

**DEPARTMENT OF THE ARMY
CONSENT TO EASEMENT
TO USE CORPS OF ENGINEERS RIGHT-OF-WAY**

Consent No. DACW17-9-25-0131
Project: Intracoastal Waterway,
Jacksonville to Miami
Palm Beach County, Florida
Tract No. 823

THIS CONSENT TO EASEMENT AGREEMENT, made by and between the **UNITED STATES OF AMERICA, DEPARTMENT OF THE ARMY**, hereinafter referred to as the "Government", acting by and through the Real Estate Contracting Officer, Chief, Real Estate Division, hereinafter referred to as "said officer," and **CITY DELRAY BEACH**, hereinafter referred to as the "Grantee":

WHEREAS, the Government has acquired a right-of-way easement over the above-numbered tract of land, which easement, by its terms, reserves to the Government, in perpetuity, the right to use said easement for the construction, improvement, and maintenance of the Intracoastal Waterway, Jacksonville to Miami, Palm Beach County, Florida; and

WHEREAS, the Grantee has requested to construct, use, maintain, control, operate, and repair structures on, across, over, and under a portion of the lands identified as Tract No. 823, Section 21, Township 46 South, Range 43 East, Palm Beach County, Florida. The general location of which is shown in red on Exhibit "A", attached hereto and made a part hereof; and

WHEREAS, the Government has issued Department of the Army Permit No. SAJ-2005-08610 (NWP-ACD) authorizing the Grantee's construction of the specified structures under certain conditions, including the requirement that the Grantee obtain a Consent to Easement Agreement from the Government.

NOW THEREFORE, this Consent to Easement Agreement is granted and accepted under the following conditions:

1. That construction shall be in accordance with the drawings attached hereto and made a part hereof as Exhibit "B" and to Department of the Army Permit No. SAJ-2005-08610 (NWP-ACD), incorporated herein by reference.
2. That it is understood that this consent is effective only insofar as the property rights of the Government in the land to be occupied are concerned, and that it does not relieve the Grantee from the necessity of obtaining grants from the owners of the fee and/or other interests, therein, nor does it obviate the requirement that the Grantee obtain State or local assent required by law for the activity authorized herein.

3. That any proposed improvements or use authorized herein shall not be commenced until appropriate rights shall have been obtained by the Grantee from the record owners and encumbrances of the fee title to the lands involved, or until the Grantee has obtained all Federal, State, or local permits required by law.

4. That the proposed improvements or use authorized herein shall be consistent with the terms and conditions of this consent; and that any improvements or use not specifically identified and authorized shall constitute a violation of the terms and conditions of this consent which may result in a revocation of this consent and in the institution of such legal proceedings as the Government may consider appropriate, whether or not this consent has been revoked or modified.

5. That the exercise of the privileges hereby consented to shall be without cost or expense to the Government and under the supervision of and subject to the approval of the said officer having immediate jurisdiction over the property and subject to such regulations as he may from time to time prescribe, including, but not limited to, the specific conditions, requirements, and specifications set forth in paragraph 1.

6. That the Grantee shall supervise and maintain the said improvements and cause it to be inspected at reasonable intervals and shall immediately repair any damage found therein as a result of such inspection, or when requested by said officer to repair any defects. Upon completion of the installation of said improvements or the making of any repairs thereto, the premises shall be restored immediately by the Grantee, at the Grantee's own expense, to the same condition as that in which they existed prior to the commencement of such work, to the satisfaction of said officer.

7. That any property of the Government damaged or destroyed by the Grantee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the Grantee to the satisfaction of the said officer, or in lieu of such repair or replacement, the Grantee shall, if so required by said officer and at his option, pay to the Government an amount sufficient to compensate for the loss sustained by the Government by reason of damage to or destruction of Government property.

8. That the Government shall not be responsible for damages to the property or injuries to persons which may arise from or be incident to the exercise of the privileges herein granted, or for damages to the property of the Grantee, or for damages to the property or injuries to the person of the Grantee, or the persons of Grantee's officers, agents, servants, or employees, or others who may be on said premises at the invitation of the Grantee or the invitation of one of them, arising from Governmental activities on or in the vicinity of the said premises, and the Grantee shall hold the Government harmless from any and all claims.

9. That the Government shall in no case be liable for any damage, either hidden or known, to any improvements herein authorized which may be caused by any action of the Government, under the rights obtained in its easements, or that may result from the future operations undertaken by the Government, and no claim or right to compensation

shall accrue from such damage, and if further operations of the Government require the alteration or removal of any improvements herein authorized, the Grantee shall, upon due notice, from said officer, alter or remove said improvements without expense to the Government and subject to the supervision and approval of the said officer and no claim for damages shall be made against the Government on account of such alterations or removal.

10. That construction and/or operation, maintenance, and use of any improvement's incident to the exercise of the privileges herein granted shall be in such a manner as not to conflict with the rights of the Government, nor to interfere with the operations by the Government under such rights nor to endanger lives and safety of the public.

11. That this consent may be terminated by the Government or said officer upon reasonable notice to the Grantee if the Government or said officer shall determine that any improvements or use to which consent is herein granted interferes with the use of said land or any part thereof by the Government, and this consent may be annulled and forfeited by the declaration of the Government or said officer for failure to comply with any or all of the provisions and conditions of this consent, or for nonuse for a period of two (2) years, or for abandonment.

12. That upon relinquishment, termination, revocation, forfeiture, or annulment of this consent, the Grantee shall vacate the premises, remove all property of the Grantee therefrom, and restore the premises to a condition satisfactory to the said officer. If the Grantee shall fail or neglect to remove the said property and so restore the premises, then at the option of the Government or said officer, the said property shall either become the property of the Government without compensation therefor, or the Government or said officer, may cause it to be removed, and the premises to be so restored at the expense of the Grantee, and no claim for damages against the Government, or its officer or agents, shall be created by or made on account of such removal and restoration.

13. That the Grantee within the limits of his respective legal powers shall comply with all Federal, interstate, State, and/or local governmental regulations, conditions, or instructions for the protection of the environment and all other matters as they relate to real property interests granted herein.

14. That the Grantee shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity. In the event such items are discovered on the premises, the Grantee shall immediately notify the District Engineer, Jacksonville District, Post Office Box 4970, Jacksonville, Florida 32232-0019, and the site and the material shall be protected by the Grantee from further disturbance until a professional examination of them can be made or until a clearance to proceed is authorized by the District Engineer.

15. That no additional structures shall be constructed waterward of the Government's right-of-way line and that any structures currently within the right-of-way must be

removed by the Grantee, at Grantee's expense, if future needs of the Government so require.

16. That this consent may not be transferred to a third party without the prior written notice to the Chief, Real Estate Division, U.S. Army Corps of Engineers, Jacksonville District, Post Office Box 4970, Jacksonville, Florida 32232-0019, and by the transferee's written agreement to comply with and be bound by all the terms and conditions of this consent. In addition, if the Grantee transfers the improvements authorized herein by conveyance of realty, the deed shall reference this consent and the terms and conditions herein and the consent shall be recorded along with the deed in the Registrar of Deeds or with another appropriate official.

This consent is not subject to Title 10, United States Code, Section 2662.

IN WITNESS WHEREOF, I have hereunto set my hand, by authority of the Secretary of the Army, this _____, day of _____ 2026.

UNITED STATES OF AMERICA

BY: _____
EMMANUEL J. FREEMAN
Real Estate Contracting Officer
Deputy Chief, Real Estate Division

AGREED TO AND ACCEPTED

CITY OF DELRAY BEACH

WITNESS (PRINT NAME)

By: _____
SIGNATURE

WITNESS (SIGNATURE)

Thomas F. Carney, Jr., Mayor

WITNESS (PRINT NAME)

ATTEST:

WITNESS (SIGNATURE)

Alexis Givings, City Clerk

Approved as to form:

Lynn Gelin, City Attorney

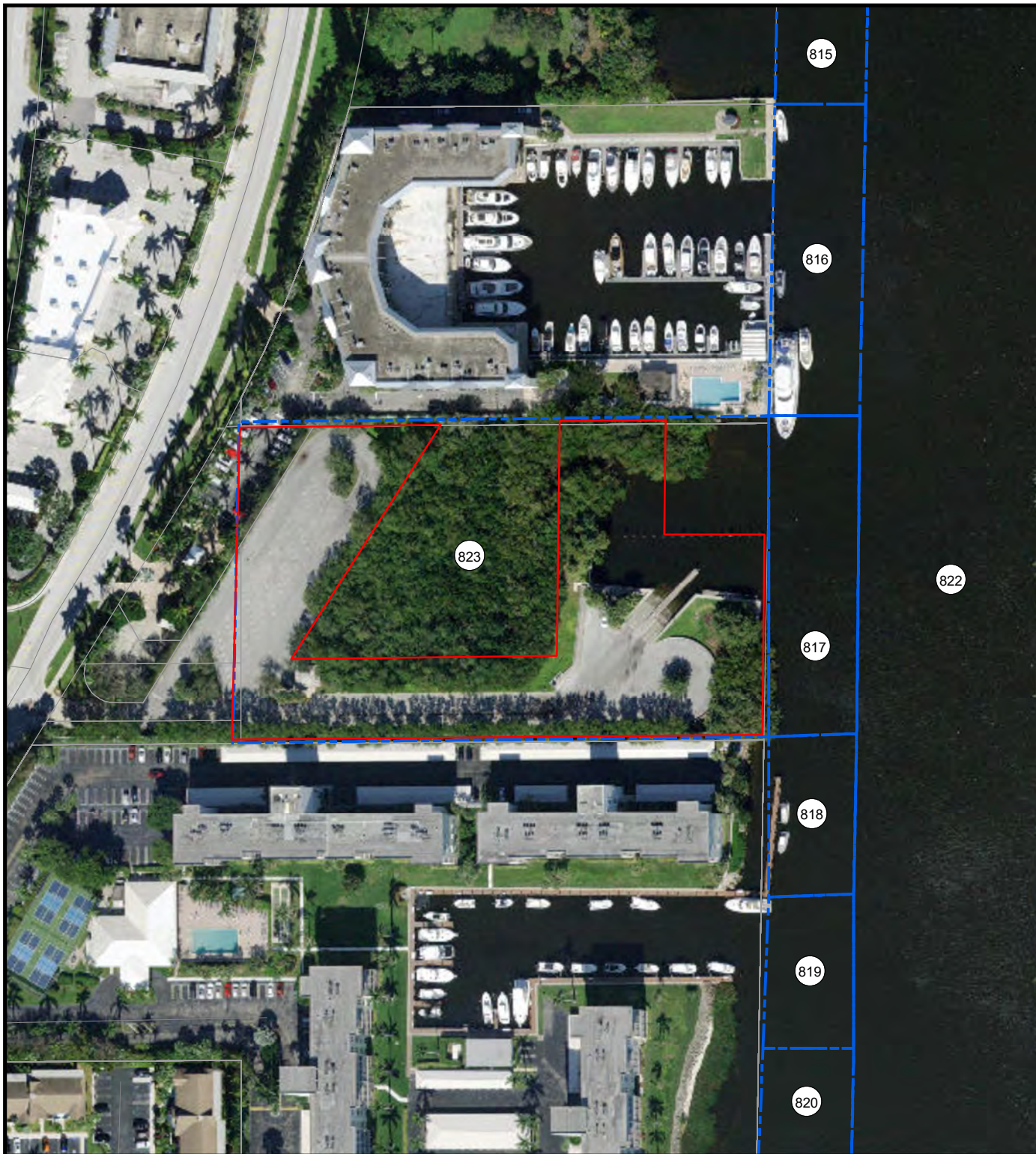




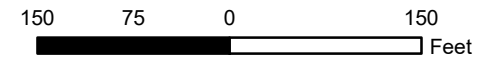
EXHIBIT A

Map for Consent to Easement
 Consent No. DACW17-9-25-0131
 Permit No. SAJ-2005-08610(NWP-ACD)
 Grantee: City of Delray Beach Public Works
 Mangrove Park Boat Launch Facility
 1055 SE 6th Avenue
 Delray Beach, Palm Beach County, Florida
 Section 21 - T 46 S - R 43 E
 29 September 2025

Intracoastal Waterway Jacksonville to Miami
 Affects Tract No. 823

LEGEND

-  Consent Area
-  Perpetual Spoil Area Easement



SCALE: 1 INCH = 150 FEET



VICINITY MAP



Prepared by:
 Department of the Army
 Corps of Engineers
 Jacksonville District
 Real Estate Division
 Technical Services Branch

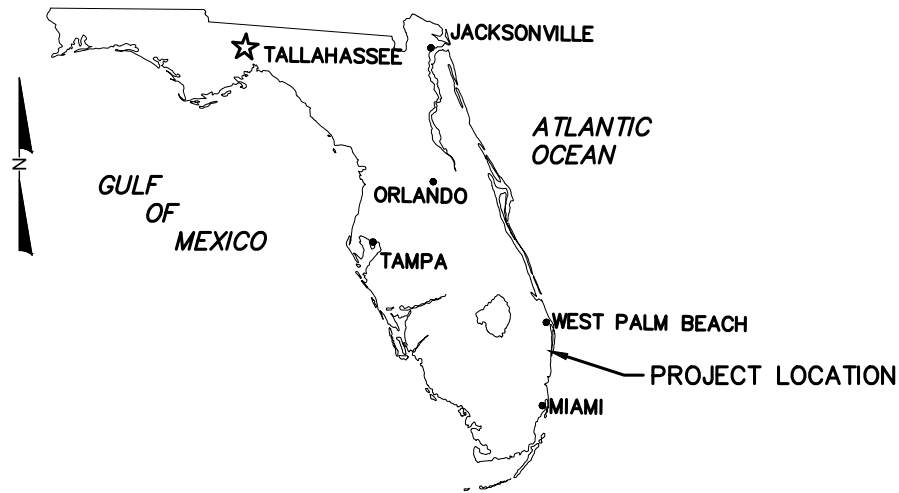
MANGROVE PARK RAMP, DELRAY BEACH SEAWALL REPLACEMENT PROJECT PALM BEACH COUNTY, FLORIDA 33483

U.S. Army Corps of Engineers
SAJ-2005-08610-ACD
Sheet 1 of 12
08/01/2025

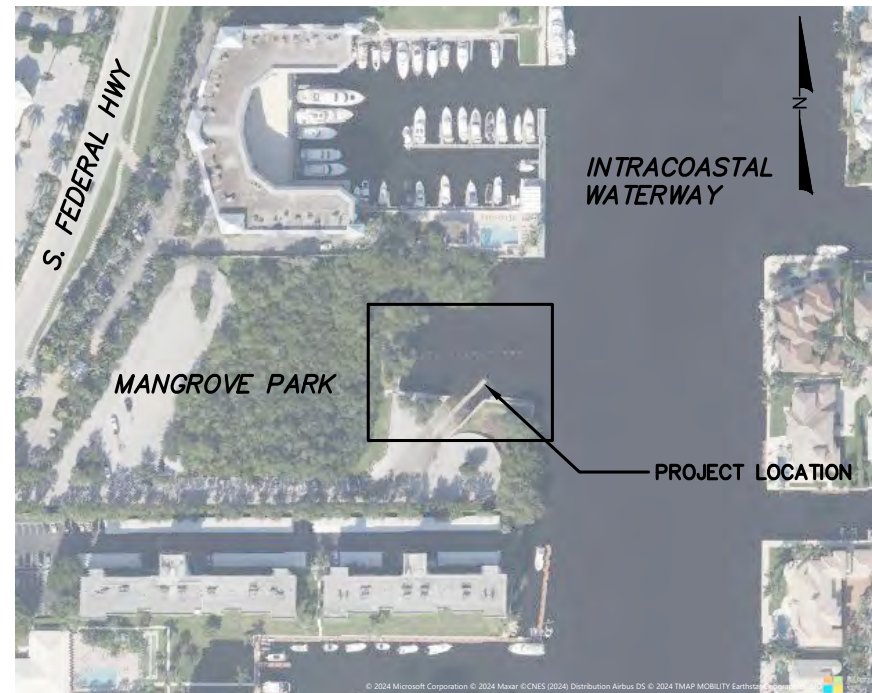
Aptim Environmental & Infrastructure, LLC

PH: (561) 391-8102
FAX: (561) 391-9116
C.O.A. FL #9317
C.O.A. LA #2531

6401 CONGRESS AVENUE, SUITE 140
BOCA RATON, FLORIDA 33487
www.aptim.com



INDEX TO SHEET	
1.	COVER SHEET
2.-3.	BOUNDARY SURVEY
4.-5.	EXISTING CONDITIONS AND DEMOLITION PLAN
6.	PLAN VIEW
7.-12.	DETAIL SHEETS



PROJECT LOCATION DETAIL: SCALE 1"=250'

REVISIONS	No.	Date	Description

Designed by:	RS	Checked by:	DM
Drawn by:	RS	Reviewed by:	DM
Date:	03/31/25	Submitted by:	DM
Plot Scale:	AS NOTED	Comm. No.:	631037197

Reference Files:

**MANGROVE PARK RAMP, DELRAY BEACH
SEAWALL REPLACEMENT PROJECT**

COVER SHEET

DRAWING NO.
CV-1

SHEET 1 OF 12

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"

DOUGLAS W. MANN, P.E. NO. 44046

DATE

PG 1 OF 43

BOUNDARY SURVEY

SECTION 21, TOWNSHIP 46 SOUTH, RANGE 43 EAST,
PALM BEACH COUNTY, FLORIDA

LEGAL DESCRIPTION (PROVIDED BY CLIENT)

LOT 27 AND THAT PORTION OF LOT 11, BLOCK 2, OF MODEL LAND COMPANY'S SUBDIVISION OF SECTION 21, TOWNSHIP 46 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, ACCORDING TO PLAT RECORDED IN PLAT BOOK 1, PAGE 128, OF THE PUBLIC RECORDS OF SAID PALM BEACH COUNTY, LYING WEST OF THE WESTERLY RIGHT OF WAY LINE OF THE INTRACOASTAL WATERWAY FROM JACKSONVILLE TO MIAMI, FLORIDA, AS THAT RIGHT OF WAY LINE IS SHOWN ON THE PLAT RECORDED IN PLAT BOOK 17, AT PAGE 17-D, OF THE PUBLIC RECORDS OF SAID PALM BEACH COUNTY, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SAID SECTION 21 FOR A POINT OF REFERENCE; FROM SAID POINT OF REFERENCE RUN ALONG THE SOUTH LINE OF SAID SECTION 21, NORTH 89°49'09" EAST, A DISTANCE OF 2414.37 FEET TO AN INTERSECTION WITH THE WESTERLY RIGHT OF WAY LINE OF THE INTRACOASTAL WATERWAY AFOREMENTIONED; THENCE ALONG SAID WESTERLY RIGHT OF WAY LINE, NORTH 01°22'42" EAST, A DISTANCE OF 1660.20 FEET TO AN INTERSECTION WITH THE SOUTH LINE OF AFOREMENTIONED LOT 11, SAID POINT BEING MARKED BY A CONCRETE MONUMENT WITH A BRASS CAP THEREIN; STAMPED "U.S. RIGHT OF WAY", THE SAME BEING THE POINT OF BEGINNING FOR THE TRACT HEREIN DESCRIBED;

FROM SAID POINT OF BEGINNING RUN THENCE ALONG THE SOUTH LINE OF AFOREMENTIONED LOTS 11 AND 27, SOUTH 09°51'37" WEST, A DISTANCE OF 536.58 FEET TO AN INTERSECTION WITH THE ACCEPTED WEST LINE OF SAID LOT 27; THENCE ALONG SAID ACCEPTED WEST LINE OF LOT 27, NORTH 00°34'00" EAST, A DISTANCE OF 332.02 FEET TO AN INTERSECTION WITH THE NORTH LINE OF SAID LOT 27; THENCE ALONG THE NORTH LINE OF LOTS 27 AND 11, NORTH 89°52'07" EAST, A DISTANCE OF 537.75 FEET TO AN INTERSECTION WITH THE WESTERLY RIGHT OF WAY LINE OF SAID INTRACOASTAL WATERWAY; THENCE ALONG SAID WESTERLY RIGHT OF WAY LINE, SOUTH 00°46'07.11 WEST, A DISTANCE OF 331.96 FEET TO THE POINT OF BEGINNING HEREINABOVE MENTIONED.

