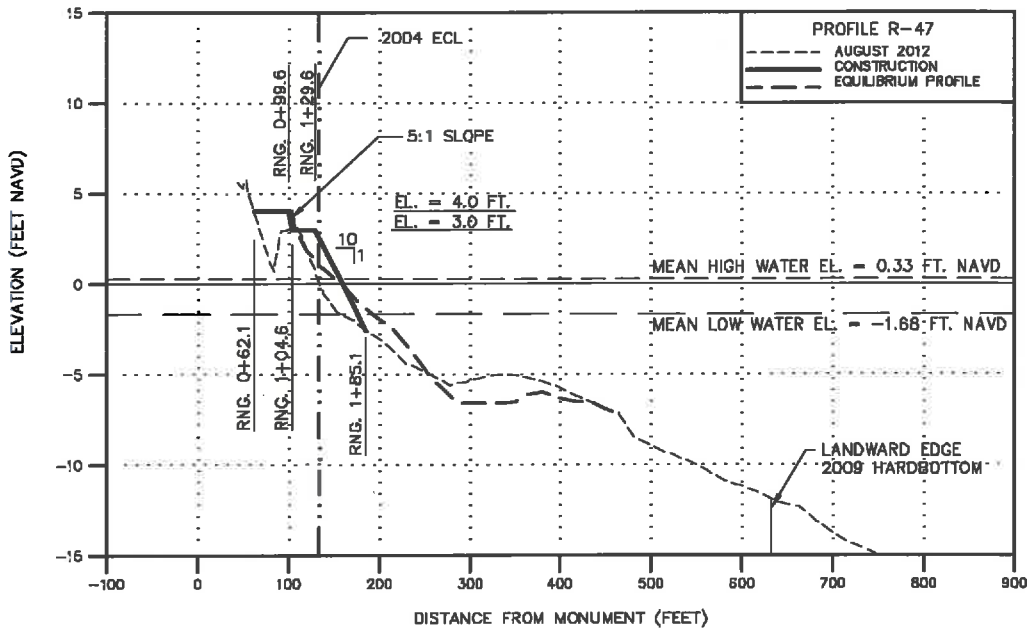
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146925

SHEET:  
23 OF 36

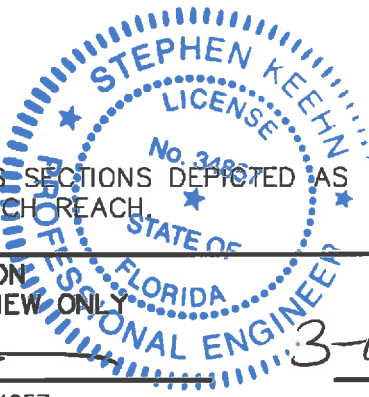
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**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH.



NOT FOR CONSTRUCTION  
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STEPHEN KEEHN P.E. No. 34857

DATE

3-19-13

REVISIONS	
DATE	DESCRIPTION
3/19/13	SK RAI REVISION 1

DATE:  
7/25/12

BY:

GK

CDMM NO.:

146925

SHEET:

24 OF 36

**COASTAL PLANNING & ENGINEERING, INC.**  
A SHAW GROUP COMPANY  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPE.com/fla



DATE:

7/25/12

BY:

GK

CDMM NO.:

146925

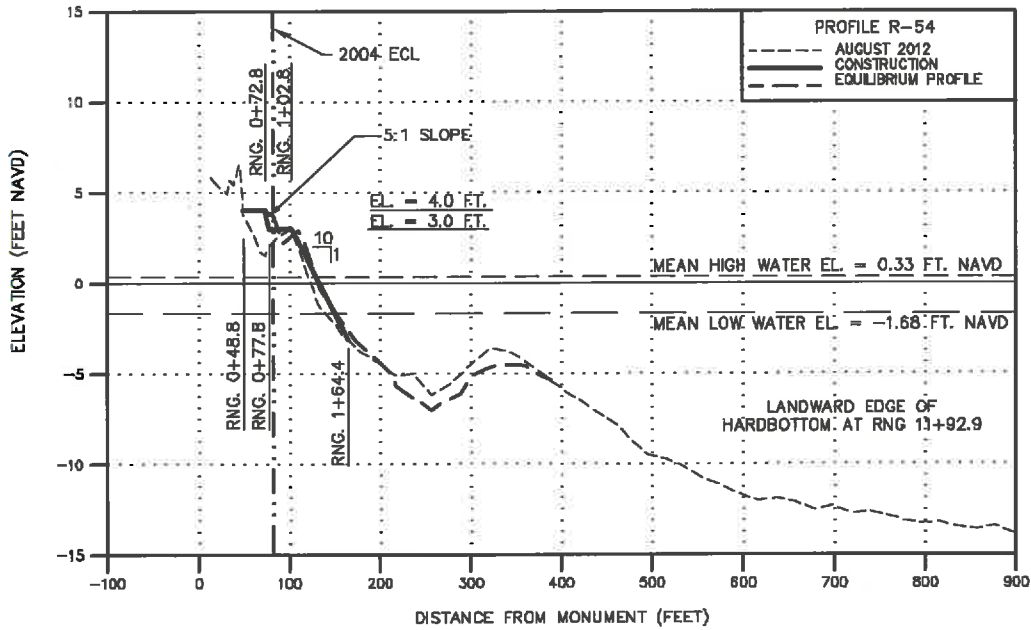
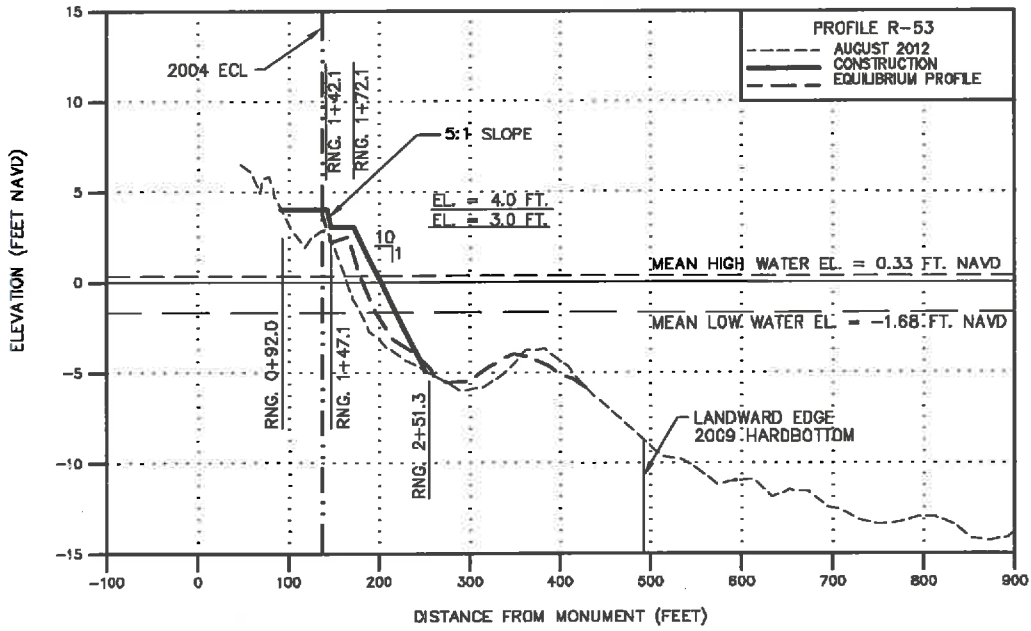
SHEET:

24 OF 36

**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**

**PERMIT # 222355012**

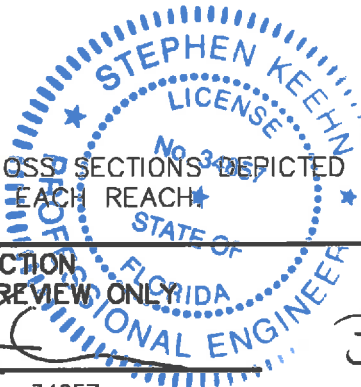
**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**



**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH

**NOT FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY**



STEPHEN KEEHN P.E. No. 34857

3-19-13

DATE

REVISIONS		
DATE	BY	DESCRIPTION
3/18/13	SK	RAI REVISION 1

**COASTAL PLANNING & ENGINEERING, INC.**  
A SHAW GROUP COMPANY  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPlanning.net  
P.L. (951) 391-8112  
FAX (951) 391-4115  
C.O.G. # 146925



DATE:

7/25/12

BY:

GK

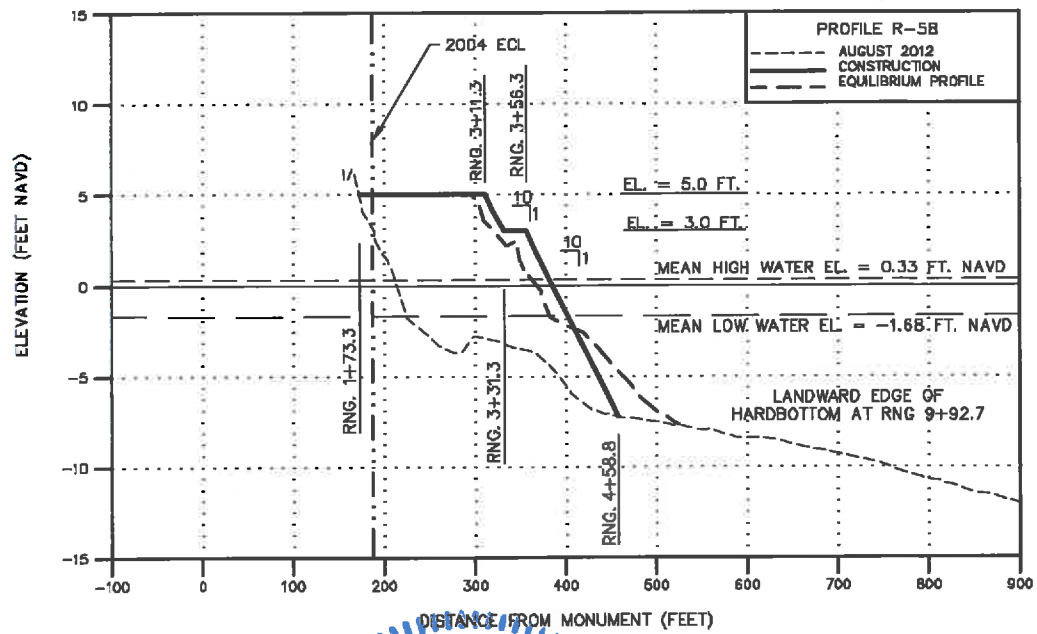
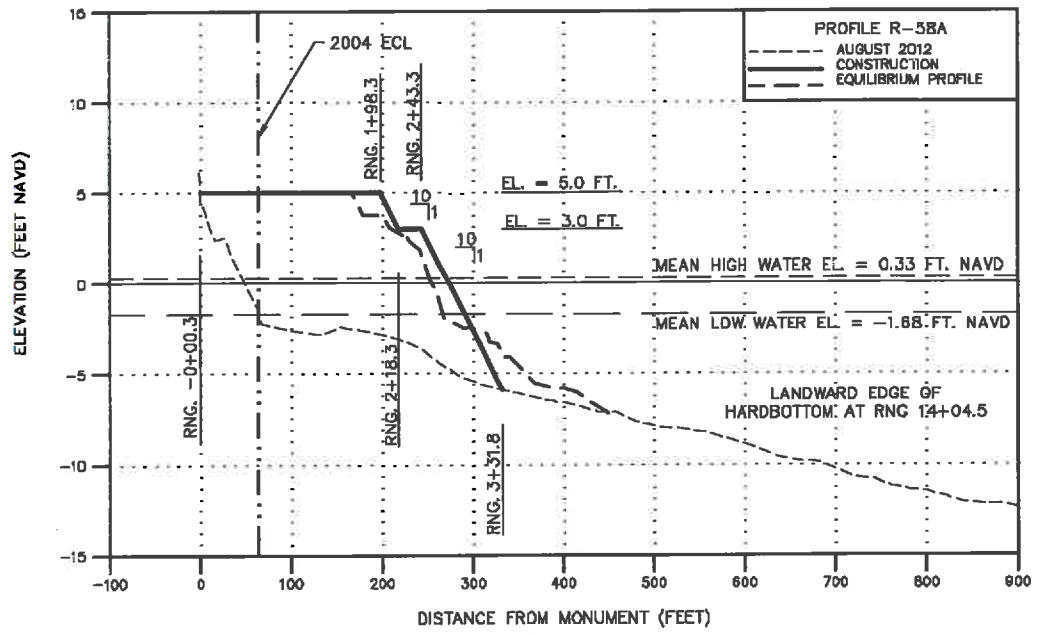
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146925

SHEET:

25 OF 36

PERMIT # 222355012



**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**

**COASTAL PLANNING & ENGINEERING, INC.  
A SHAW GROUP COMPANY**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPE.com/fla/eng.html  
P.E. (FL) 381-8112  
PAE (FL) 381-8116  
C.O.A. # 44028



DATE:  
7/25/12  
BY:

DATE: 3/18/13  
BY: SK  
DESCRIPTION: RAI REVISION 1

COMM NO.: 148925  
SHEET: 26 OF 36

**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH.

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FOR REGULATORY REVIEW ONLY**

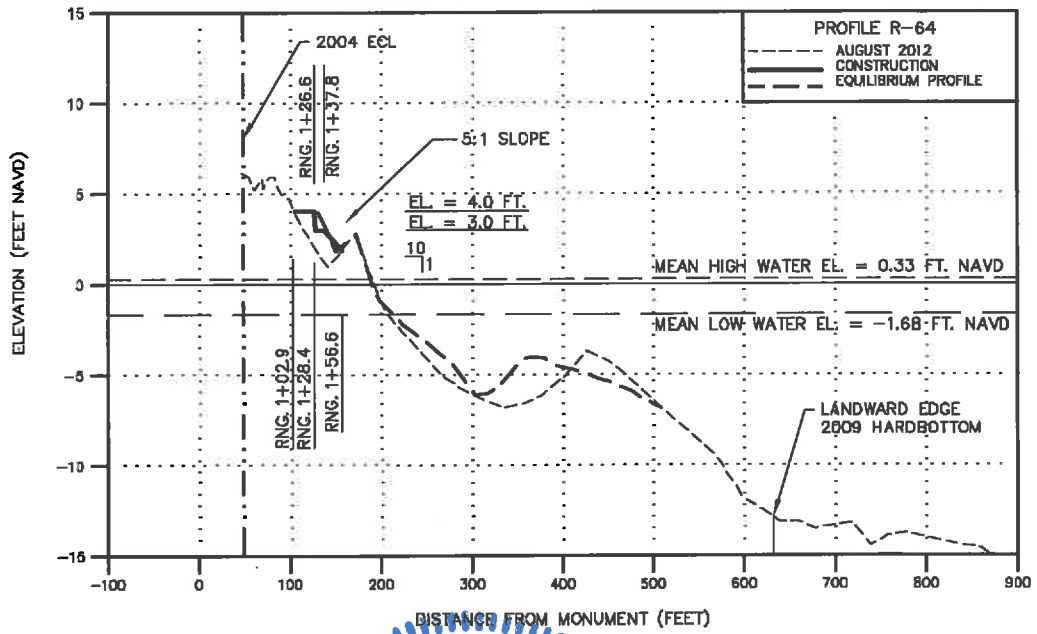
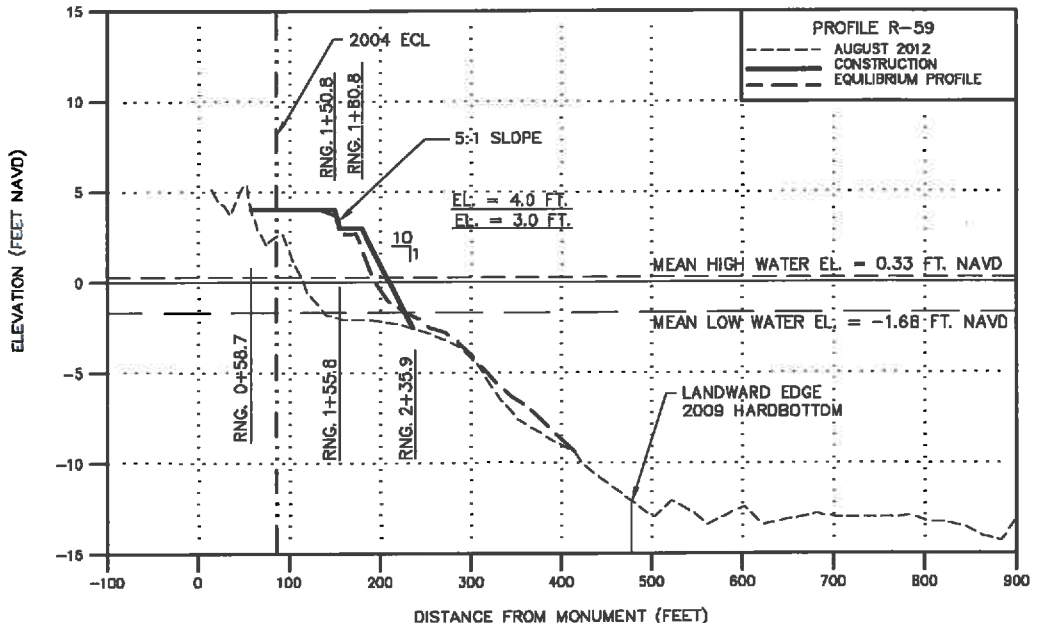
*[Signature]*  
STEPHEN KEEHN P.E. No. 34857

3-19-B  
DATE

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PERMIT # 222 355 012

**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**



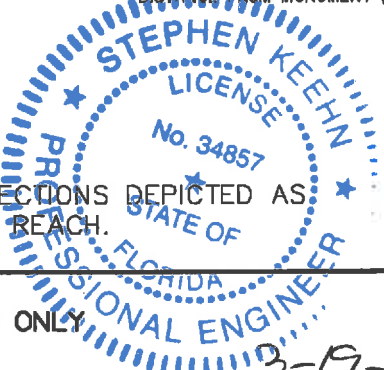
**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH.