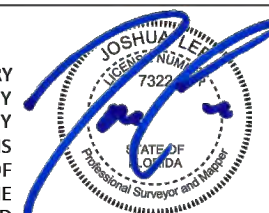
LESS

A PARCEL OR LAND BEING A PORTION OR LOT 27, BLOCK 2, OF THE "MODEL LAND COMPANY'S SUBDIVISION" IN SECTION 21, TOWNSHIP 46 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHEAST CORNER OF THE PLAT OF "THE CORNICHE", AS RECORDED IN PLAT BOOK 53, AT PAGE 28, PUBLIC RECORDS OR PALM BEACH COUNTY, FLORIDA (SAID POINT ALSO BEING THE NORTHWEST CORNER OF SAID LOT 27, BLOCK 2) AND RUN THENCE SOUTH 00 DEGREES 19' 49" WEST ALONG THE EAST LINE OF THE SAID PLAT TO "THE CORNICHE", A DISTANCE OF 122.84 FEET; THENCE NORTH 32 DEGREES 00' 05" EAST, A DISTANCE OF 144.85 FEET; SOUTH 59 DEGREES 59' 58" WEST, ALONG THE NORTH LINE OF SAID LOT 27, BLOCK 2, A DISTANCE OF 76.05 FEET TO THE POINT OF BEGINNING.

CERTIFICATION:

I HEREBY CERTIFY THAT THE ATTACHED BOUNDARY SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION ON 2/12/25. I FURTHER CERTIFY THAT THIS SPECIFIC PURPOSE SURVEY MEETS THE STANDARDS OF PRACTICE SET FORTH IN CHAPTER 5J-17 ADOPTED BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS PURSUANT TO FLORIDA STATUTE 472.027.



JOSHUA LEE, PSM - FLORIDA REGISTRATION NUMBER 7322

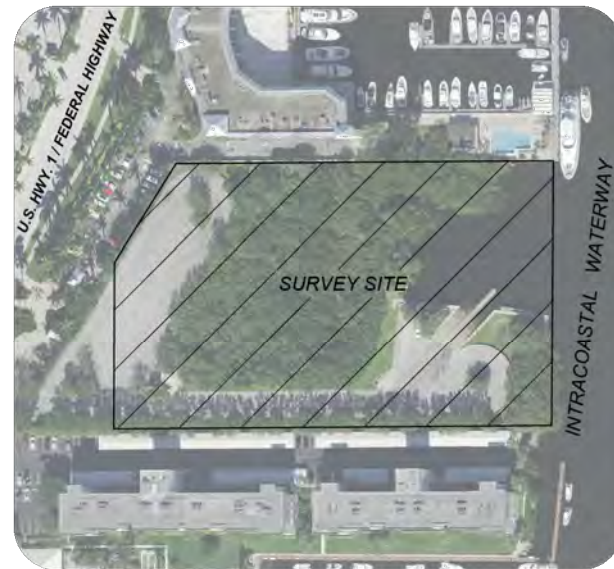
Digitally signed by
Joshua Lee, PSM
7322

Date: 2025.02.17
19:14:49 -05'00'

DACW17-9-25-213
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 2 OF 43



VICINITY MAPS
NOT TO SCALE



ABBREVIATIONS:

APX	APPROXIMATE
PBCR	PALM BEACH COUNTY RECORDS
ELEV	ELEVATION
EXST	EXISTING
FND	FOUND
ICWW	INTRACOASTAL WATER WAY
IP(C)	IRON PIPE (& CAP)
IR(C)	IRON ROD (& CAP)
L	LENGTH
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
NL/D	NAIL & DISK
ORB	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PBCR	PALM BEACH COUNTY RECORDS
PG(S)	PAGES(S)
PRM	PERMANENT REFERENCE MONUMENT
R	RADIUS
R/W	RIGHT OF WAY
TYP	TYPICAL

SURVEY NOTES:

1. THIS IS A BOUNDARY SURVEY AS DEFINED IN THE STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE.
2. THIS SURVEY IS CERTIFIED TO THE CITY OF DELRAY BEACH AND THE FLORIDA INLAND NAVIGATION DISTRICT.
3. THIS SURVEY IS INTENDED EXCLUSIVELY FOR THE USE BY THOSE TO WHOM IT IS CERTIFIED. IT IS NOT TO BE USED BY OTHERS FOR CONSTRUCTION, PERMITTING, DESIGN OR ANY OTHER USE WITHOUT THE WRITTEN CONSENT OF TERRAQUATIC, INC.
4. THIS SURVEY, AND ANY REPRODUCTION THEREOF, IS NOT VALID WITHOUT AN ORIGINAL OR VERIFIED DIGITAL SIGNATURE AND SEAL OF A FLORIDA REGISTERED SURVEYOR. ADDITIONALLY, THIS SURVEY IS NOT VALID IF PRINTED BEARING A DIGITAL SIGNATURE AND SEAL.
5. OTHER THAN THOSE SHOWN ON THE REFERENCED PLAT, NO SEARCH OF THE PUBLIC RECORDS WAS PERFORMED FOR EASEMENTS, ENCUMBRANCES OR OTHER INSTRUMENTS OF RECORD WHICH MAY AFFECT THIS PARCEL OF LAND.
6. THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1 INCH = 60 FEET OR SMALLER.
7. UNDERGROUND UTILITIES WERE NOT LOCATED AS PART OF THIS SURVEY.
8. BEARING AND DISTANCES SHOWN HERON ARE RELATIVE TO THE NORTH AMERICA DATUM OF 1983, 1990 ADJUSTMENT (NAD 83/90), FLORIDA STATE PLANE, EAST ZONE (0901), TRANSVERSE MERCATOR PROJECTION IN THE U.S. SURVEY FOOT UNIT OF MEASUREMENT.
9. LOCATIONS WERE OBTAINED USING REAL TIME KINEMATIC GPS METHODOLOGIES WITH BROADCAST CORRECTIONS FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION REFERENCE NETWORK AND ARE ACCURATE TO THIRD ORDER, CLASS II.
10. UNLESS OTHERWISE NOTED, FIELD BEARINGS AND DISTANCES ARE CONSISTENT WITH THE RECORD PLAT.

PREPARED FOR / SITE ADDRESS
CITY OF DELRAY BEACH
1055 SE 6TH AVENUE
DELRAY BEACH, FL

PREPARED BY:
TERRAQUATIC, INC
1220 TANGELO TERR, UNIT A12
DELRAY BEACH, FL 33444
TELEPHONE: (561) 806-6085
CITY OF DELRAY BEACH
SEAWALL REPLACEMENT PROJECT
BOUNDARY SURVEY
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 2 OF 43

CERTIFICATE OF AUTHORIZATION NO. 7324

DRAWING: MANGROVE PARK SURVEY.dwg		DRAWN BY: JBL	
SCALE: N/A	DATE: 2/17/25	JOB No.: 24-1849	CHECKED BY: JBL
REV:		SHEET 1 OF 2	

TERRAQUATIC
SURVEYING AND MAPPING

Aptim Environmental & Infrastructure, LLC
PH: (561) 391-8102
FAX: (561) 391-9116
C.O.A. FL #9317
C.O.A. LA #2531

6401 CONGRESS AVENUE, SUITE 140
BOCA RATON, FLORIDA 33487
www.aptim.com

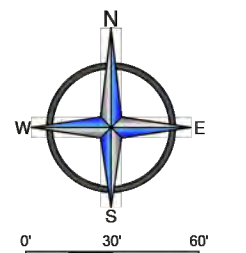
REVISIONS	No.	Date	Description

Designed by:	RS	Checked by:	DM
Drawn by:	RS	Reviewed by:	DM
Date:	03/31/25	Submitted by:	DM
Plot Scale:	AS NOTED	Comm. No.:	631037197

MANGROVE PARK RAMP, DELRAY BEACH
SEAWALL REPLACEMENT PROJECT
BOUNDARY SURVEY

DRAWING NO.
EC-1

P:\Palm Beach\Delray Beach\31037197 - Delray Seawall Replacement\CAD\Mangrove Park Seawall.dwg - Jul 18, 2025 @ 8:36am - Rebecca Schurr

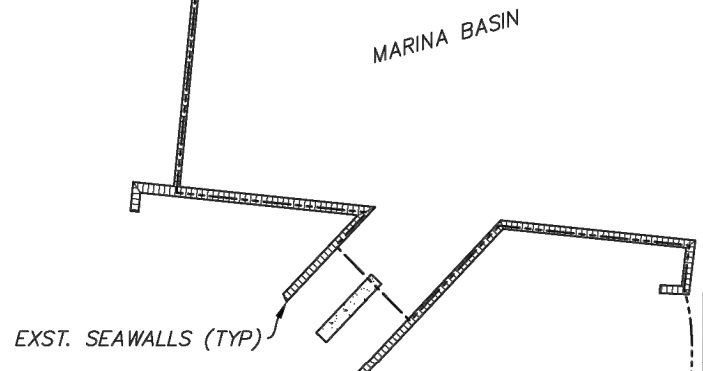


DELRAY HARBOR CLUB P.B. 43 PG. 36

NORTH BOUND
U.S. HIGHWAY #1
S.E. 6th AVENUE (P)
VARIABLE WIDTH RIGHT OF WAY
THE CORNICHE REPLAT
P.B. 79 PG. 50

MODEL LAND COMPANY'S
SUBDIVISION OF
SECTION 21
TOWNSHIP 46 SOUTH
RANGE 43 EAST
P.B. 1, PG. 128

MANGROVE PARK
1055 SE 6TH AVENUE
DELRAY BEACH, FL
P.C.N. 12-43-46-21-09-002-0110
IMPROVEMENTS NOT SHOWN

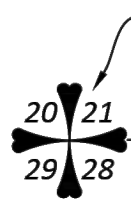


INTRACOASTAL WATERWAY P.B. 17, PG. 1

PREPARED FOR / SITE ADDRESS
CITY OF DELRAY BEACH
1055 SE 6TH AVENUE
DELRAY BEACH, FL

PREPARED BY:
TERRAQUATIC, INC
1220 TANGELO TERR, UNIT A12
DELRAY BEACH, FL 33444
TELEPHONE: (561) 806-6085
CERTIFICATE OF AUTHORIZATION NO. 7324

- OWNER OF RECORD: FLORIDA INLAND NAVIGATION DISTRICT
- OWNER OF RECORD: CITY OF DELRAY BEACH
- OWNER OF RECORD: DELRAY HARBOR CLUB



POINT OF COMMENCEMENT
SW CORNER OF SECTION 21

N89°22'34"E 2,413.90' (C) N89°49'09"E 2,414.37' (D)

SOUTH LINE OF SECTION 21

DRAWING: MANGROVE PARK SURVEY.dwg		DATE: 2/17/25	JOB No.: 24-1849
SCALE: 1" = 60'	REV:		



Aptim Environmental & Infrastructure, LLC
PH: (561) 391-8102
FAX: (561) 391-9116
C.O.A. FL #9317
C.O.A. LA #2531

6401 CONGRESS AVENUE, SUITE 140
BOCA RATON, FLORIDA 33487
www.aptim.com

REVISIONS	No.	Date	Description

Designed by: RS	Checked by: DM
Drawn by: RS	Reviewed by: DM
Date: 03/31/25	Submitted by: DM
Plot Scale: AS NOTED	Comm. No.: 631037197




Reference File:

MANGROVE PARK RAMP, DELRAY BEACH SEAWALL REPLACEMENT PROJECT
BOUNDARY SURVEY

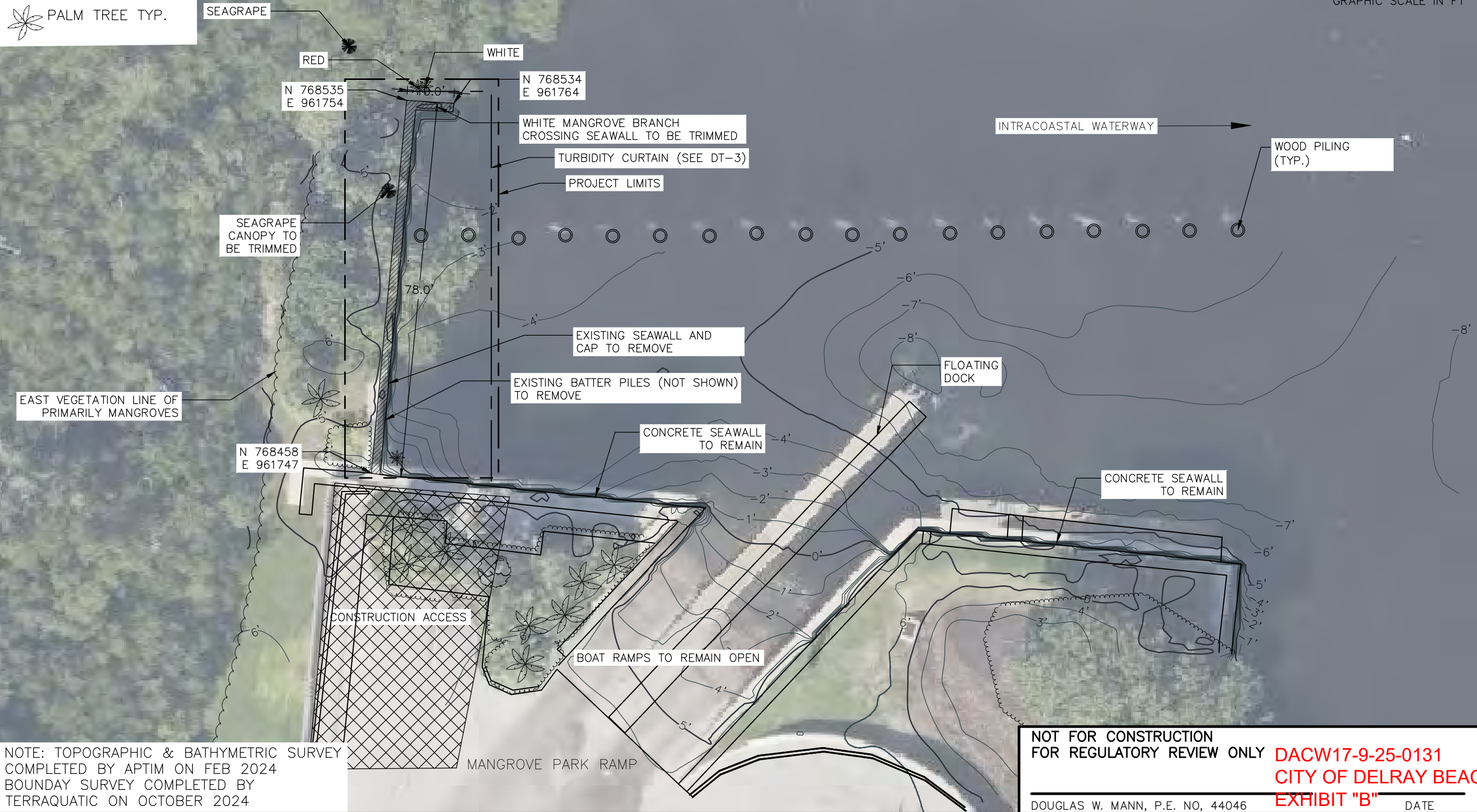
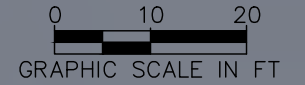
DRAWING NO.

EC-2

- DEMOLISH:**
1. EXISTING CONCRETE CAP
 2. EXISTING CONCRETE SEAWALL
 3. EXISTING BATTER PILES

- LEGEND:**
-  MANGROVE TREE
 -  SEAGRAPE
 -  PALM TREE TYP.

U.S. Army Corps of Engineers
SAJ-2005-08610-ACD
Sheet 4 of 12
08/01/2025



NOTE: TOPOGRAPHIC & BATHYMETRIC SURVEY COMPLETED BY APTIM ON FEB 2024
BOUNDARY SURVEY COMPLETED BY TERRAQUATIC ON OCTOBER 2024

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY
DOUGLAS W. MANN, P.E. NO. 44046
DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 4 OF 43

Aptim Environmental & Infrastructure, LLC
PH: (561) 391-8102
FAX: (561) 391-9116
C.O.A. FL #9317
C.O.A. LA #2531
6401 CONGRESS AVENUE, SUITE 140
BOCA RATON, FLORIDA 33487
www.aptim.com

REVISIONS	No.	Date	Description

Designed by:	RS	Checked by:	DM
Drawn by:	RS	Reviewed by:	DM
Date:	03/31/25	Submitted by:	DM
Plot Scale:	AS NOTED	Comm. No.:	631037197

MANGROVE PARK RAMP, DELRAY BEACH
SEAWALL REPLACEMENT PROJECT
EXISTING CONDITIONS
AND
DEMOLITION PLAN

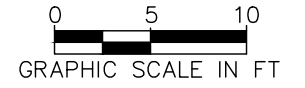
DRAWING NO. HEC-3
SHEET 4 OF 12

NOTE: NEW SEAWALL TO BE INSTALLED WITHIN EXISTING FOOTPRINT OF THE PREVIOUS SEAWALL LOCATION

LEGEND:

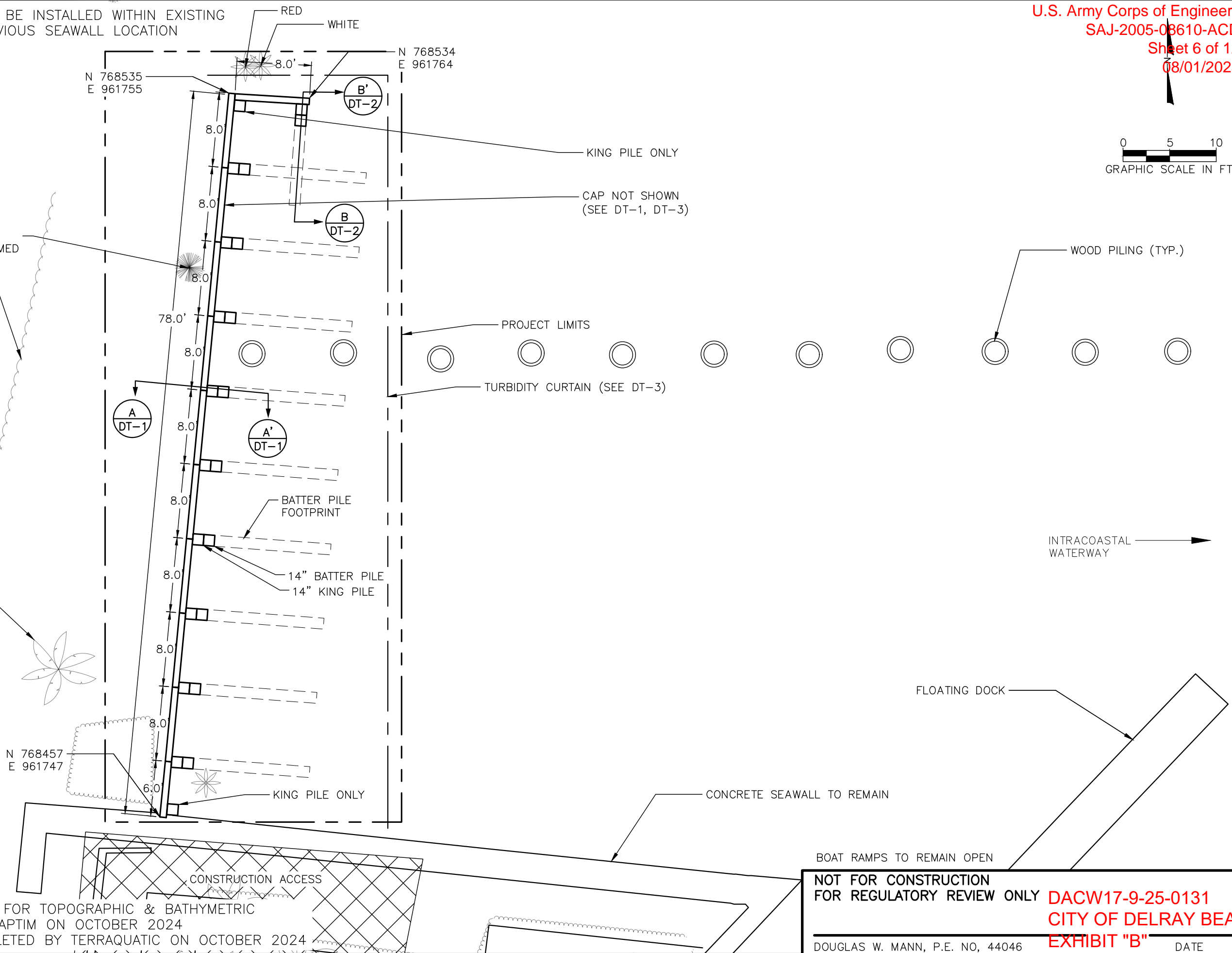
-  MANGROVE TREE
-  SEAGRAPE
-  PALM TREE TYP.

U.S. Army Corps of Engineers
SAJ-2005-08610-ACD
Sheet 6 of 12
08/01/2025



SEAGRAPE CANOPY TO BE TRIMMED
EAST VEGETATION LINE OF PRIMARILY MANGROVES

PALM TREE TYP.



NOTE: SEE SHEET EC-3 FOR TOPOGRAPHIC & BATHYMETRIC SURVEY COMPLETED BY APTIM ON OCTOBER 2024
BOUNDARY SURVEY COMPLETED BY TERRAQUATIC ON OCTOBER 2024

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DOUGLAS W. MANN, P.E. NO. 44046

DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 6 OF 43

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REVISIONS

No.	Date	Description

Checked by: DM
Reviewed by: DM
Submitted by: DM
Date: 03/31/25
Comm. No.: 631037197
Pilot Scale: AS NOTED

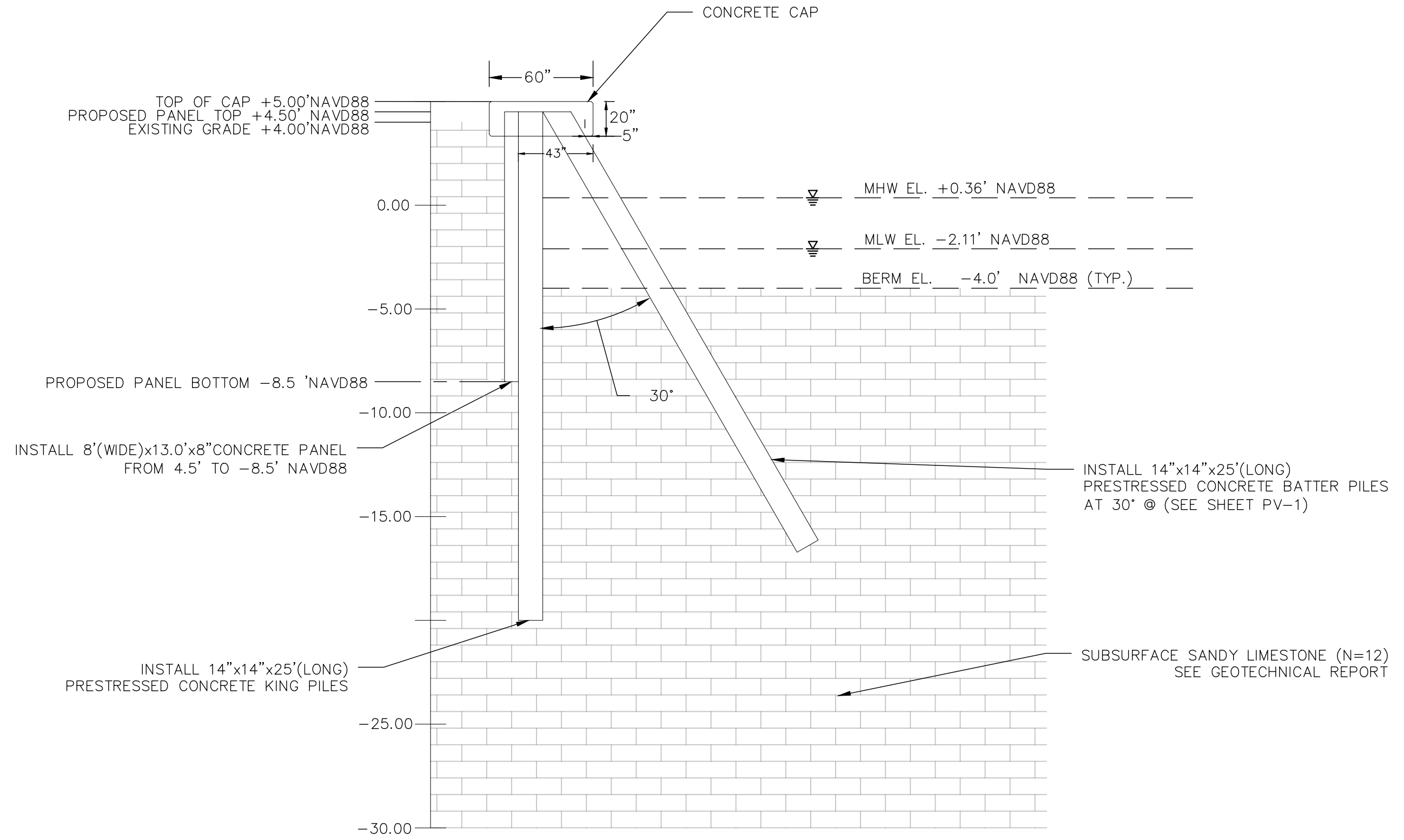
MANGROVE PARK RAMP, DELRAY BEACH
SEAWALL REPLACEMENT PROJECT
PLAN VIEW

DRAWING NO.

HPV-1

SHEET 6 OF 12

ELEVATION (FEET NAVD88)



SEAWALL DETAIL A'-A
 SCALE: 1"=5'

NOT FOR CONSTRUCTION
 FOR REGULATORY REVIEW ONLY
 DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 7 OF 43

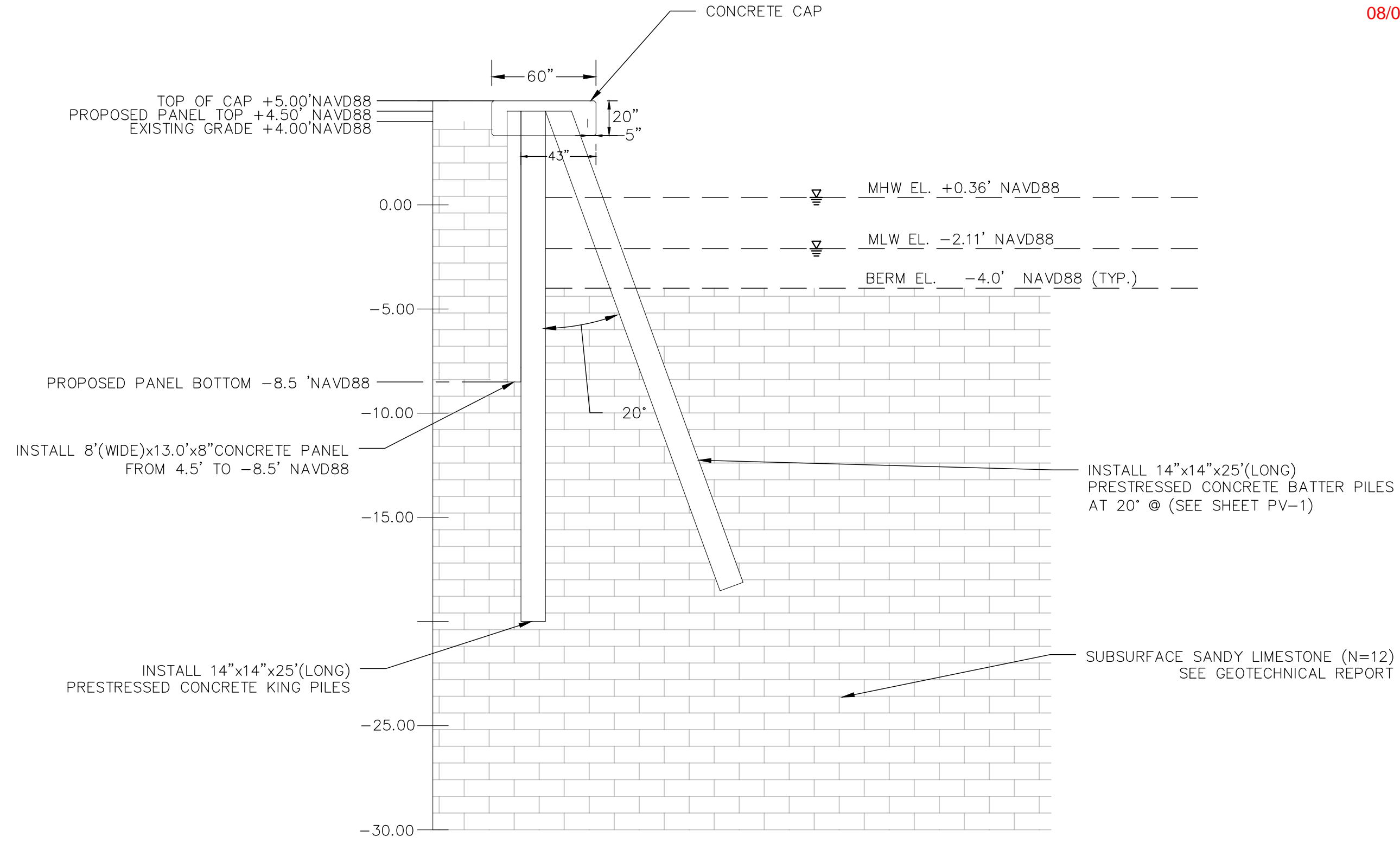
REVISIONS	No.	Date	Description

Designed by: RS	Checked by: DM
Drawn by: RS	Reviewed by: DM
Date: 03/31/25	Submitted by: DM
Plot Scale: AS NOTED	Comm. No.: 631037197

MANGROVE PARK RAMP, DELRAY BEACH SEAWALL REPLACEMENT PROJECT	DETAIL SHEET
DRAWING NO. DT-1	SHEET 7 OF 12

P:\Palm Beach\Delray Beach\31037197 - Delray Seawall Replacement\CAD\Wangrow Park Seawall.dwg - Jul 18, 2025 9:38am - Renee Schurr

ELEVATION (FEET NAVD88)



SEAWALL DETAIL B'-B
 SCALE: 1"=5'

NOT FOR CONSTRUCTION
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 DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 DOUGLAS W. MANN, P.E. NO. 44046
 DATE

REVISIONS	No.	Date	Description

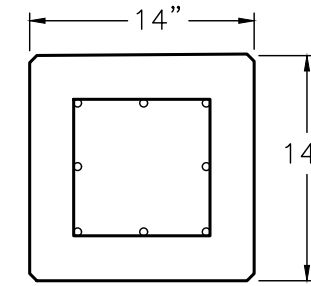
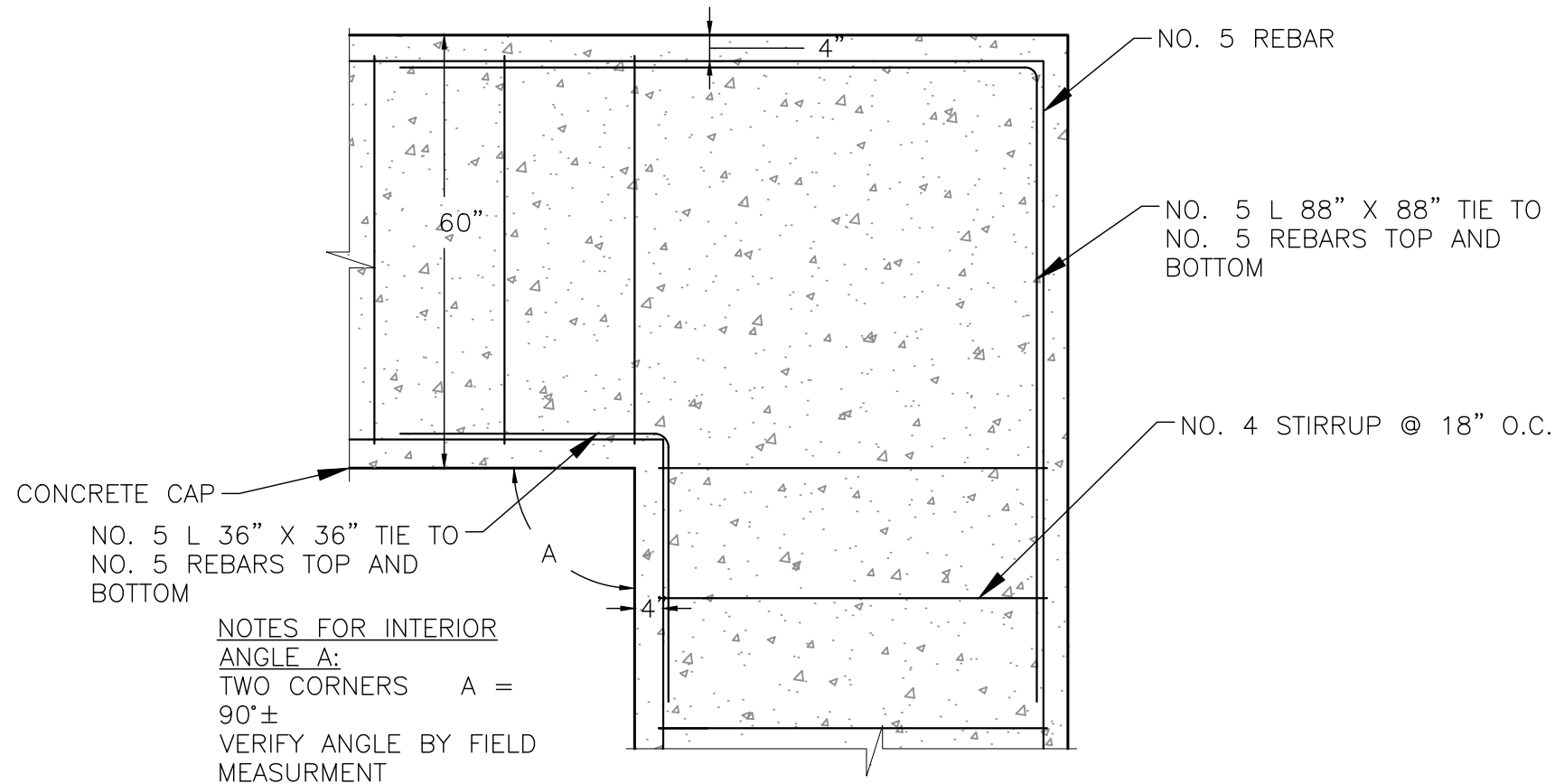
Designed by:	Checked by:
Drawn by:	Reviewed by:
Date:	Submitted by:
Plot Scale:	Comm. No.:
AS NOTED	631037197