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FOR REGULATORY REVIEW ONLY**

STEPHEN KEEHN P.E. No. 34857

DATE



3-19-13

REVISIONS		
DATE	BY	DESCRIPTION
3/18/13	SK	RAI REVISION 1

**COASTAL PLANNING & ENGINEERING, INC.**  
**A SHAW GROUP COMPANY**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 WWW.COASTALPE.com/FLORIDA, INC.



DATE:

7/25/12

BY:

GK

COMM NO.:

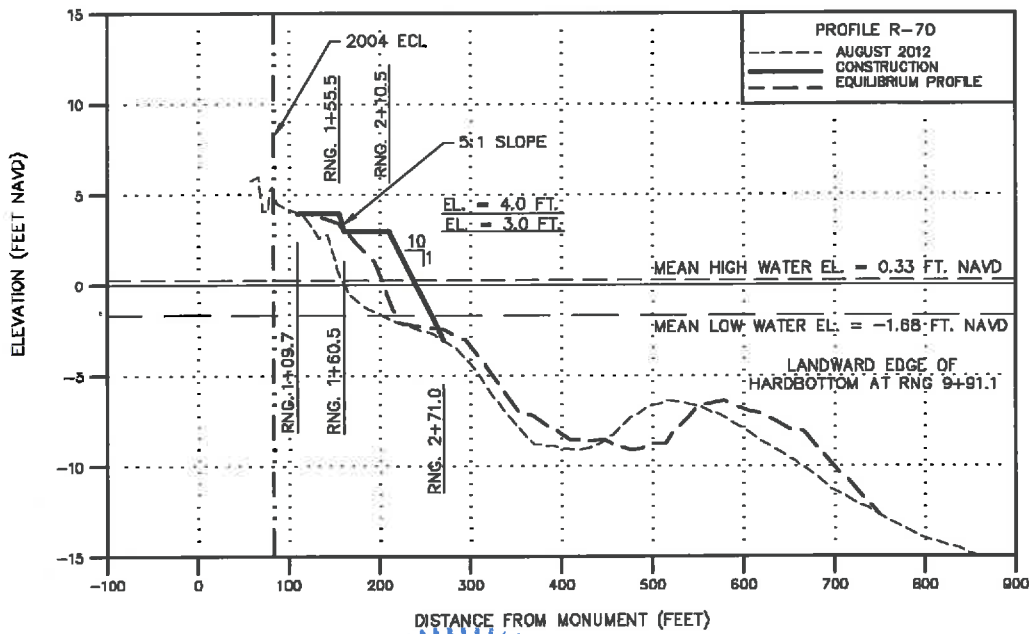
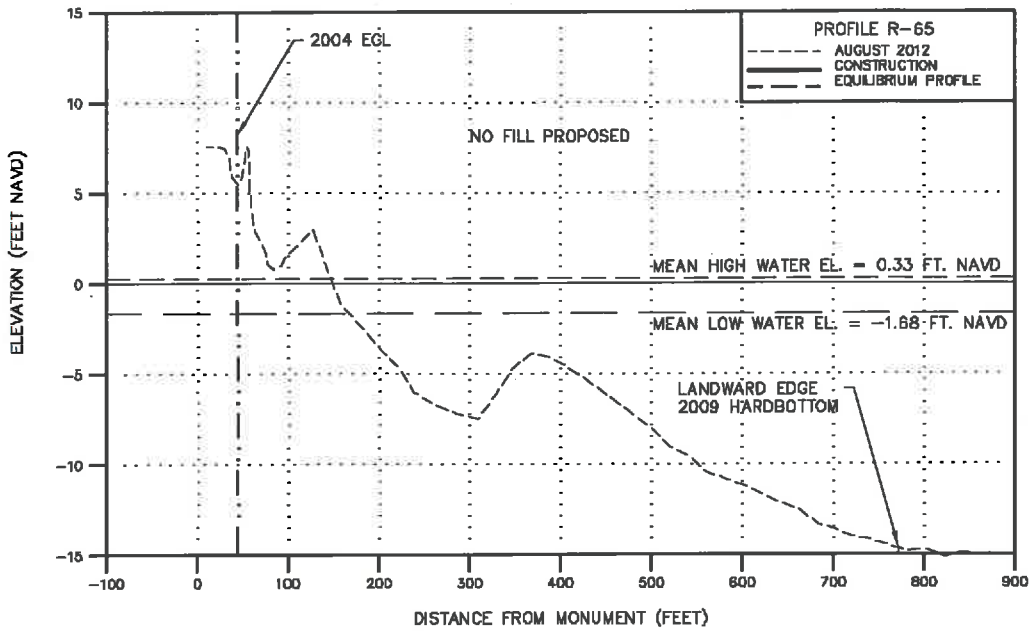
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SHEET:

27 OF 38

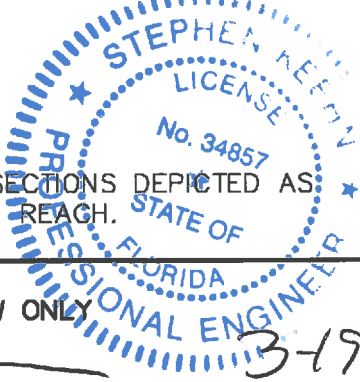
PERMIT # 222355012

**COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
TYPICAL CROSS SECTIONS**



**NOTE:**

1. SELECTED CROSS SECTIONS DEPICTED AS EXAMPLES IN EACH REACH.



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FOR REGULATORY REVIEW ONLY**

STEPHEN KEEHN P.E. No. 34857

3-19-13

DATE

REVISIONS		
DATE	BY	DESCRIPTION
3/18/13	SK	RAI REVISION 1

**COASTAL PLANNING & ENGINEERING, INC.  
A SHAW GROUP COMPANY**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
www.CoastalPlanning.com



DATE:  
7/25/12

BY:  
GK

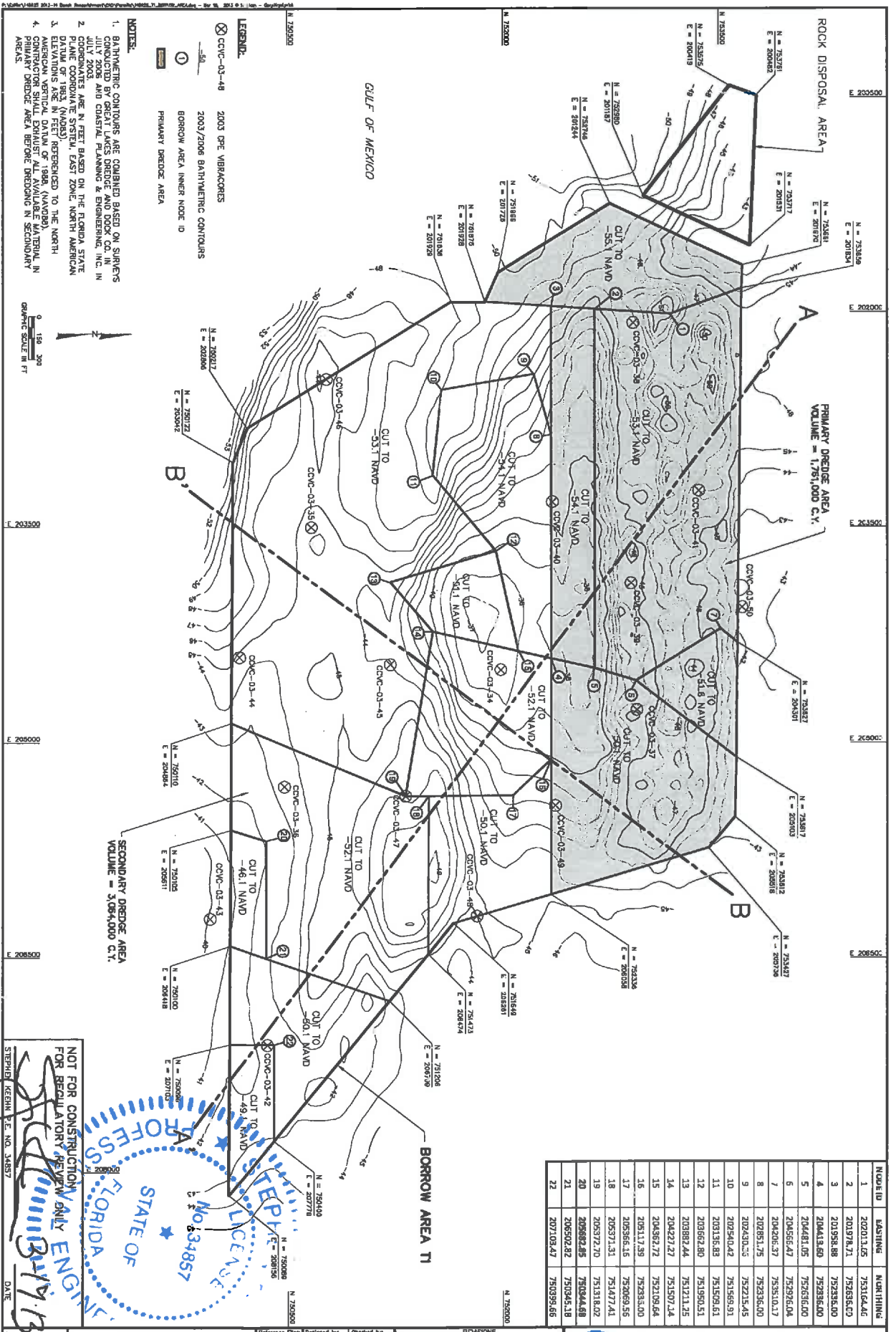
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SHEET:

28 OF 36

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4	204431.60	752936.00
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7	204206.37	752936.04
8	202951.75	752936.00
9	202430.25	752715.45
10	202340.42	751569.91
11	203136.89	751509.61
12	203662.80	751990.51
13	203892.44	751211.25
14	204227.27	751507.14
15	204952.72	752109.64
16	205117.39	752383.00
17	205365.16	752093.55
18	205371.31	751471.41
19	205372.70	751318.02
20	205982.85	750844.88
21	206502.82	750945.18
22	207103.47	750395.66

STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 No. 634857  
 SHEPHERD KEVIN P.E. NO. 34857

NOT FOR CONSTRUCTION  
 FOR REGULATORY REVIEW ONLY  
 COLLIER COUNTY BEACH RENOURISHMENT PROJECT  
 BORROW AREA T1 BATHYMETRY CONTOURS  
 DRAWING NO. BA-1  
 SHEET 29 OF 36

PERMIT # 222 355 012

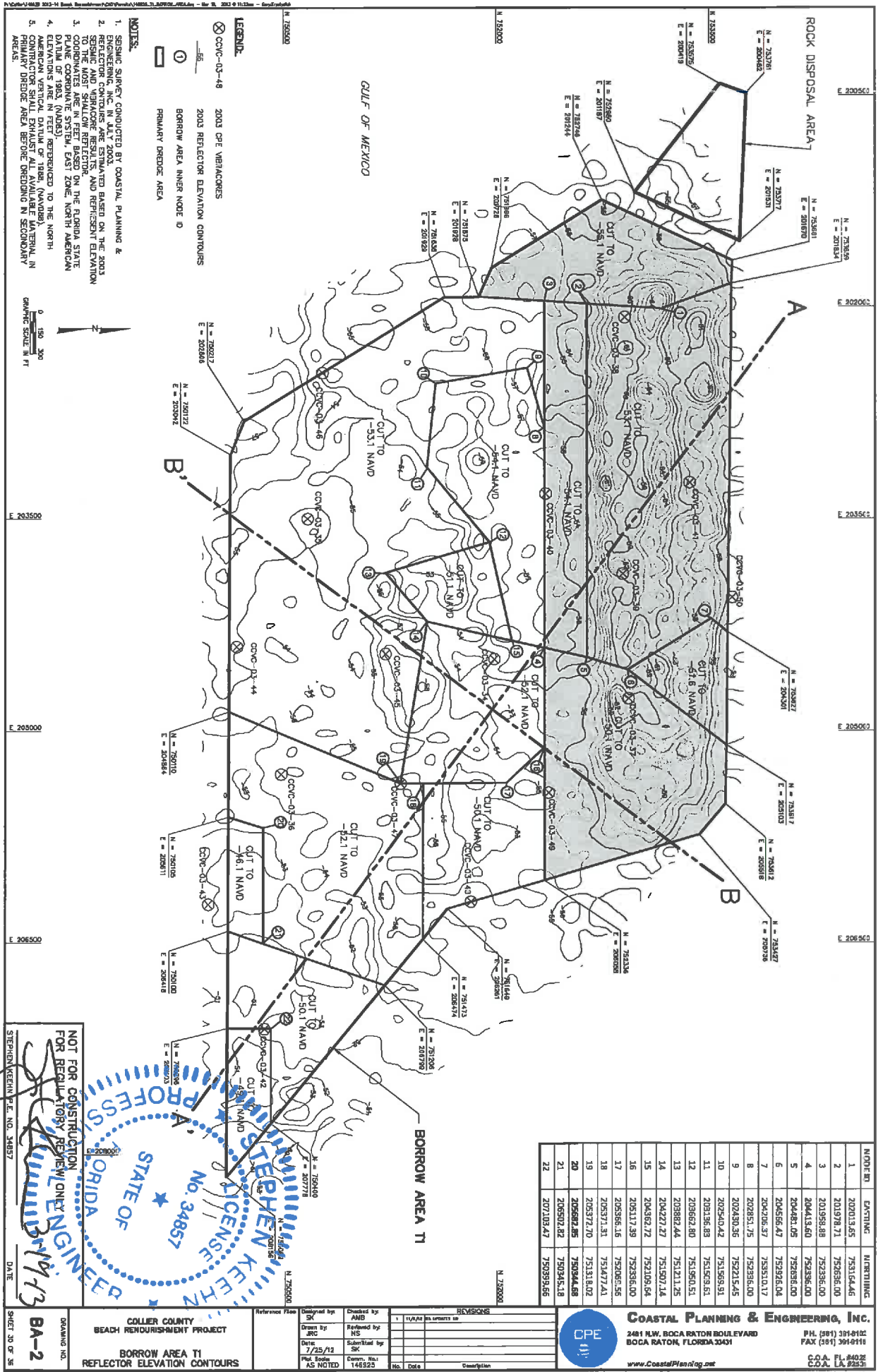
**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH: (561) 391-6100  
 FAX: (561) 391-6118  
 C.O.A. FL #4028  
 C.O.A. LA #2321  
 www.CoastalPlanning.net

**REVISIONS**

No.	Date	Description
1	6/25/09	ISSUED
2	11/6/09	REVISED

Checked by: AMB  
 Drawn by: SK  
 Date: 7/25/12  
 Scale: AS NOTED





NO. IN	DATE	DESCRIPTION
1	2/20/13	55
2	2/19/13	71
3	2/19/13	88
4	2/19/13	60
5	2/19/13	60
6	2/19/13	04
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FOR REGULATORY REVIEW ONLY  
STEPHEN KEHN, P.E. NO. 34857  
DATE: 1/25/12