Reference File:

**MANGROVE PARK RAMP, DELRAY BEACH
 SEAWALL REPLACEMENT PROJECT**
 DETAIL SHEET

DRAWING NO.
DT-2
 SHEET 7 OF 12

P:\Palm Beach\Delray Beach\31037197 - Delray Seawall Replacement\CAD\Wingrove Park Seawall.dwg - Jul 18, 2025 9:38am - Renee.Schurr



NOTE:
14"x14" PRESTRESSED CONCRETE PILE
8-1/2" Ø, GRADE 270 LRS, PULL AT
31 KIPS
REFER TO FDOT INDEX NO. 20614
SHEET NO. 1

SECTION PILE
SCALE: 1" = 1'

**NOTES FOR INTERIOR
ANGLE A:**
TWO CORNERS A =
90°±
VERIFY ANGLE BY FIELD
MEASUREMENT

**CONCRETE CAP
CORNER DETAIL**
SCALE: 1" = 2'

REVISIONS	No.	Date	Description

Designed by:	DM	Checked by:	DM
Drawn by:	RS	Reviewed by:	DM
Date:	03/31/25	Submitted by:	DM
Plot Scale:	AS NOTED	Comm. No.:	631037197

Reference File:

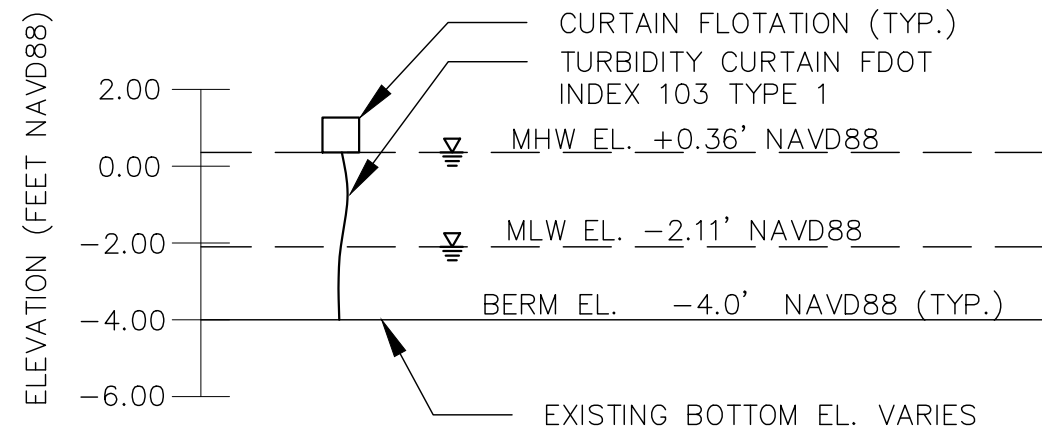
**MANGROVE PARK RAMP, DELRAY BEACH
SEAWALL REPLACEMENT PROJECT**

DETAIL SHEET

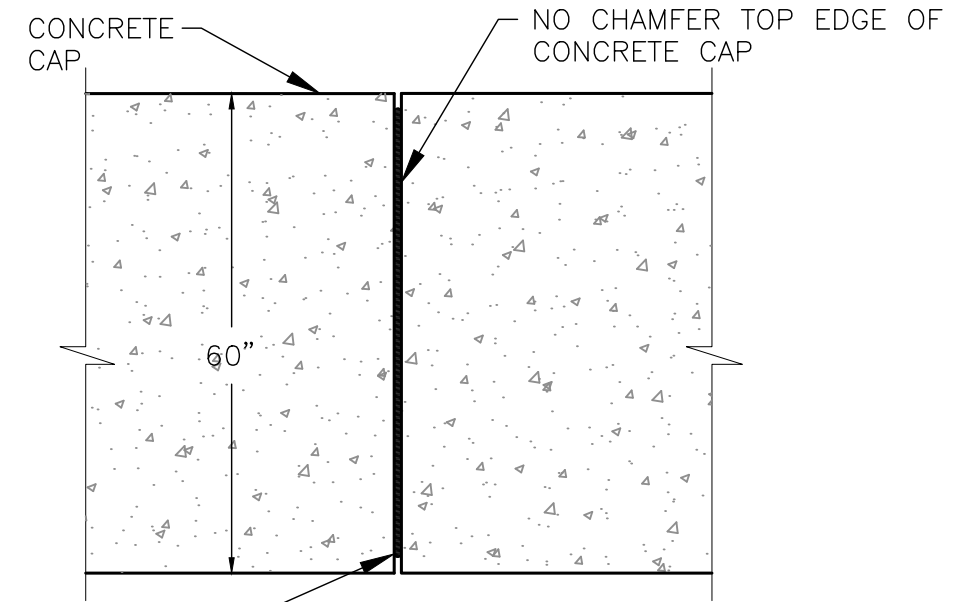
NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY	DRAWING NO.
	DT-5
DOUGLAS W. MANN, P.E. NO. 44046	SHEET 11 OF 12

DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 11 OF 43

P:\Palm Beach\Delray Beach\631037197 - Delray Seawall Replacements\CAD\Wangrove Park Seawall.dwg - Jul 18, 2025 8:36am - ReneeSchurr



**TURBIDITY CURTAIN
ELEVATION VIEW DETAIL**
SCALE: 1" = 5'



**CONCRETE CAP
EXPANSION JOINT DETAIL**
SCALE: 1" = 2'

EXPANSION JOINT EVERY 30' STOP ALL REINFORCING STEEL AT JOINT. PROVIDE 4 INCHES OF CONCRETE COVER.

NOTES:

1. EXPANSION JOINT STOP ALL REINFORCING STEEL AT JOINT. PROVIDE 4 INCHES OF CONCRETE COVER.
2. INSTALL 0.5" EXPANSION JOINT MATERIAL FDOT SECTION 932, OR EQUAL, FULL SECTION OF CAP.
3. CAULK REMAINING JOINT AFTER CONCRETE CURE AND FORM REMOVAL.
4. NO EXPANSION JOINT WITHIN 2 FEET OF PILES.

REVISIONS	No.	Date	Description

Designed by: RS	Checked by: DM
Drawn by: RS	Reviewed by: DM
Date: 03/31/25	Submitted by: DM
Plot Scale: AS NOTED	Comm. No.: 631037197

Reference Files

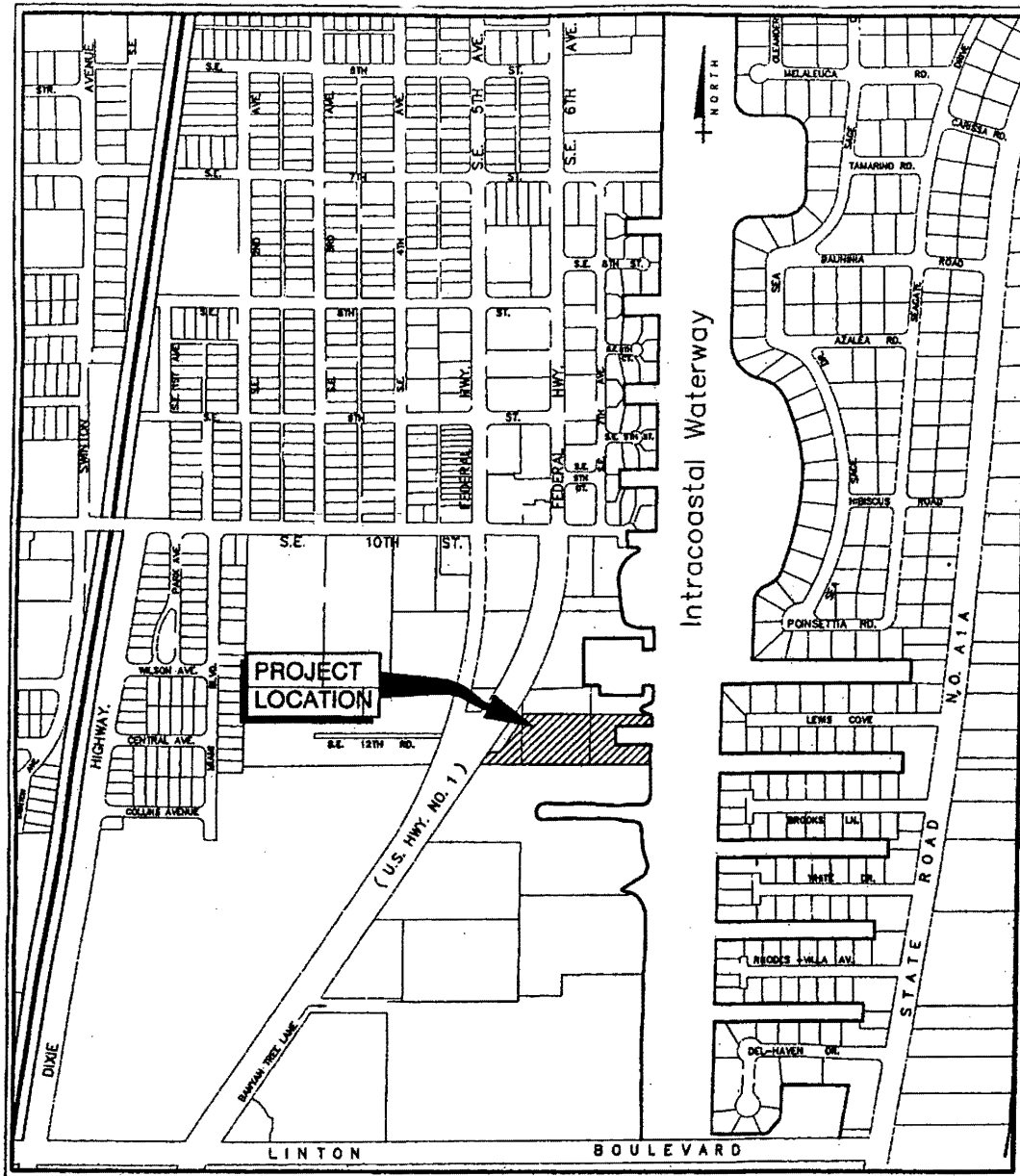
**MANGROVE PARK RAMP, DELRAY BEACH
SEAWALL REPLACEMENT PROJECT**

DETAIL SHEET

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY
DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 12 OF 43
DOUGLAS W. MANN, P.E. NO. 44046
DATE

DRAWING NO.
DT-6
SHEET 12 OF 12

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PROJECT LOCATION MAP
 SECTION 21, TWP 46, RGE 43
 N.T.S.

EXHIBIT 1

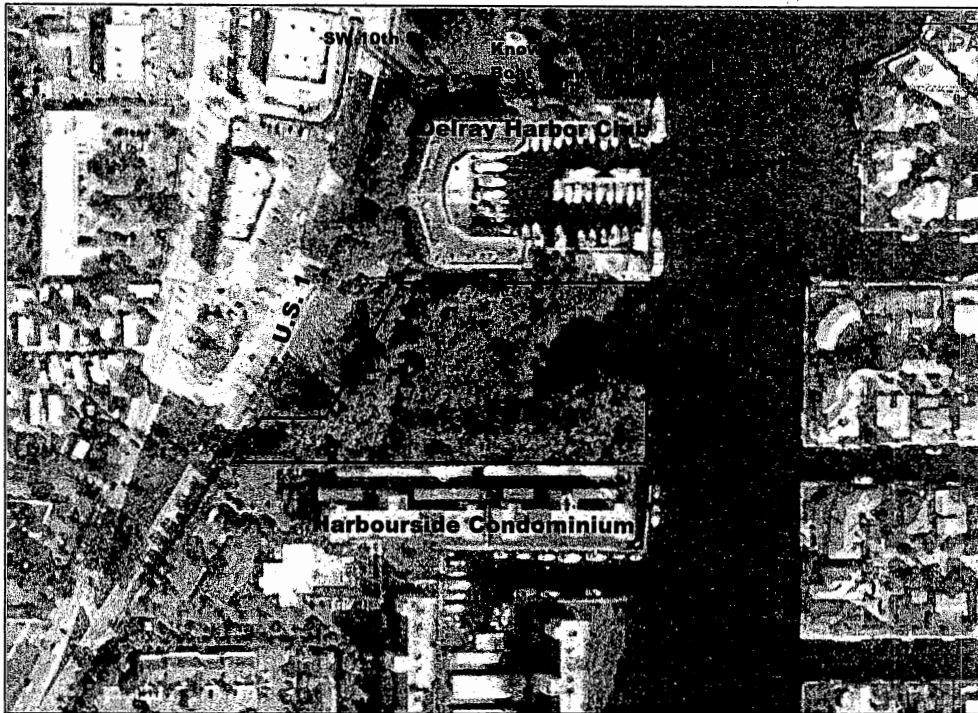
COE APPL # SAT-2005-8610
 DEP / SFWMD # 50-09332-P
 DATE 9/1/06
 DRAWING PAGE 1 OF 32

COE APPL # 505-2005 8610

DEP / SFWMD # 50-09332-P

8/31/06

PAGE 2 OF 32



Note: Property Boundary is Approximate.

300 0 300 Feet

1" = 300'

-050818-22
ORIGINAL SUBMITTAL

AUG 18 2005

WPB

RECEIVED
SEP 06 2005
JACKSONVILLE DISTRICT
USACE

DEPT. OF ENV. PROTECTION



RECEIVED

Exhibit
B

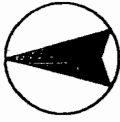
Site Aerial Photograph
Palm Beach County, 2002.