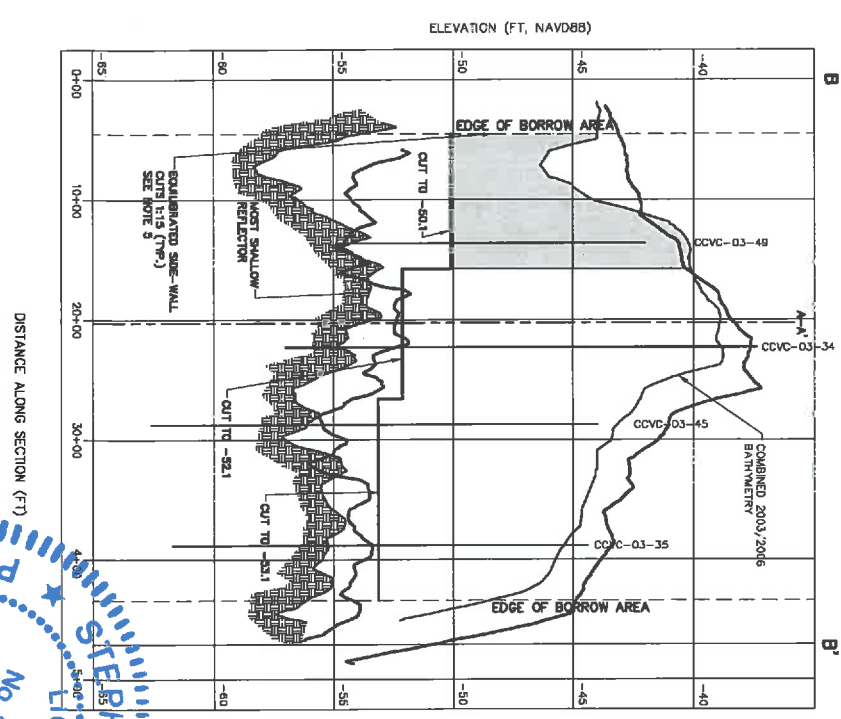
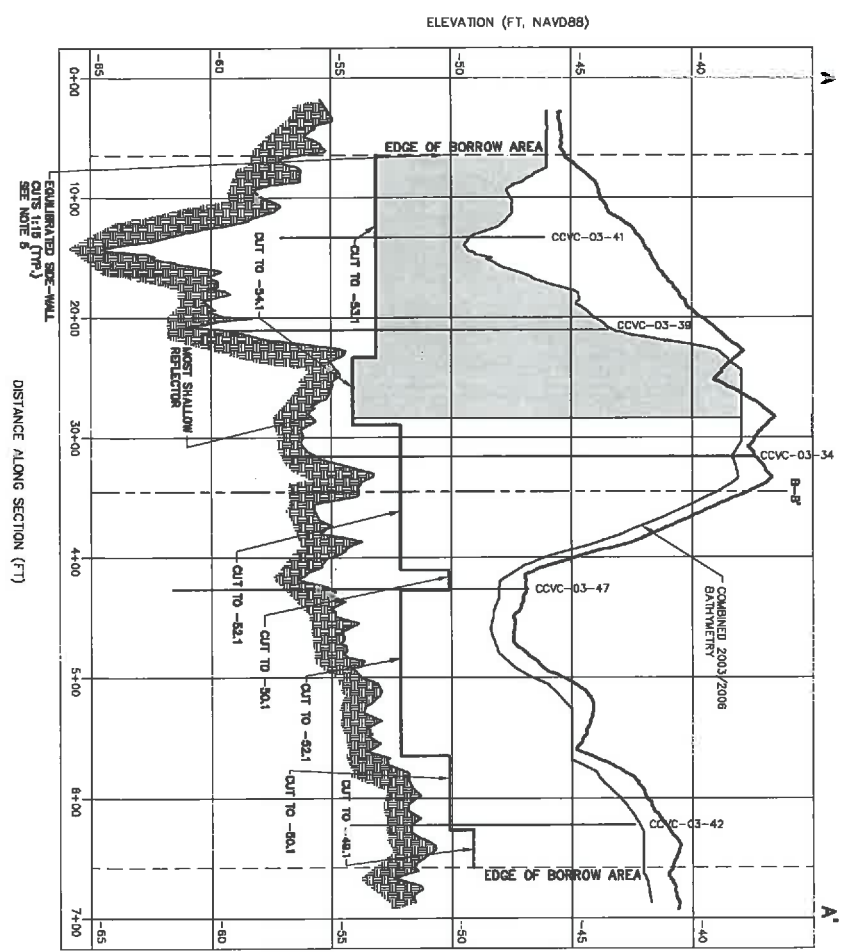


COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
BORROW AREA T1  
REFLECTOR ELEVATION CONTOURS  
DRAWING NO. BA-2

Reference Plan	Checked by	Checked by	Checked by
	SK	AMB	HS
	Date: 1/25/12	Date: 1/25/12	Date: 1/25/12
	AS NOTED	AS NOTED	AS NOTED

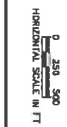
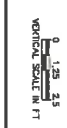
**COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
PH: (561) 351-0102  
FAX: (561) 351-0116  
C.O.A. FL #002  
C.O.E. LA #2535

PERMIT # 222 355 012



- NOTES:**
1. ELEVATIONS ARE IN FEET REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
  2. CUTS MAY NOT FALL DIRECTLY ON A CROSS SECTION LINE, BUT ARE LOCATED NEAREST TO REPRESENT SIMILAR MATERIAL.
  3. MAIN REFLECTOR IS REPRESENTATIVE ONLY, ACTUAL MATERIAL MAY VARY.
  4. SEE SHEETS 21 AND 27 FOR LOCATION OF CROSS SECTION LINE.
  5. SIDE-WALL SLOPE NOT VISIBLE DUE TO ENLARGED SCALE.

- LEGEND:**
- PRIMARY BORROW AREA
  - ▨ MOST SHALLOW REFLECTOR AS DETERMINED BY SEISMIC SURVEY



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STEPHEN KEENE, P.E. NO. 34857

STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
STEPHEN KEENE  
No. 34857  
LICENSE

3/19/13

PERMIT # 222355012

COLLIER COUNTY  
BEACH REDEMPTION PROJECT

BORROW AREA TI  
CROSS SECTIONS

SHEET 21 OF 25

Reference File	Designed by	Checked by	REVISIONS	
2012_Landmarks	SK	AMB	1	6/26/12 Review
	Drawn by	Reviewed by	2	11/16/12 per URS/CI ID
	GC	NS		
	Date	Submitted by		
	1/25/12	SK		
	Plot Scale	Comp. Sp.		
	AS NOTED	148825		
			No.	Date
				Description

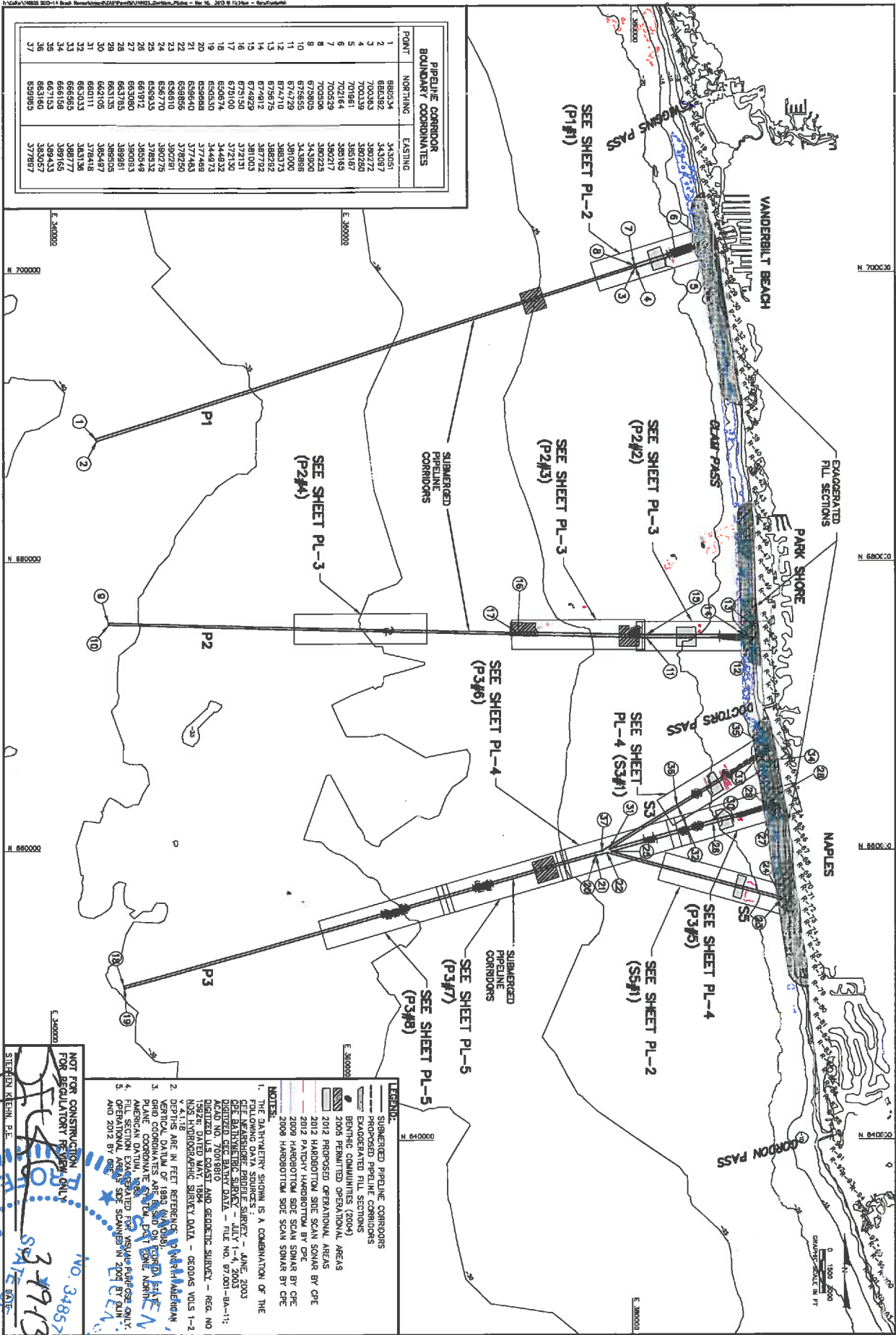
**COASTAL PLANNING & ENGINEERING, INC.**

2411 N.W. BOCCA RATON BOULEVARD  
BOCCA RATON, FLORIDA 33431

PH: (561) 381-0100  
FAX: (561) 381-0110

C.O.A. FL #4028  
C.O.A. LA #2531

www.CoastalPlanning.net



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 NOT FOR REGULATORY REVIEW ONLY  
 STEPHEN KEVIN, P.E.  
 3-19-13  
 NO. 34857  
 PROFESSIONAL ENGINEER

**NOTES:**  
 1. THE DARTMOUTH SHOWN IS A COMBINATION OF THE CPE MEASUREMENT PROFILE SURVEY - JUNE, 2003 CPE BATHYMETRIC SURVEY - JULY 1-4, 2003 DIGITIZED CPE BATHYMETRIC DATA - FILE NO. 07001-BA-11; DATED AND UNADJUSTED AND GEODETIC SURVEY - REG. NO. 1992A; DATED MAY, 1994. NAD 83 HYDROGRAPHIC SURVEY DATA - GEODAS VOL 1-2 DEPTHS ARE IN FEET REFERENCE TO MEAN SEA LEVEL. VERTICAL DATUM OF 1980 (MAD 80). PLANE COORDINATES ARE BASED ON THE NAD 83 PLANE COORDINATE SYSTEM. ELEVATION ABOVE MEAN SEA LEVEL. OPERATIONAL AREAS SIDE SWANNS IN 2005 BY CPE AND 2012 BY CPE.

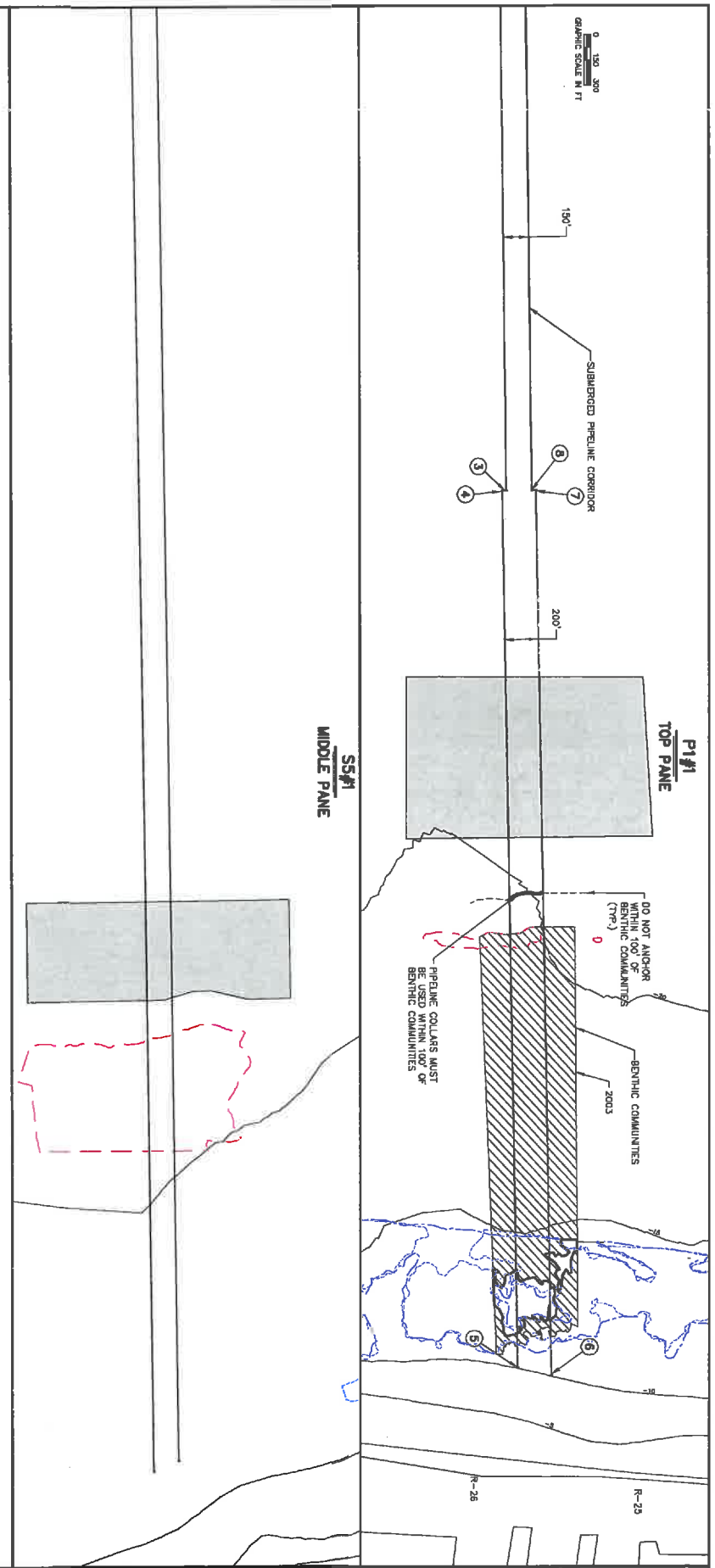
**LEGEND:**  
 SUBMERGED PIPELINE CORRIDORS  
 PROPOSED PIPELINE CORRIDORS  
 EXCAVATED FILL SECTIONS  
 BENTONIC COMMUNITIES (2004)  
 2005 PERMITTED OPERATIONAL AREAS  
 2012 PROPOSED OPERATIONAL AREAS  
 2012 PARTY HARBOUR BY CPE  
 2009 HARBOUR SITE SCAN SONAR BY CPE  
 2008 HARBOUR SITE SCAN SONAR BY CPE

Reference File	Designed by	Checked by
SK	SK	AMB
	Reviewed by	NS
	Submitted by	NS
	Date	7/25/12
	Plot Scale	AS NOTED
	Comp. No.	146925

**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 NW BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH: (561) 391-8142  
 FAX: (561) 391-4177  
 C.O.A. FL #402  
 C.O.A. LA #2517

- LEGEND:**
- PIPELINE COLLAR LIMITS
  - DO NOT ANCHOR LIMITS
  - SUBMERGED PIPELINE CORRIDOR
  - 2012 PATCHY HABBOBTOM BY CPE
  - 2009 HABBOBTOM FINAL SIDE SCAN SONAR BY CPE
  - 2009 HABBOBTOM FINAL SIDE SCAN SONAR BY CPE
  - BENTHIC COMMUNITIES (2004)
  - PIPELINE CORRIDOR BOUNDARY COORDINATES (SEE RL-1 FOR TABLE)
  - PROPOSED OPERATIONAL AREA

- NOTES:**
1. CONTRACTOR MUST AVOID PLACING PIPELINE ON OR NEAR HABBOBTOM RESOURCES AND BENTHIC COMMUNITIES WHEREVER POSSIBLE.
  2. RADIAL PIPELINE COLLARS MUST BE INSTALLED ON ALL PIPELINES ABOVE OR WITHIN 100' OF BENTHIC COMMUNITIES. COLLARS MUST BE INSTALLED WITH A SPACING NOT TO EXCEED 50 FEET.
  3. ANCHORS, CABLES, SPUDS, JACK-UP BARGES OR SIMILAR EQUIPMENT WILL BE PLACED ON OR WITHIN BENTHIC COMMUNITIES OR THEIR BUFFERS.
  4. ANCHORS, CABLES, SPUDS, JACK-UP BARGES, ETC. SHOULD BE PLACED WITHIN THE OPERATIONAL AREA OF THE SUBMERGED PIPELINE CORRIDOR.
  5. THE CONTRACTOR SHALL OBTAIN ANY EXCEPTION TO THE ABOVE WITH THE ENGINEER.