Intracoastal Park
Delray Beach, Florida



www.ecologicalassociatesinc.com

DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 14 OF 43



COE APPL # SD5-2005-8610
 DEP / SFWMD # 50-09332-P
 DATE 9/1/06
 DRAWING PAGE 3 OF 32

RECEIVED

AUG 18 2005

DEPT. OF ENV. PROTECTION



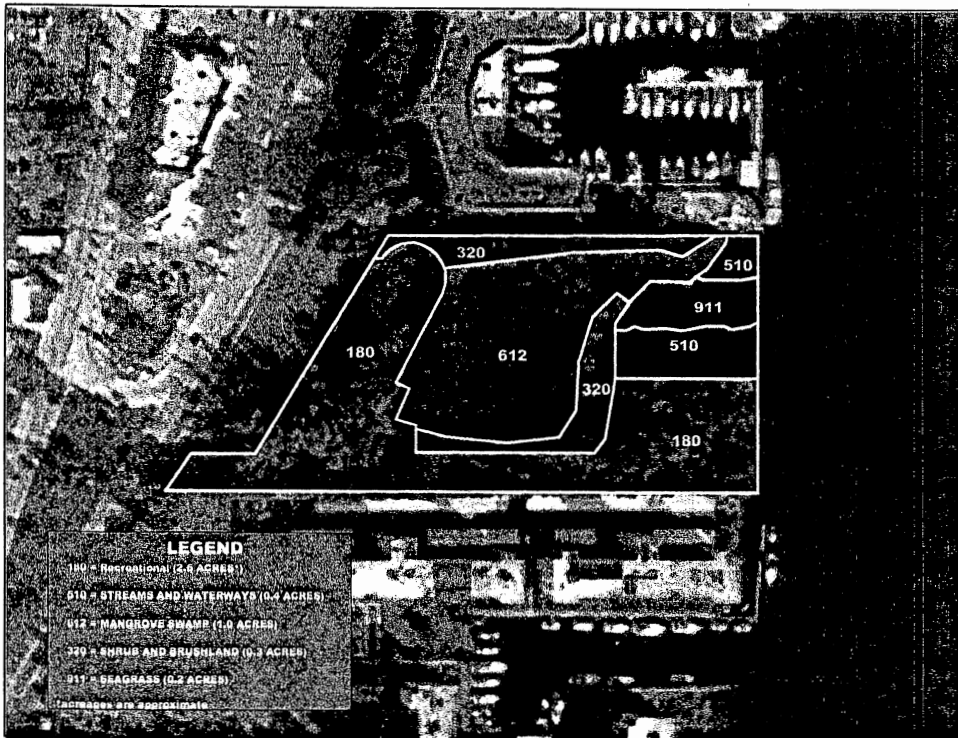
Ecological Associates, Inc.
 Environmental Consultants
 10000 South Florida

www.ecologicalassociatesinc.com

**Intracoastal Park
 Delray Beach, Florida**

**Existing Land Use
 & Cover (FLUCCS)**

**Exhibit
 E**



COE APPL # 545-2005-8610
 DEP / SFVWD # 50-09333-P
 DATE 9/1/06
 DRAWING PAGE 4 OF 32

DEPT. OF ENV. PROTECTION
 AUG 18 2005
 RECEIVED

Exhibit
G

**Proposed Land Use
& Cover (FLUCCS)**

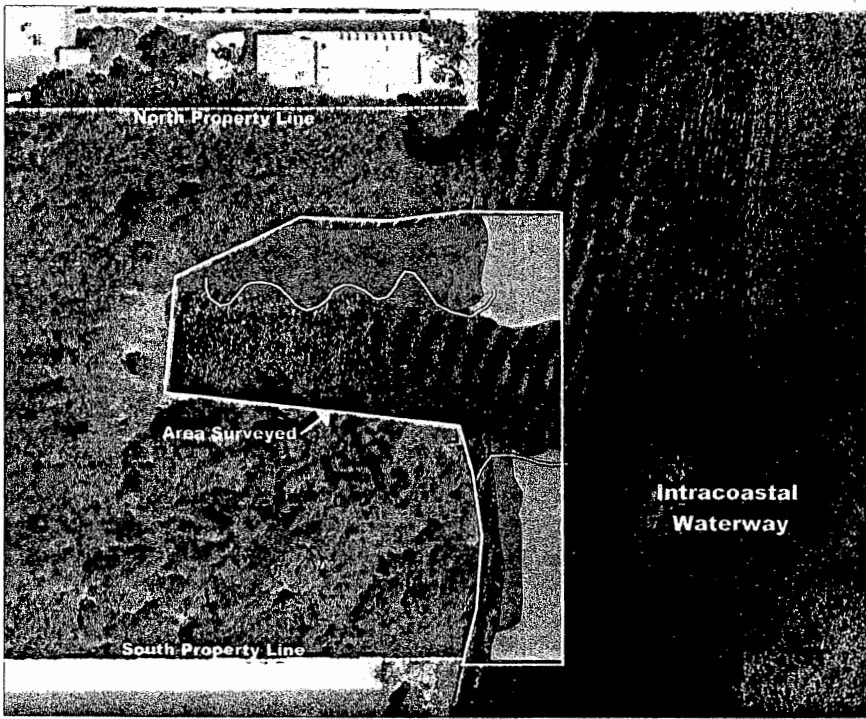
**Intracoastal Park
Delray Beach, Florida**






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DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 16 OF 43

COE APPL # SAT-2005-8610
 DEP / SFWMD # 50-07332-P
 DATE 9/1/06
 DRAWING PAGE 5 OF 32



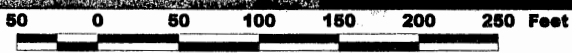
LEGEND


-  Halophila decipiens, patchy, sparse to dense
-  Mixed Halophila decipiens / Halophila johnsonii, patchy, sparse to dense
-  Halophila johnsonii, patchy, sparse to moderate

— Seagrass boundary as of June 2005

DEPT. OF ENV. PROTECTION
 AUG 18 2005

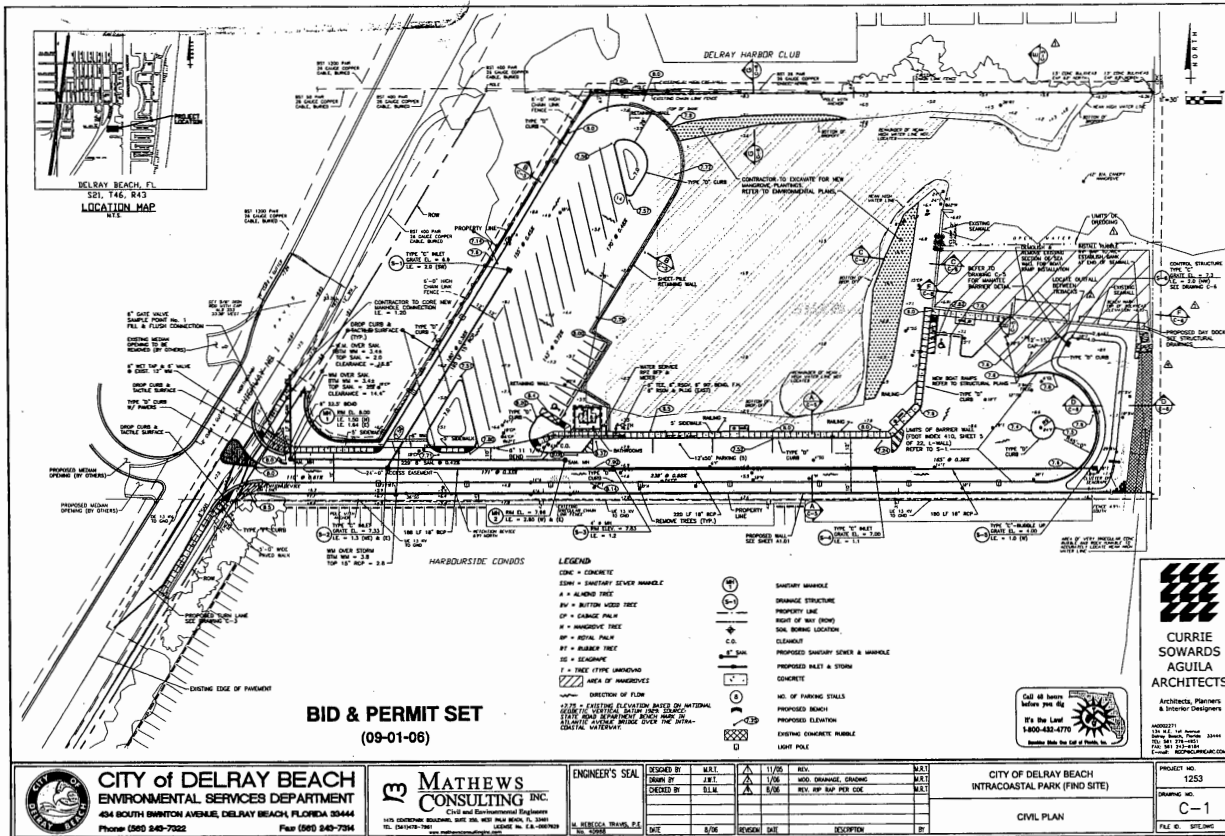
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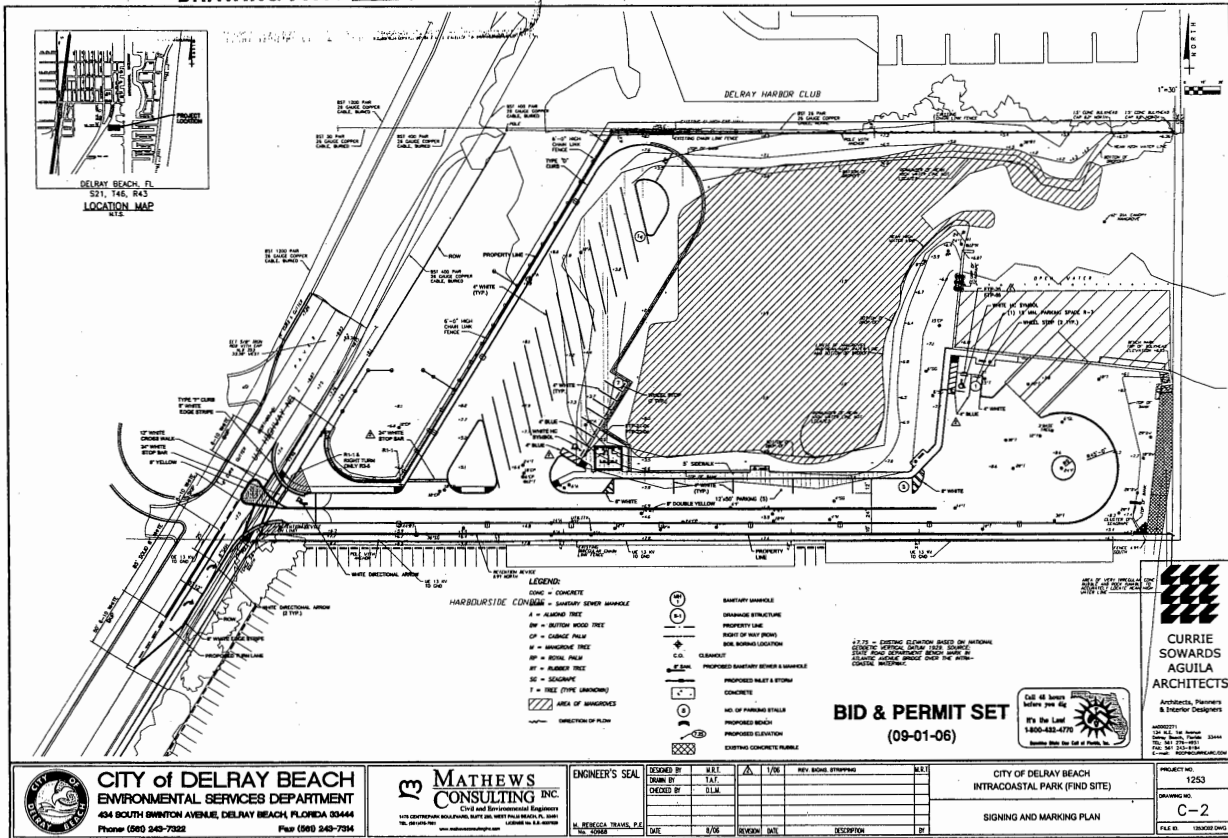
<p>Exhibit F</p>	<p>Seagrass Survey August 2003 Updated June 2005</p>	<p>Intracoastal Park Delray Beach, Florida</p>	 <p>www.ecologicalassociatesinc.com</p>
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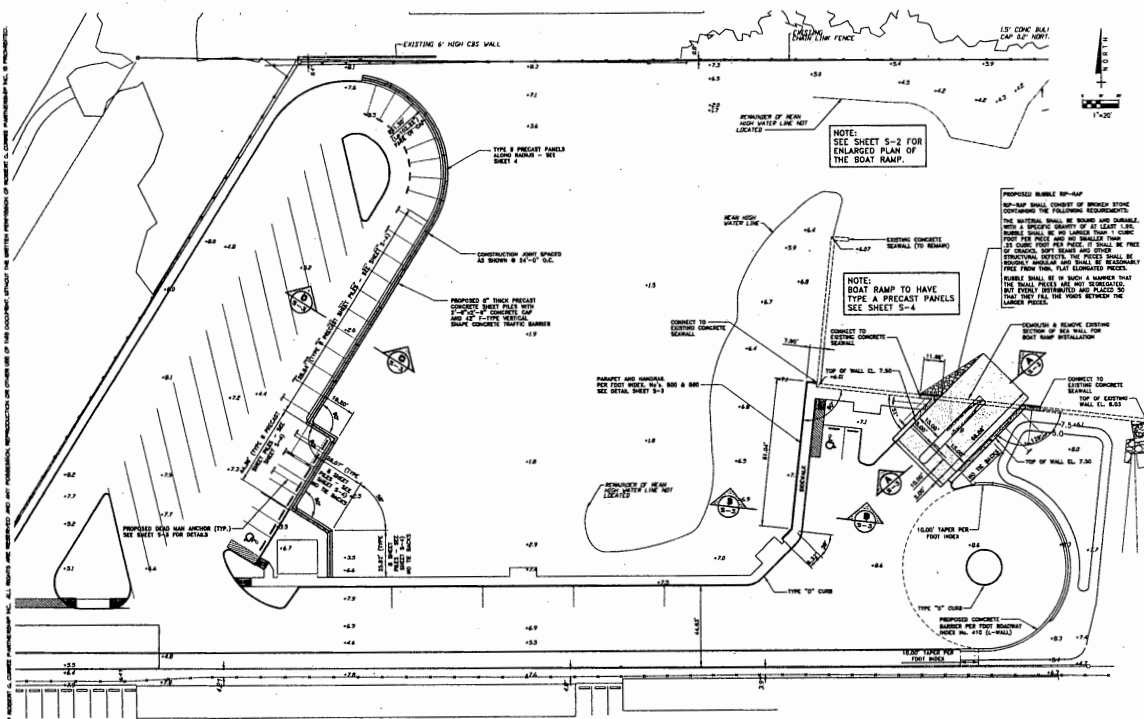
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 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 17 OF 43

DEP / SFWMD # 50-07032-1
 DATE 9/1/06
 DRAWING PAGE 6 OF 32



DEP / SFWMD # 50-07332-P
 DATE 9/1/06
 DRAWING PAGE 7 OF 32





**CURRIE
SOWARDS
ARQUILA
ARCHITECTS**

Architects, Planners
& Interior Designers

1201 N.W. 4th Avenue, Suite 200
Fort Lauderdale, FL 33304
Tel: 954-575-2111
Fax: 954-575-2112
E-mail: info@currie.com

ALAN L. GERWIG, P.E., SEABT
PROJECT FILE
**INTRACOASTAL
PARK (POND SITE)**

U.S. HIGHWAY #1
DELRAY BEACH, FL.
CLAY COUNTY
SEAWALL

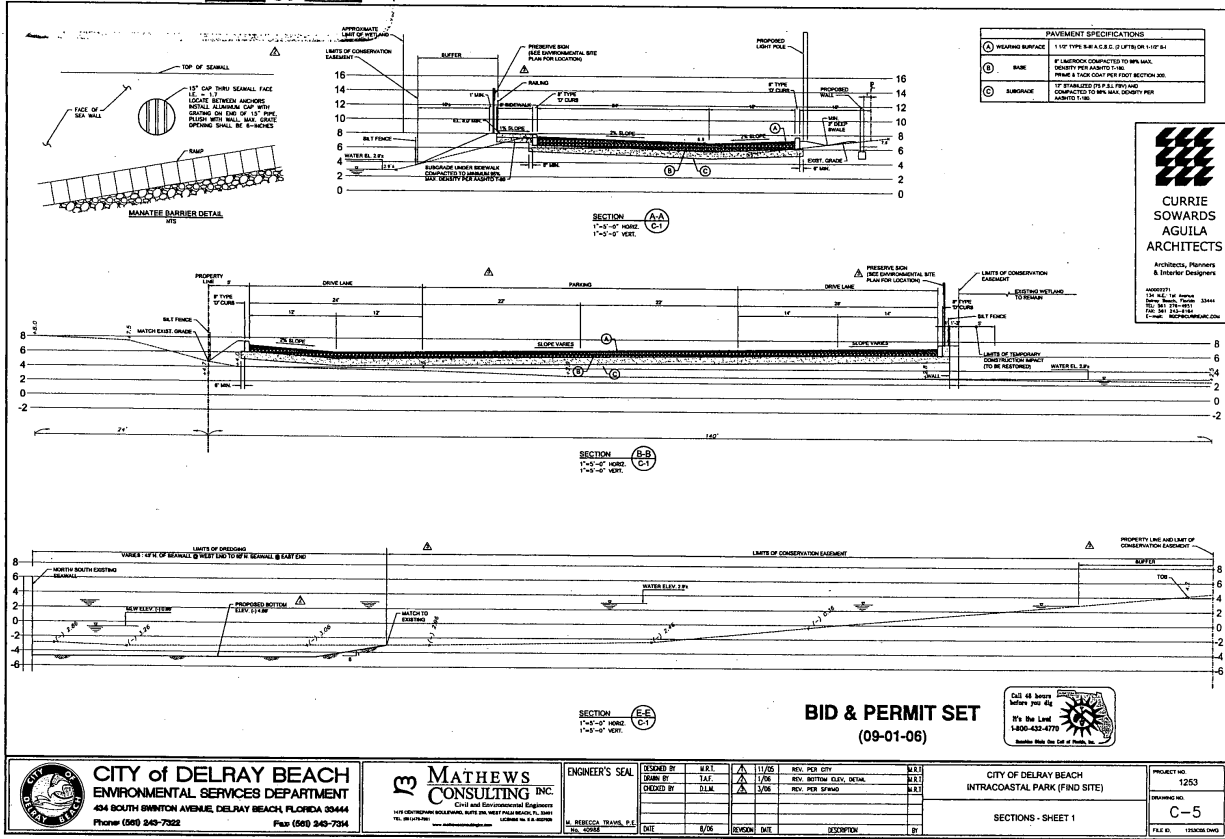
FILE NUMBER
PROJECT NO. 142
**OVERALL
SEAWALL
STRUCTURAL
GEOMETRY PLAN**
DATE 01.10.06
DRAWN BY SSP
CHECKED BY
DATE 02.10.06
PROJECT NUMBER
S-1