PERMIT # 222 355 0 1

NOT FOR CONSTRUCTION  
FOR REGULATION REVIEW ONLY

STEPHEN KESHAM E.A.  
No. 34857  
3-19-13  
DATE

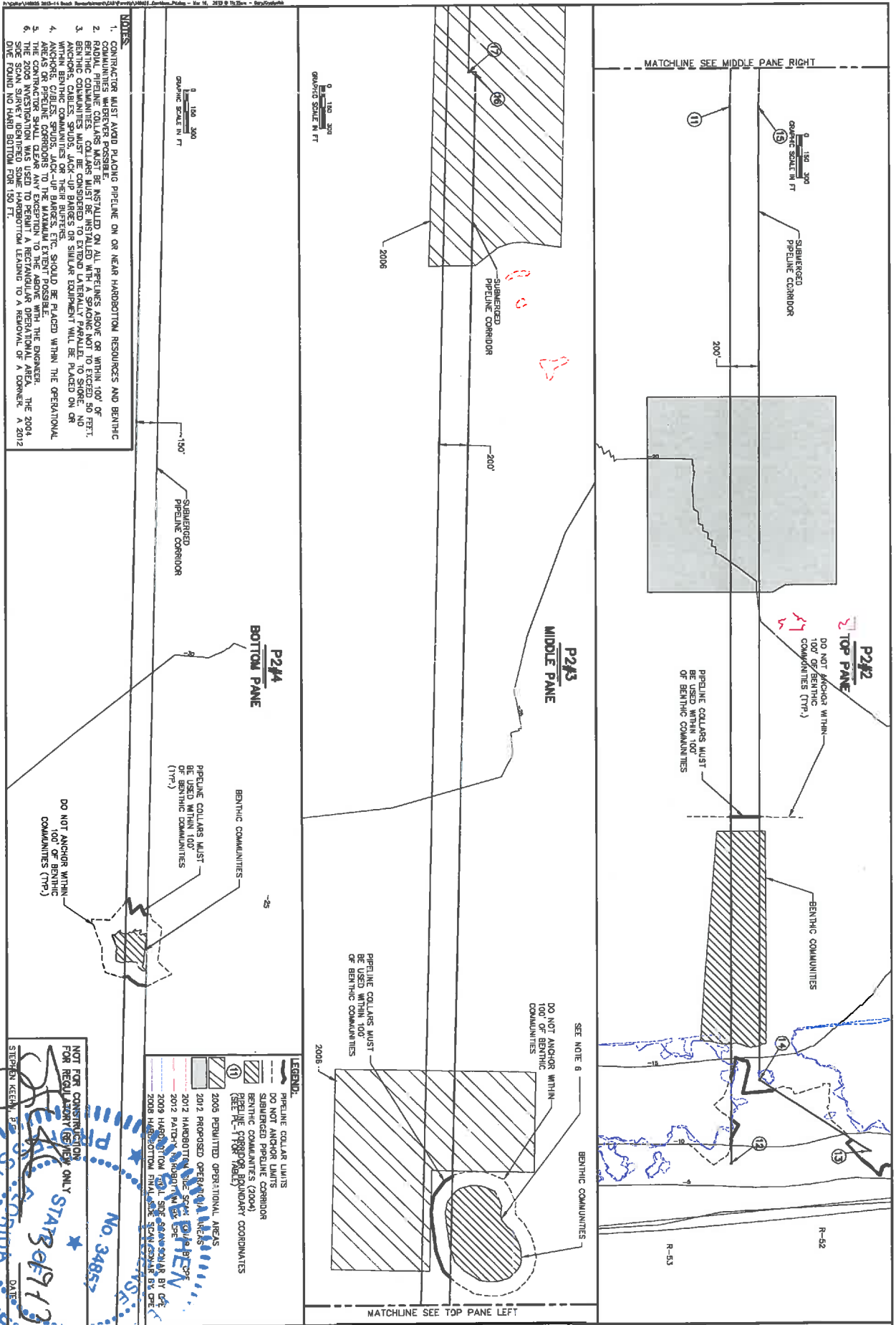
FLORIDA  
 STATE ENGINEER  
 LICENSE NO. 34857  
 DATE 3-19-13

COLLER COUNTY  
BEACH RENOURNISHMENT PROJECT  
PIPELINE CORRIDOR P1

Reference Files	Designed by	Checked by	REVISIONS
	BY	AND	
	Drawn by	Reviewed by	
	7/25/18	Submittal by	
	AS NOTED	Drawn. No.	
		148925	
		No.	Date
			Description

**COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
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 FAX (561) 391-6110  
 C.O.A. FL. #4023  
 C.S.A. LA. #2331



- NOTES**
1. CONTRACTOR MUST AVOID PLACING PIPELINE ON OR NEAR HARDBOTTOM RESOURCES AND BENTHIC COMMUNITIES WHEREVER POSSIBLE.
  2. RADIAL PIPELINE COLLARS MUST BE INSTALLED ON ALL PIPELINES ABOVE OR WITHIN 100' OF BENTHIC COMMUNITIES. COLLARS MUST BE INSTALLED IN SPACING NOT TO EXCEED 50 FT.
  3. ANCHORS, CABLES, SPURS, JACK-UP BARRERS OR SIMILAR EQUIPMENT WILL BE PLACED ON OR WITHIN BENTHIC COMMUNITIES OR THEIR BUFFERS.
  4. ANCHORS, CABLES, SPURS, JACK-UP BARRERS, ETC. SHOULD BE PLACED WITHIN THE OPERATIONAL BUFFER ZONES OF BENTHIC COMMUNITIES.
  5. THE CONTRACTOR SHALL CLEAR ANY EXCEPTION TO THE ABOVE WITH THE ENGINEER.
  6. THE 2006 INVESTIGATION WAS USED TO PERMIT A RECTANGULAR OPERATIONAL AREA. THE 2004 SIDE SCAN SURVEY IDENTIFIED SOME HARDBOTTOM LEAVING TO A REMOVAL OF A CORNER. A 2012 DIVE FOUND NO HARD BOTTOM FOR 150 FT.

**LEGEND:**

- PIPELINE COLLAR UNITS
- ANCHOR AND BARRER CORRIDOR
- BENTHIC COMMUNITIES (2004)
- PIPELINE CORRIDOR BOUNDARY COORDINATES (SEE PLAN FOR TABLE)
- 2006 PERMITTED OPERATIONAL AREAS
- 2012 PROPOSED OPERATIONAL AREAS
- 2012 HANDDOTTED SCALE COLLAR BUFFER
- 2012 PATCHED HARDBOTTOM BUFFER
- 2009 HARDBOTTOM TOLL SIDE SCAN SONAR BY CPE
- 2008 HARDBOTTOM TOLL SIDE SCAN SONAR BY CPE

**NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY**

STEPHEN KEENE, P.E. DATE: 7/25/12

NO. 34857

PL-5

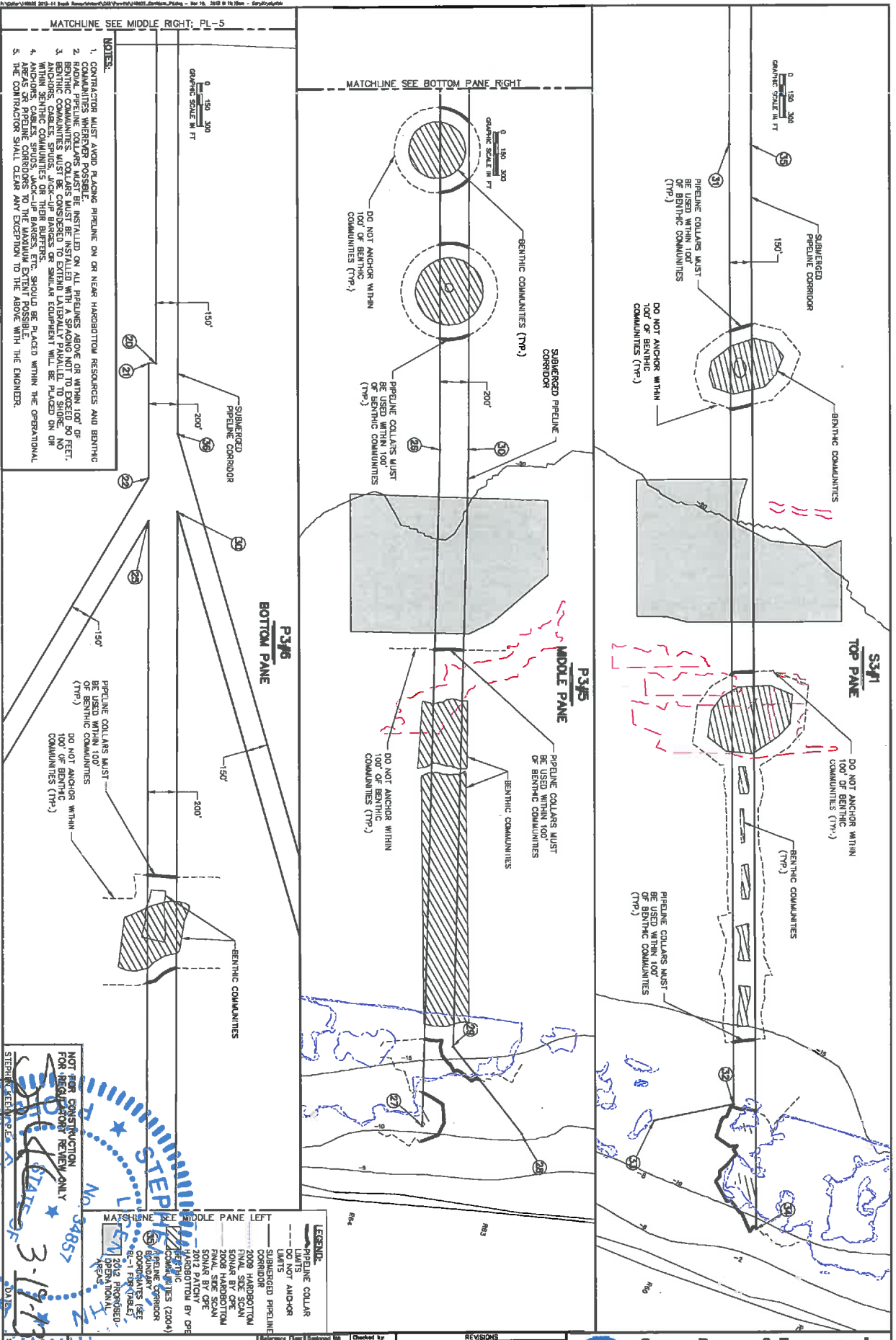
COLLIER COUNTY  
BEACH RENOURISHMENT PROJECT  
PIPELINE CORRIDOR P2

Revised by	Checked by	Approved by	Submitted by	Date	Description
AS NOTED	AS NOTED	AS NOTED	AS NOTED	7/25/12	