COE APPL # 64J-2005-8610
DEP / SFWMD # 50-09332-P
DATE 9/1/06
DRAWING PAGE 8 OF 32

Alan Gerwig & Associates, Inc.
Civil and Structural Engineers

DEP / SFWMD # SO-67332-P
 DATE 9/1/06
 DRAWING PAGE 9 OF 32



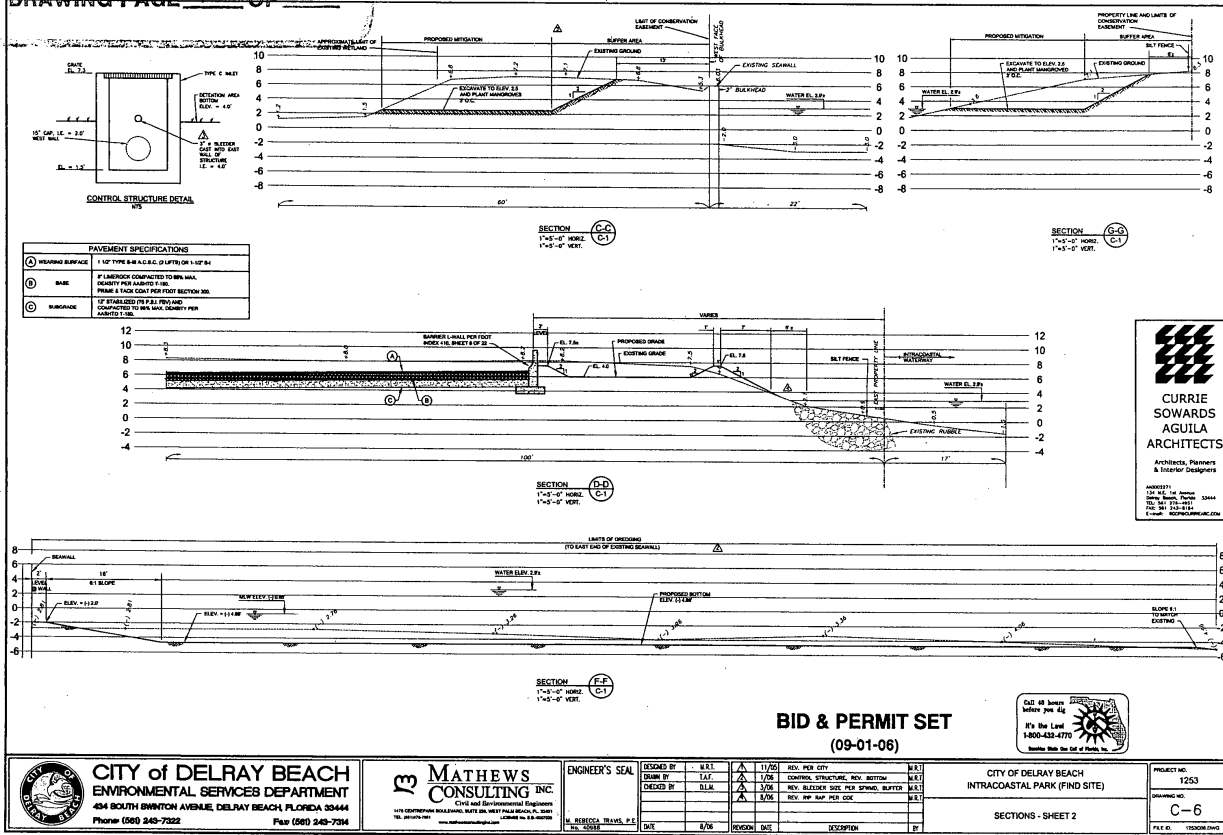
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DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 21 OF 43

DEP / SFWMD # 50-69332-P

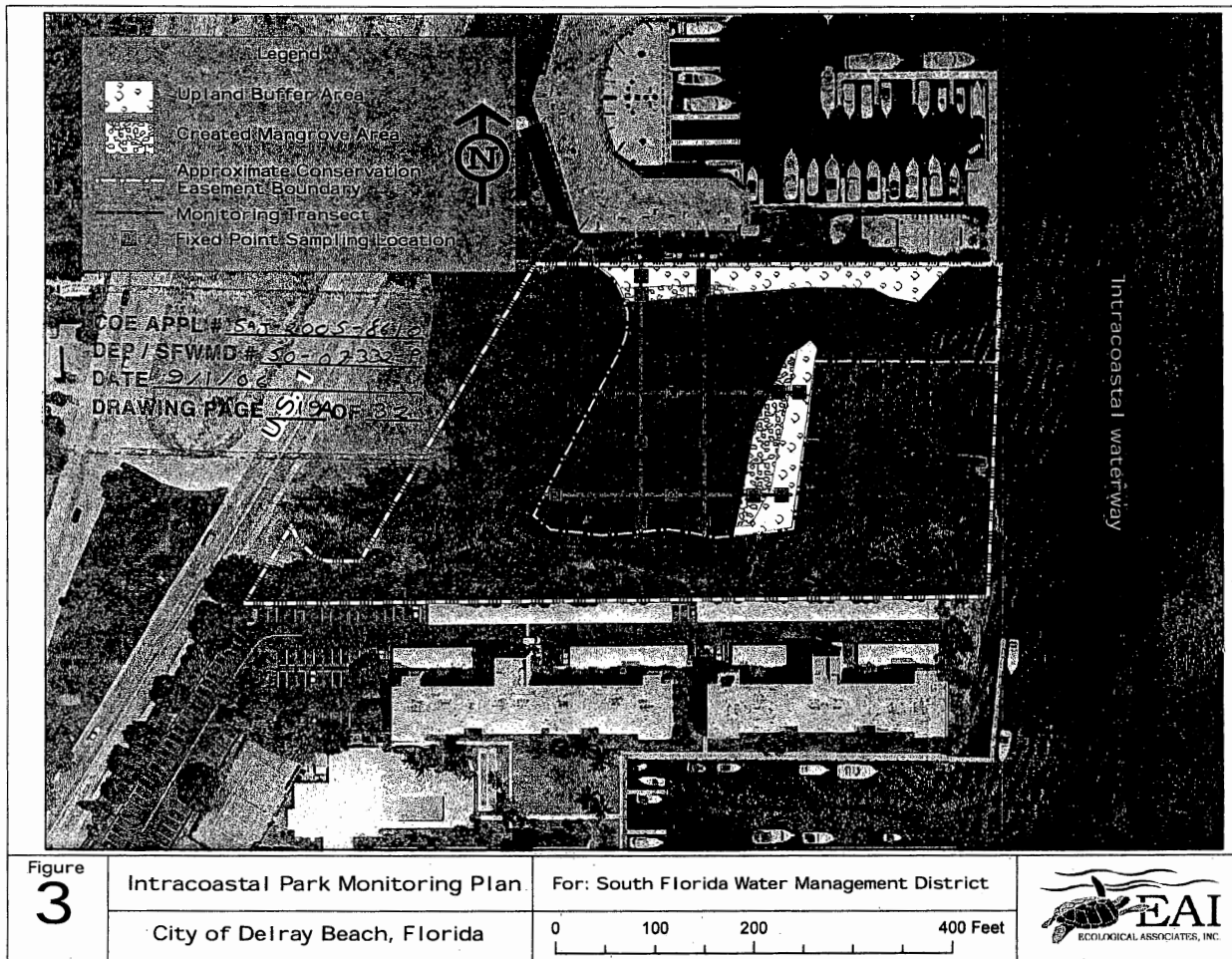
DATE 9/1/06

DRAWING PAGE 10 OF 32



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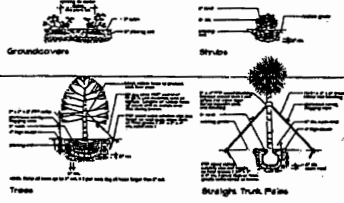
DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 22 OF 43



DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 24 OF 43

COE APPL # SAS-2005-8610
 DEP / SFWMD # 50-07332-P
 DATE 9/1/06
 DRAWING PAGE 21 OF 32

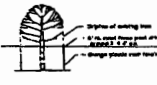
PLANTING DETAILS



CODE COMPLIANCE DATA

Item	Description	Code Reference	Compliance
1
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EXISTING TREE PROTECTION BARRIER DETAIL



NOTE
 REMOVE ALL
 SMALLER PLANTING
 REMOVAL ALTHOUGH
 AUSTRALIAN FIRE
 RISK FOR VERTICALLY
 LANDSCAPE ARCHITECT

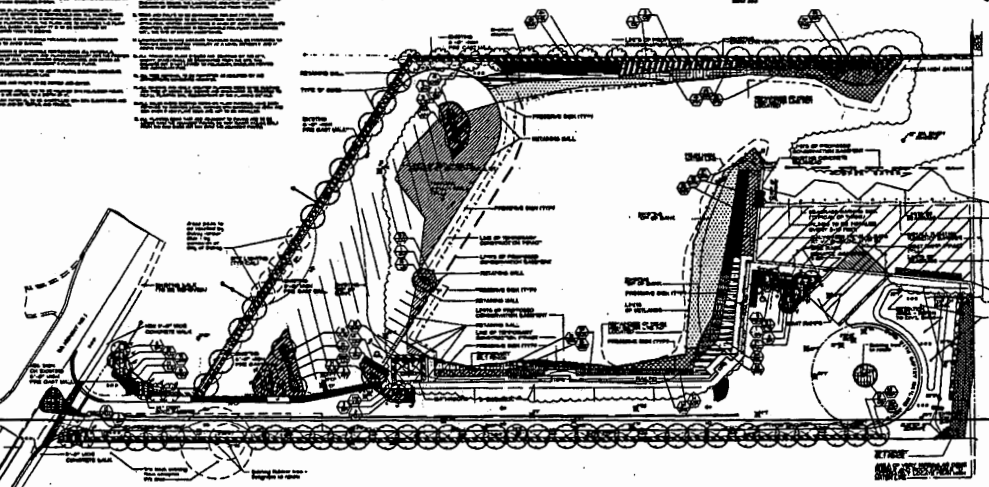
PLANTING NOTES

1. All plants to be installed in groups.
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50. All plants to be installed in groups.

LEGEND



EXHIBIT B.2



INTRACOAST PART (find site)

planting plan

DATE: 9/1/06

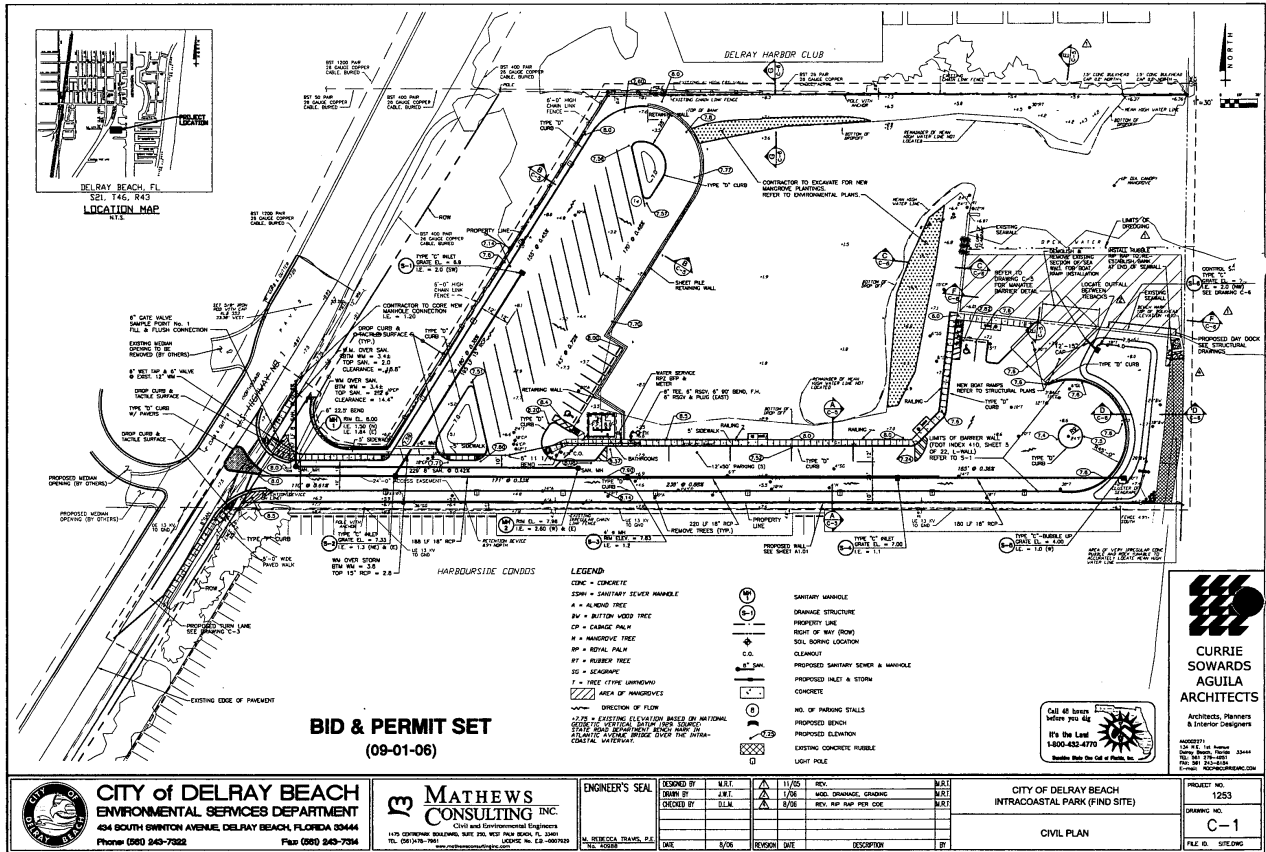
SCALE: 1" = 10'

PROJECT: [illegible]

CLIENT: [illegible]

DESIGNER: [illegible]

APPRECIATION TO ARCHITECT



BID & PERMIT SET
(09-01-06)

**CURRIE
SOWARDS
AGUILERA
ARCHITECTS**
Architects, Planners
& Interior Designers
ADDRESS: 134 W. 14th Avenue, Suite 2000
Delray Beach, FL 33481
Phone: 561-271-9911
Fax: 561-271-9912
www.curriesowards.com

Call 48 hours
before 7:00 AM
It's the Last
1-800-433-4775
Be sure to call us first, too!



CITY OF DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
404 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7822 Fax: (561) 243-7934

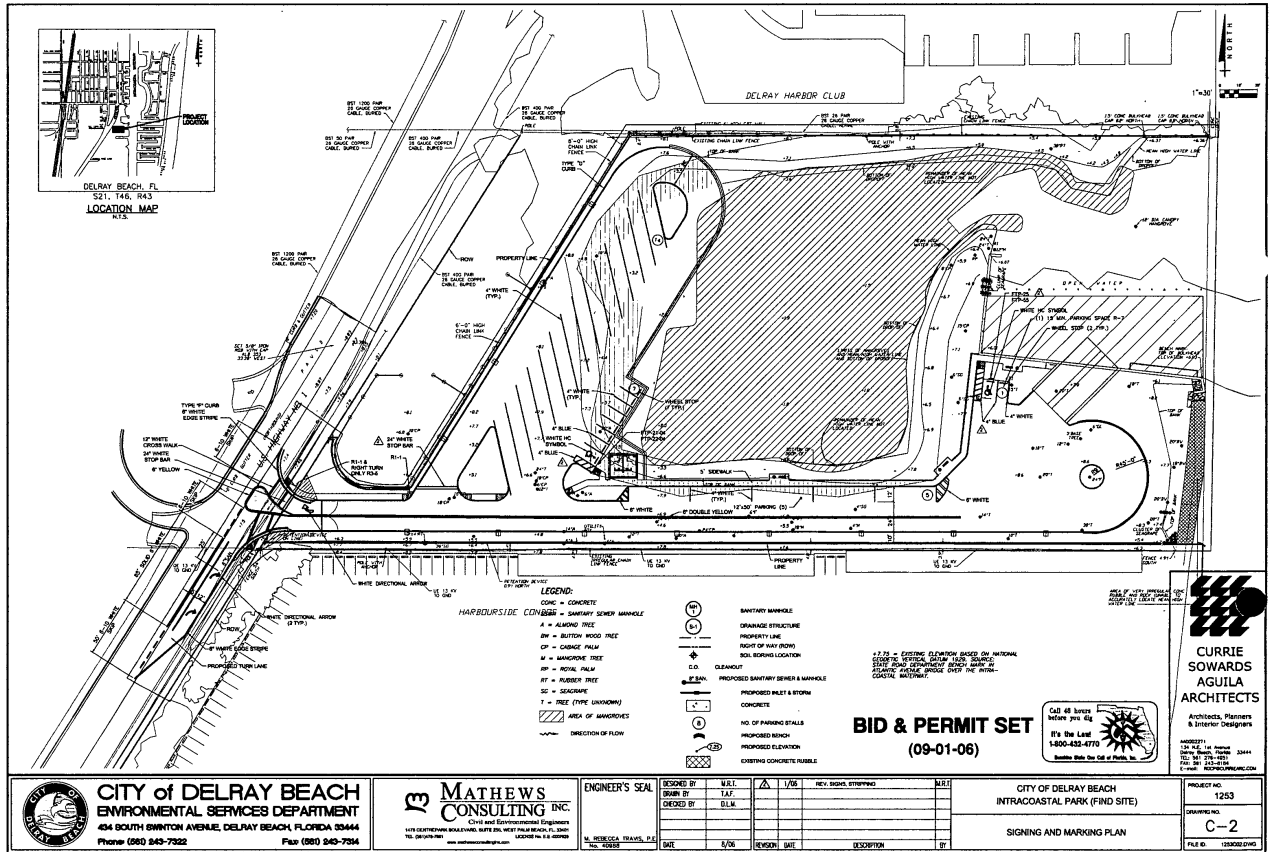
MATHEWS CONSULTING INC.
Civil and Environmental Engineers
1175 GARDNER SQUARE, SUITE 200 WEST PALM BEACH, FL 33411
TEL: (561) 748-7811 FAX: (561) 748-7812
www.mathewsconsulting.com

ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
TEL: 708-888-8888

DESIGNED BY	W.S.T.	11/05	REV.	11/05	NO. OF PAGES	1
DRAWN BY	J.R.T.	1/06	MOD. DRAINAGE, GRADING	1/06		
CHECKED BY	D.L.M.	8/06	REV. RFP RFP PER CODE	8/06		
DATE	8/06	REVISION	DATE	DESCRIPTION	BY	

CITY OF DELRAY BEACH
INTRACOASTAL PARK (PIND SITE)
CIVIL PLAN

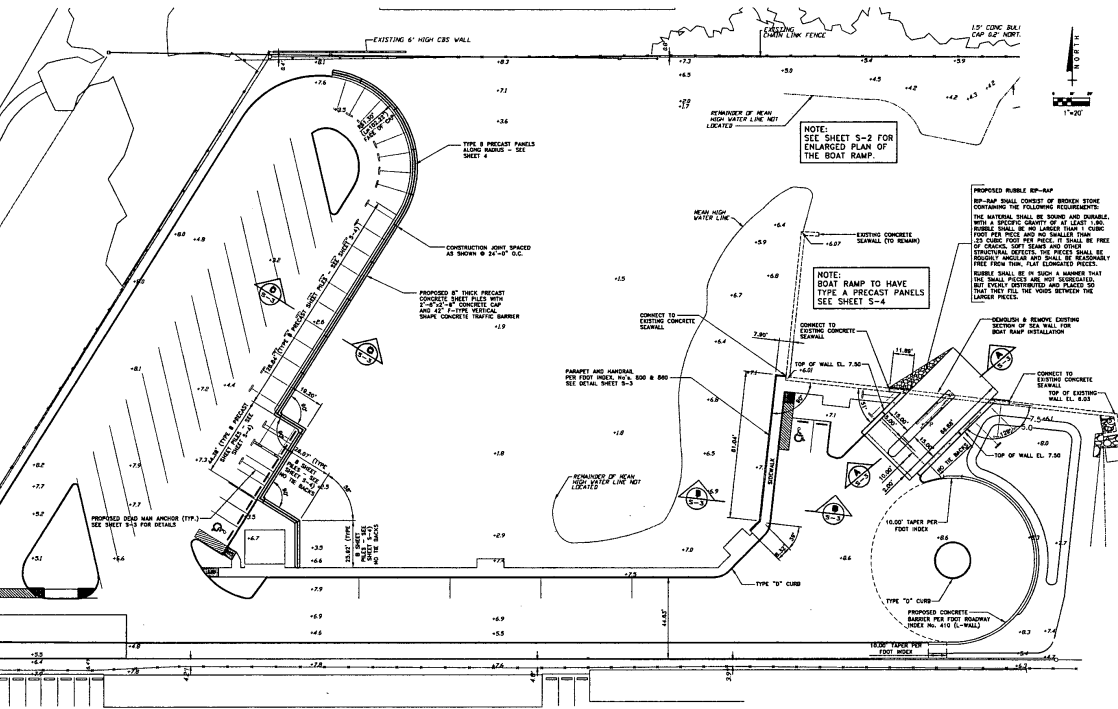
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DRAWING NO. C-1
FILE NO. SIFL06



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DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 28 OF 43

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CURRIE SOWARDS AGUILA ARCHITECTS
 ARCHITECTS, PLANNERS & INTERIOR DESIGNERS

ADDRESS:
 1311 N.W. 14th Street, Suite 1000
 Fort Lauderdale, FL 33304
 Tel: (954) 561-1414
 Fax: (954) 561-1415
 E-mail: info@curriesowards.com

MARK L. GERWIG, P.E., PRINCIPAL
 PROJECT NO. 11
INTRACOASTAL PARK (FIND SITE)

U.S. HIGHWAY #1 DELRAY BEACH, FL.
 CLIENT: UNKNOWN
 REGION: UNKNOWN

FILE NUMBER: 108-01-000
 DRAWING TITLE: **OVERALL SEAWALL STRUCTURAL GEOMETRY PLAN**
 DATE: 8/10/06
 DRAWN BY: DSP
 CHECKED BY: DSP
 PROJECT NUMBER: 021002
S-1



Alan Gerwig & Associates, Inc.
 1000 N. UNIVERSITY BLVD., SUITE 200
 DELRAY BEACH, FL 33483
 TEL: (561) 768-0000
 FAX: (561) 768-0000
 Civil and Structural Engineers

STRUCTURAL SPECIFICATIONS

MISCELLANEOUS

1. THE STRUCTURAL SYSTEM IS INDICATED UNTIL ALL CONNECTIONS HAVE BEEN MADE AS SHOWN IN THE STRUCTURAL DRAWINGS.
2. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION TO BE USED TO CONSTRUCT THE STRUCTURAL SYSTEM AS SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS AND SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS AND SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS.
3. CONTRACTOR TO VERIFY MEANS AND METHODS OF CONSTRUCTION AS REQUIRED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF THE WORK BEING CONSTRUCTED.
4. APPLICABLE BUILDING CODE: 2004 FLORIDA BUILDING CODE WITH 2005 REVISIONS.
5. CONCRETE DESIGN:
 - CONCRETE STRENGTH: 4000 PSI (30 MPa)
 - MINIMUM COVER: 2"
6. ALL MEANS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REFERENCED BUILDING CODE.
7. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
9. CONTRACTOR SHALL VERIFY THE STRUCTURE SHALL BE AS REVIEWED AND APPROVED BY MEANS OF THE EXISTING FROM TO COMMENCE WORK ON THIS PROJECT.
10. CONTRACTOR SHALL NOTIFY THE OFFICE WHEN THE STRUCTURAL SYSTEM IS COMPLETELY CONSTRUCTED.

SEISMIC INVESTIGATION

1. A SEISMIC INVESTIGATION SHALL BE COMPLETED AT THE SITE BY A LICENSED ENGINEER, CONSULTED PRIOR TO BEGINNING CONSTRUCTION.
2. A SEISMIC AND SOILS REPORT SHALL BE SUBMITTED TO ACCURATELY AND ACCORDING TO THE SEISMIC DESIGN PROCEDURE AND THE COUNTY RECOMMENDATIONS.

STEEL PILING

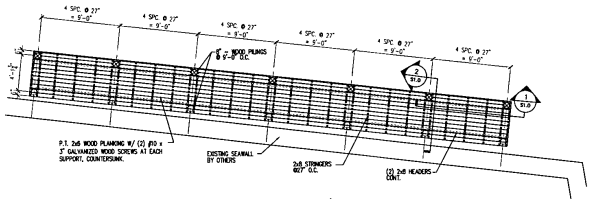
1. PILE SPACING: 10' ON CENTER
2. PILE SPACING: 10' ON CENTER
3. CONTRACTOR SHALL HAVE AT LEAST FIVE (5) YEARS EXPERIENCE IN INSTALLING STEEL PILES.
4. CONTRACTOR SHALL HAVE AT LEAST FIVE (5) YEARS EXPERIENCE IN INSTALLING STEEL PILES.
5. ALL STEEL PILES SHALL BE TREATED PER A.P.A. SPECIFICATION C1 AND C2 TO A MINIMUM OF 12 MILS. RESIDUE OR OTHERWISE THE SURFACE SHALL BE COATED WITH AN APPROVED ANTI-RUST TREATMENT WITH A MINIMUM OF 12 MILS. RESIDUE.
6. DOCUMENT ALL MEANS AND METHODS OF CONSTRUCTION AS REQUIRED FROM TO BEINGING THE STRUCTURE. MEANS AND METHODS SHALL BE AS SHOWN AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
7. ALL PILES SHALL BE DRIVEN WITH CARE THAT SHALL BE THE PILE SHALL BE KEPT PLUMB AND PERPENDICULAR TO THE HORIZONTAL. THE SURFACE OF THE PILE SHALL BE KEPT PLUMB AND PERPENDICULAR TO THE HORIZONTAL. THE SURFACE OF THE PILE SHALL BE KEPT PLUMB AND PERPENDICULAR TO THE HORIZONTAL.
8. PILES AND PILE INSTALLATION SHALL CONFORM TO:
 - (A) "STEEL PILING" SPECIFICATION FOR STEEL PILES, AISC 360
 - (B) "STEEL PILING" SPECIFICATION FOR STEEL PILES, AISC 360
 - (C) "STEEL PILING" SPECIFICATION FOR STEEL PILES, AISC 360
9. PILES SHALL BE DRIVEN TO THE REQUIRED BLOW COUNT AS DETERMINED BY THE "STEEL PILING" SPECIFICATION FOR STEEL PILES, AISC 360, OR OTHERWISE CONSULT WITH YOUR APPROVED GEOTECHNICAL ENGINEER.
10. THE INSTALLATION OF ALL PILES SHALL BE MONITORED AND RECORDED BY A QUALIFIED STEEL LABORER. SOME MEASUREMENTS SHOULD BE TAKEN AT THE END OF THE PILE DRIVING OPERATION. MEASUREMENTS SHOULD BE TAKEN AT THE END OF THE PILE DRIVING OPERATION. MEASUREMENTS SHOULD BE TAKEN AT THE END OF THE PILE DRIVING OPERATION.

CONCRETE

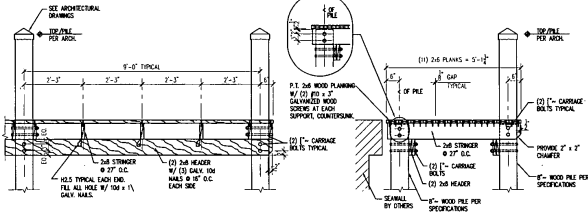
1. PRECASTED LAMINAR SHALL BE PRECASTED AND DELIVERED TO THE SITE WITH THE BRAND STAMP OF THE MANUFACTURER'S ASSOCIATION.
2. ALL LAMINAR SHALL BE STORED, SHIPPED, AND DELIVERED TO THE SITE WITH THE BRAND STAMP OF THE MANUFACTURER'S ASSOCIATION.
3. ALL LAMINAR SHALL BE PRECASTED AND DELIVERED TO THE SITE WITH THE BRAND STAMP OF THE MANUFACTURER'S ASSOCIATION.
4. ALL LAMINAR IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER SHALL BE PRECASTED AND DELIVERED TO THE SITE WITH THE BRAND STAMP OF THE MANUFACTURER'S ASSOCIATION.
5. PRECASTED LAMINAR SHALL CONFORM WITH A.P.A. C1 AND C2 FOR LAMINAR AND SHALL BE AS SHOWN IN THE DRAWINGS. ALL PRECASTED LAMINAR SHALL BE AS SHOWN IN THE DRAWINGS.
6. LAMINAR CONNECTIONS FOR METAL CONNECTIONS AND FASTENERS:
 - (A) EXTERIOR - GALVANIZED STEEL (PER AISC 360)
 - (B) EXTERIOR INTERIOR - GALVANIZED STEEL (PER AISC 360)
7. REBAR SHALL BE PRECASTED WITH YELLOW PAINT (E) OR OTHER PRACTICAL METHOD OF IDENTIFICATION. ALL REBAR SHALL BE AS SHOWN IN THE DRAWINGS.
8. SEE DETAIL FOR REBAR REQUIREMENTS.
9. SEE DETAIL FOR REBAR REQUIREMENTS.

TRUSS WOOD-POLYMER COMPOSITE LUMBER BACKING (ALTERNATE BACKING)

1. MANUFACTURER: TRUSS COMPANY, INC. WWW.TRUSSCO.COM, PHONE NUMBER 360-340-1111
2. TRUSS IS A MANUFACTURED COMPOSITE MATERIAL THAT CONSISTS OF APPROXIMATELY 100% WOOD FIBERS AND OTHER CELLULOSE FIBERS IN CONTACT WITH THE REINFORCING OF THE POLYMER. TRUSS IS A MANUFACTURED COMPOSITE MATERIAL THAT CONSISTS OF APPROXIMATELY 100% WOOD FIBERS AND OTHER CELLULOSE FIBERS IN CONTACT WITH THE REINFORCING OF THE POLYMER.
3. TRUSS SHALL BE IDENTIFIED BY A STAMP OR NON-REMOVABLE LABEL, SPACED AT REGULAR INTERVALS ALONG EACH TRUSS. THE FOLLOWING INFORMATION:
 - (A) ECC-CI LABEL NUMBER ECC-CI 900-000
 - (B) MANUFACTURER NAME OR TRADEMARK AND PRODUCT DESCRIPTION
 - (C) NAME OF THE QUALITY CONTROL AGENCY (P3 CORPORATION (AEC-Q9001)) OR OTHER TRADEMARK
 - (D) DATE OF MANUFACTURE
4. THE DESIGN AND INSTALLATION OF TRUSS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS FOR WORK CONNECTIONS.
5. TRUSS USED AS BEAMS SHALL BE IDENTIFIED AND MARKED TO AVOID BEING DETECTED UNDER THIS DESIGN LOAD TO LESS THAN OR EQUAL TO 1.0X.
6. TRUSS BEAMS SHALL BE CAPABLE TO RESIST APPLICABLE LOADS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. THE MINIMUM HEIGHT OF THE COMPOSITE ASSEMBLY SHALL BE 43 INCHES FROM THE DECK SURFACE. THE MINIMUM SPACING BETWEEN THE TRUSS SHALL BE THREE (3) INCHES. COORDINATE WITH ARCHITECTURAL DRAWINGS.

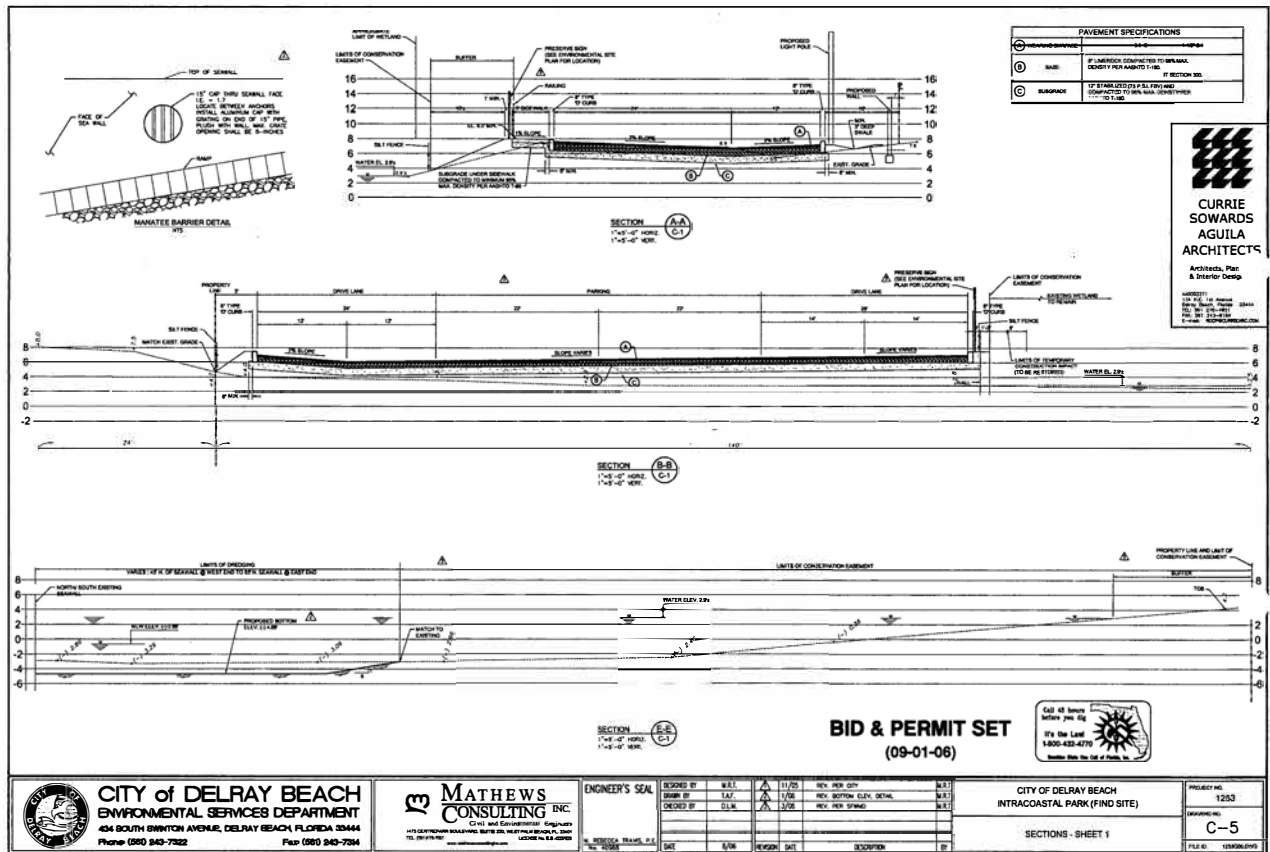


DOCK LAYOUT
SCALE: 1" = 1'-0"