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C.D.A. LA 82191

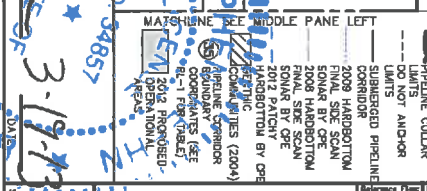
www.CoastalPlanning.com

PERMIT # 222 355 012



- NOTES:**
1. CONTRACTOR MUST AVOID PLACING PIPELINE ON OR NEAR HARDBOTTOM RESOURCES AND BENTHIC COMMUNITIES.
  2. BENTHIC PIPELINE COLLARS MUST BE INSTALLED ON ALL PIPELINES ABOVE OR WITHIN 100' OF BENTHIC COMMUNITIES. COLLARS MUST BE INSTALLED WITH A SPACING NOT TO EXCEED 90 FEET.
  3. BENTHIC COMMUNITIES MUST BE CONSIDERED TO EXTEND LATERALLY PARALLEL TO SHORE, NO MATTER HOW SHALLOW, UNLESS SURVEY DATA AND/OR VISUAL INSPECTION INDICATES OTHERWISE.
  4. ANCHORS, CHAINS, SPUDS, JACK-UP BARGES, ETC. SHOULD BE PLACED WITHIN THE OPERATIONAL AREAS OR PIPELINE CORRIDORS TO THE MAXIMUM EXTENT POSSIBLE.
  5. THE CONTRACTOR SHALL OBTAIN ANY DECISION TO THE ABOVE WITH THE ENGINEER.

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FOR INFORMATION REVIEW ONLY  
DATE: 3-19-12



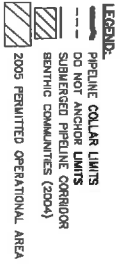
Reference File	Revised by	Checked by
	RDO	NS
	7/25/12	SK
	Final Site Scan	
	SONAR BY CRE	
	2012 PATCHY HARDBOTTOMS BY CRE	
	COORDINATES (SEE SHEET 2012 PATCHY HARDBOTTOMS (2004))	
	COORDINATES (SEE SHEET 2012 PATCHY HARDBOTTOMS (2004))	
	COORDINATES (SEE SHEET 2012 PATCHY HARDBOTTOMS (2004))	
	COORDINATES (SEE SHEET 2012 PATCHY HARDBOTTOMS (2004))	

Revised by	Checked by
RDO	NS
7/25/12	SK
Final Site Scan	
SONAR BY CRE	
2012 PATCHY HARDBOTTOMS BY CRE	
COORDINATES (SEE SHEET 2012 PATCHY HARDBOTTOMS (2004))	
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COORDINATES (SEE SHEET 2012 PATCHY HARDBOTTOMS (2004))	

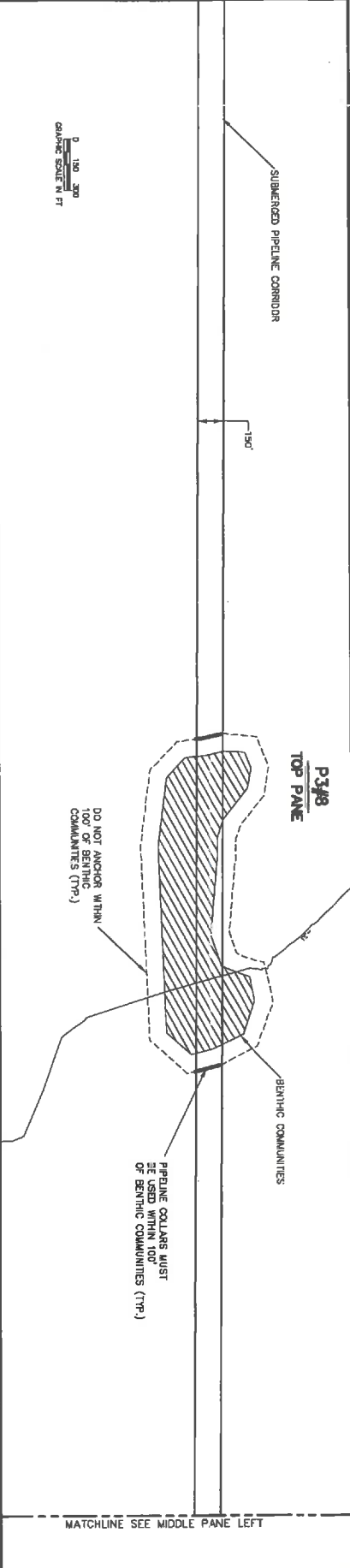
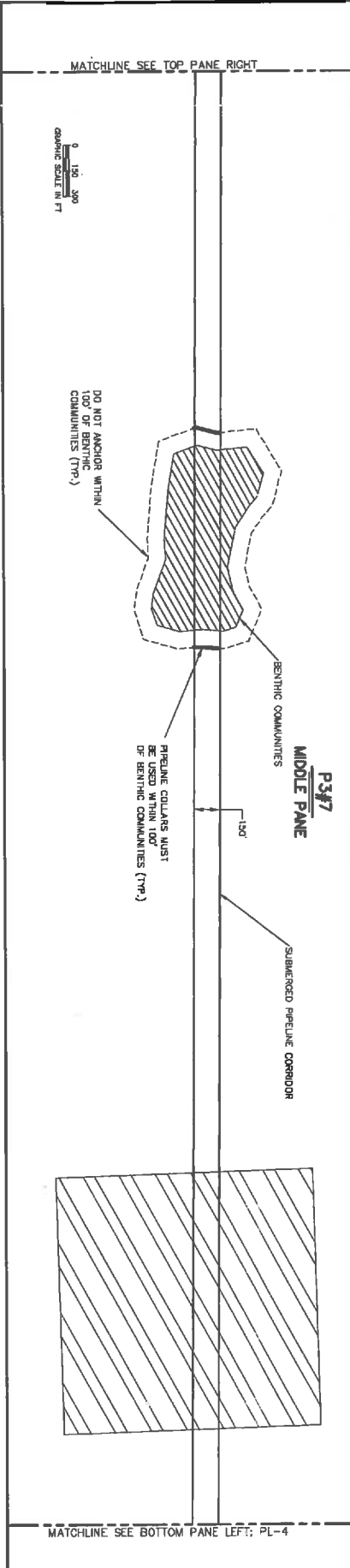
**COASTAL PLANNING & ENGINEERING, INC.**  
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PERMIT # 222 355 012



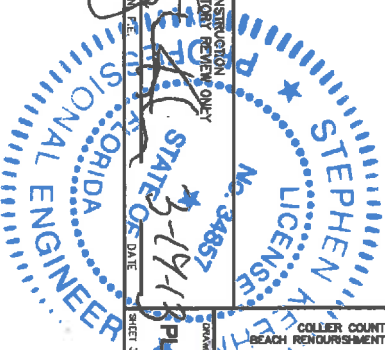


- NOTES:**
1. CONTRACTOR MUST AVOID PLACING PIPELINE ON OR NEAR HARBORBOTTOM RESOURCES AND BENTHIC COMMUNITIES WHEREVER POSSIBLE.
  2. RURAL PIPELINE COLLARS MUST BE INSTALLED ON ALL PIPELINES ABOVE OR WITHIN 100' OF BENTHIC COMMUNITIES. COLLARS MUST BE PLACED IN THE CENTER OF THE PIPELINE AND EXTEND 50 FEET LATERALLY PARALLEL TO SHORE. NO ANCHORS, CABLES, SPUDS, JACK-UP BARGES OR SIMILAR EQUIPMENT WILL BE PLACED ON OR WITHIN BENTHIC COMMUNITIES OR THEIR BUFFERZONES. COLLARS SHOULD BE PLACED WITHIN THE OPERATIONAL AREAS OR PIPELINE CORRIDORS TO THE MAXIMUM EXTENT POSSIBLE.
  3. THE CONTRACTOR SHALL CLEAR ANY EXCEPTION TO THE ABOVE WITH THE ENGINEER.



NOT FOR CONSTRUCTION  
FOR REGULATION REVIEW ONLY


STEPHEN K...  
FLORIDA  
PROFESSIONAL ENGINEER  
No. 24857  
3-19-18  
PL-5  
SHEET 36 OF 38



COLLER COUNTY  
BEACH RENOURISHMENT PROJECT  
PIPELINE CORRIDOR P3 (CONT)

Reference Files	
Designated by: SK	Checked by: AKB
Drawn by: RDO	Reviewed by: NS
Date: 7/25/12	Submitted by: SK
Plot Scale: AS NOTED	Dwgn. No: 148925

REVISIONS		
No.	Date	Description



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