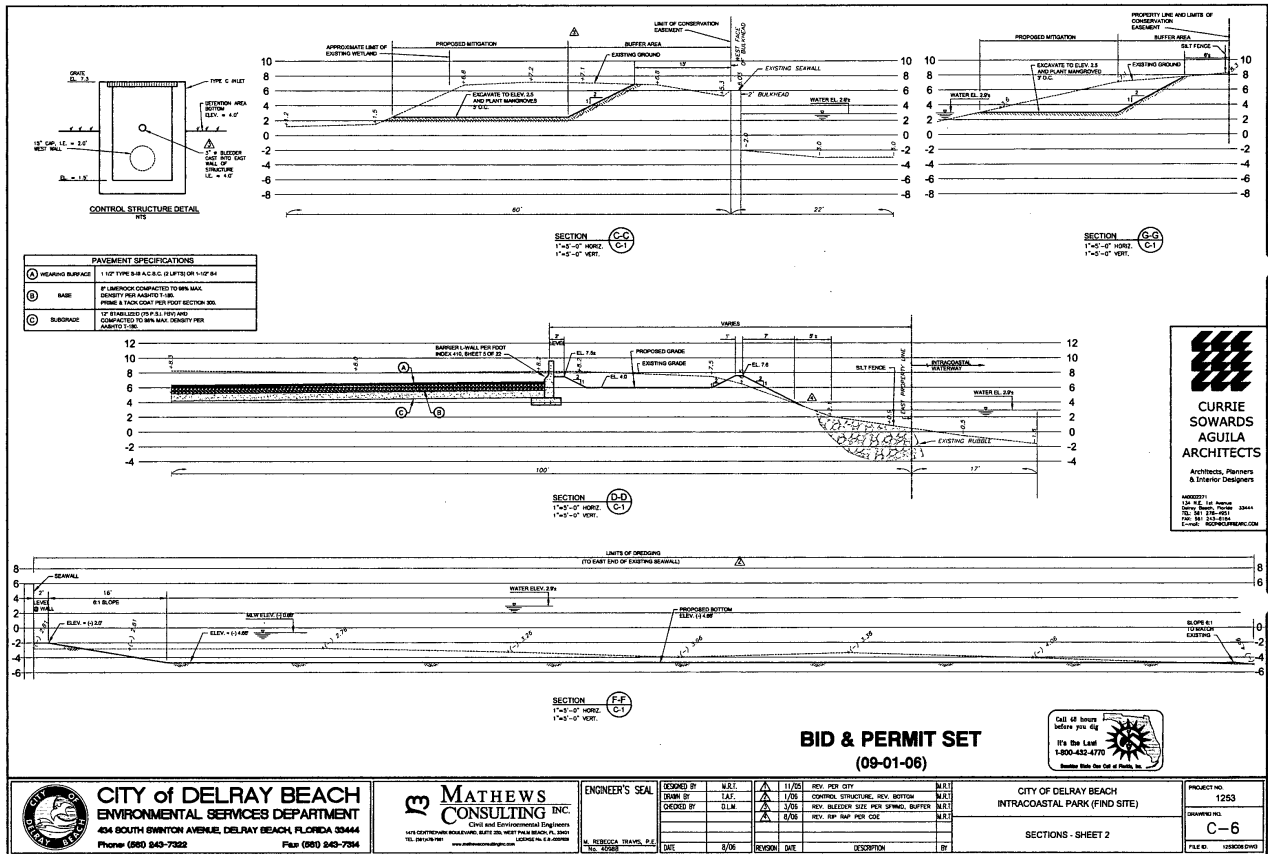
SECTION 1
SCALE: 1" = 1'-0"

SECTION 2
SCALE: 1" = 1'-0"



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DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 31 OF 43



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DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 32 OF 43

GENERAL SPECIFICATIONS

1. ALL SIGNS SHALL BE MADE OF ALUMINUM OR ALUMINUM COATED STEEL.
2. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.
3. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.
4. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.

STREET SIGN DETAIL RT 2.1a

GENERAL SPECIFICATIONS

1. ALL SIGNS SHALL BE MADE OF ALUMINUM OR ALUMINUM COATED STEEL.
2. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.
3. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.
4. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.

STREET SIGNS DETAIL RT 2.1b

NOTES

1. ALL SIGNS SHALL BE MADE OF ALUMINUM OR ALUMINUM COATED STEEL.
2. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.
3. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.
4. ALL SIGNS SHALL BE MADE OF 1/4" THICK ALUMINUM OR ALUMINUM COATED STEEL.

INTERSECTION TRAFFIC CONTROL STOP CONDITION DETAIL RT 3.2

STANDARD CROSSWALK

CROSSWALK DETAILS RT 3.3

TYPICAL PARKING SPACES DETAIL RT 4.2

SIDEWALK CONSTRUCTION DETAIL RT 5.1

CONCRETE CURB AND GUTTER SECTIONS RT 6.1

PAVEMENT MARKING SPECIFICATIONS

PERMANENT MARKINGS

- All markings shall be installed by the contractor.
- Markings shall be made of reflective, white, glass, and other reflective beads.
- Markings shall be made of reflective, white, glass, and other reflective beads.

ALL PAVEMENT MARKINGS

RAISED PAVEMENT MARKERS

- R.P.M.'s shall be installed on all lane lines and centerlines.
- R.P.M.'s shall be 4" x 4" x 1/2" high.
- R.P.M.'s shall be made of reflective, white, glass, and other reflective beads.

OTHER NOTES

- All markings shall be installed by the contractor.
- Markings shall be made of reflective, white, glass, and other reflective beads.

PAVEMENT MARKING SPECIFICATIONS DETAIL RT 6.1a

CONCRETE CURB AND GUTTER SECTIONS RT 6.1

CURB RAMP DETECTABLE SURFACE

CITY OF DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 249-7322 Fax: (561) 249-7344

MATHEWS CONSULTING INC.
Civil and Environmental Engineers
1414 CANTONMENT AVENUE, SUITE 100, WEST PALM BEACH, FL 33411
TEL: 561-838-7800 www.mathewsconsulting.com LICENSE NO. E.C. 36389

ENGINEER'S SEAL

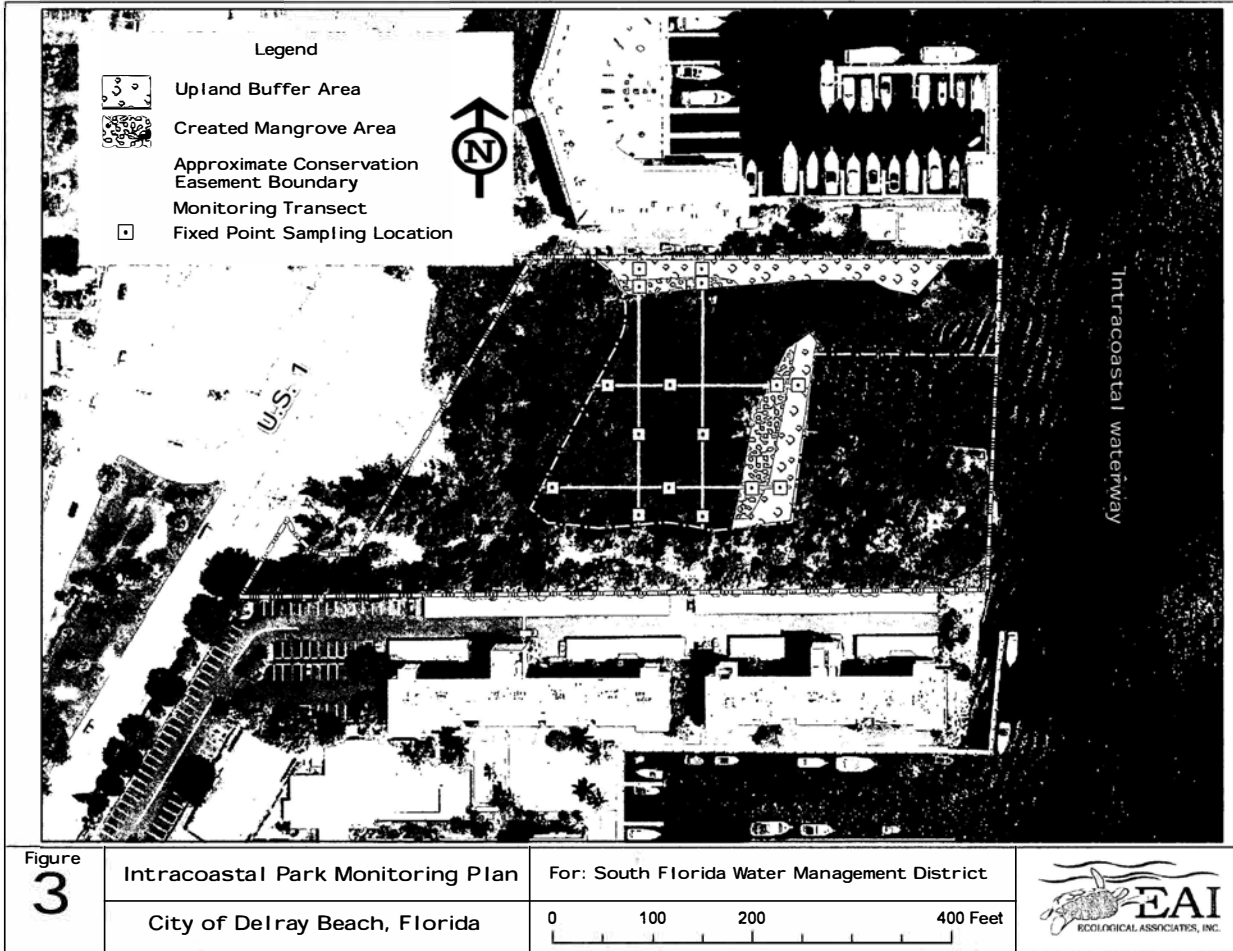
DESIGNED BY	WLT				
CHECKED BY	JAJ				
DRAWN BY	DLM				
DATE	6/06	REVISION	DATE	DESCRIPTION	BY

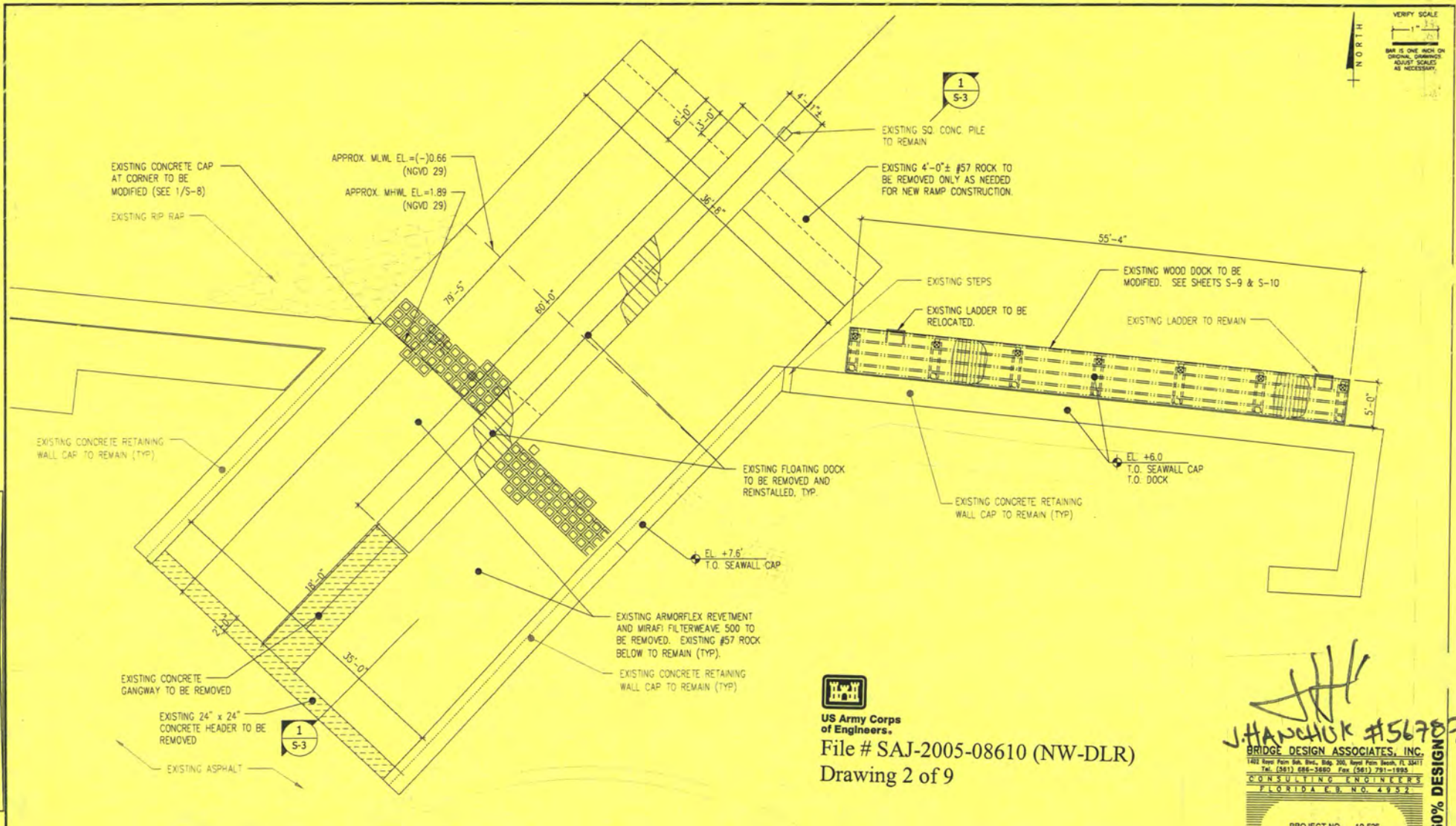
CITY OF DELRAY BEACH
INTRACOASTAL PARK (PIND SITE)

STANDARD DETAILS - SHEET 5

PROJECT NO: 1253
DRAWING NO: C-11
FILE NO: US311106

City of Delray Beach
It's the Best
1-800-432-4770
Burlingame, Florida, Inc.





US Army Corps of Engineers.

File # SAJ-2005-08610 (NW-DLR)

Drawing 2 of 9

J. HANCOCK #156787

BRIDGE DESIGN ASSOCIATES, INC.
1482 New Palm Bch. Blvd., Suite 200, West Palm Beach, FL 33411
Tel. (561) 686-5880 Fax (561) 791-1995
CONSULTING ENGINEERS
FLORIDA REG. NO. 4932

PROJECT NO. 10-525

60% DESIGN

CITY OF DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
CIVIL ENGINEERS
47 S. Highway Avenue, Suite 205, West Palm Beach, Florida 33411
Phone: (561) 844-7112 Fax: (561) 844-7119
www.matthewsconsulting.com

ENGINEER'S SEAL
FOR THE CITY OF DELRAY BEACH

DESIGNED BY	J.C.H.				
DRAWN BY	C.A.				
CHECKED BY	J.C.H.				
DATE	JUNE, 2010	REVISION	DATE	DESCRIPTION	BY

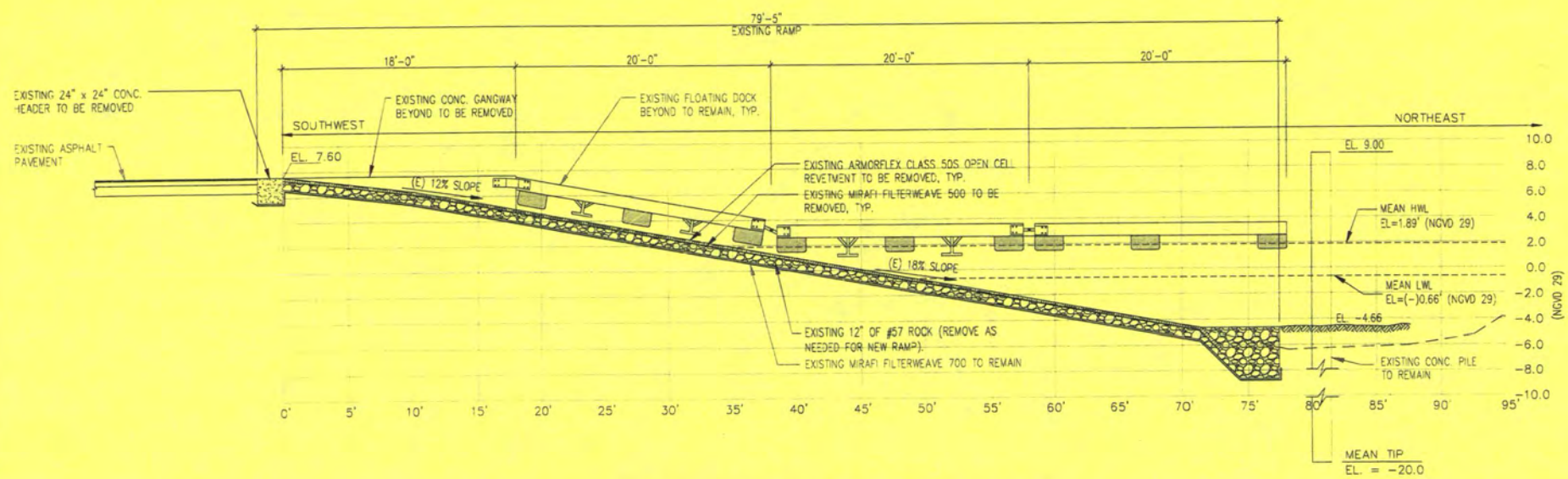
CITY OF DELRAY BEACH
MANGROVE BOAT RAMP MODIFICATIONS
EXISTING/DEMOLITION PLAN

PROJECT NO.	10-106
DRAWING NO.	S-1
FILE ID	

AUG 1 1 2010

DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 36 OF 43

VERIFY SCALE
 1" = 10'-0"
 BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.



1 EXISTING/DEMOLITION RAMP SECTION
 S-3 Scale: 1/4"=1'-0"



US Army Corps of Engineers
 File # SAJ-2005-08610 (NW-DLR)
 Drawing 3 of 9

J. HANCHUK #56787
 BRIDGE DESIGN ASSOCIATES, INC.
 1482 West Palm Beach Blvd., Suite 200, West Palm Beach, FL 33411
 Tel: (561) 686-3680 Fax: (561) 791-1995
 CONSULTING ENGINEERS
 FLORIDA E.C. NO. 4852
 PROJECT NO. 10-525
 60% DESIGN



CITY of DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
 Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
 CIVIL ENGINEERS
 477 S. Pineview Avenue, Suite 200, West Palm Beach, Florida 33409
 Phone: (561) 824-6100 Fax: (561) 824-6100
 www.matthewsconsulting.com

ENGINEER'S SEAL
 FOR THE CITY OF DELRAY BEACH

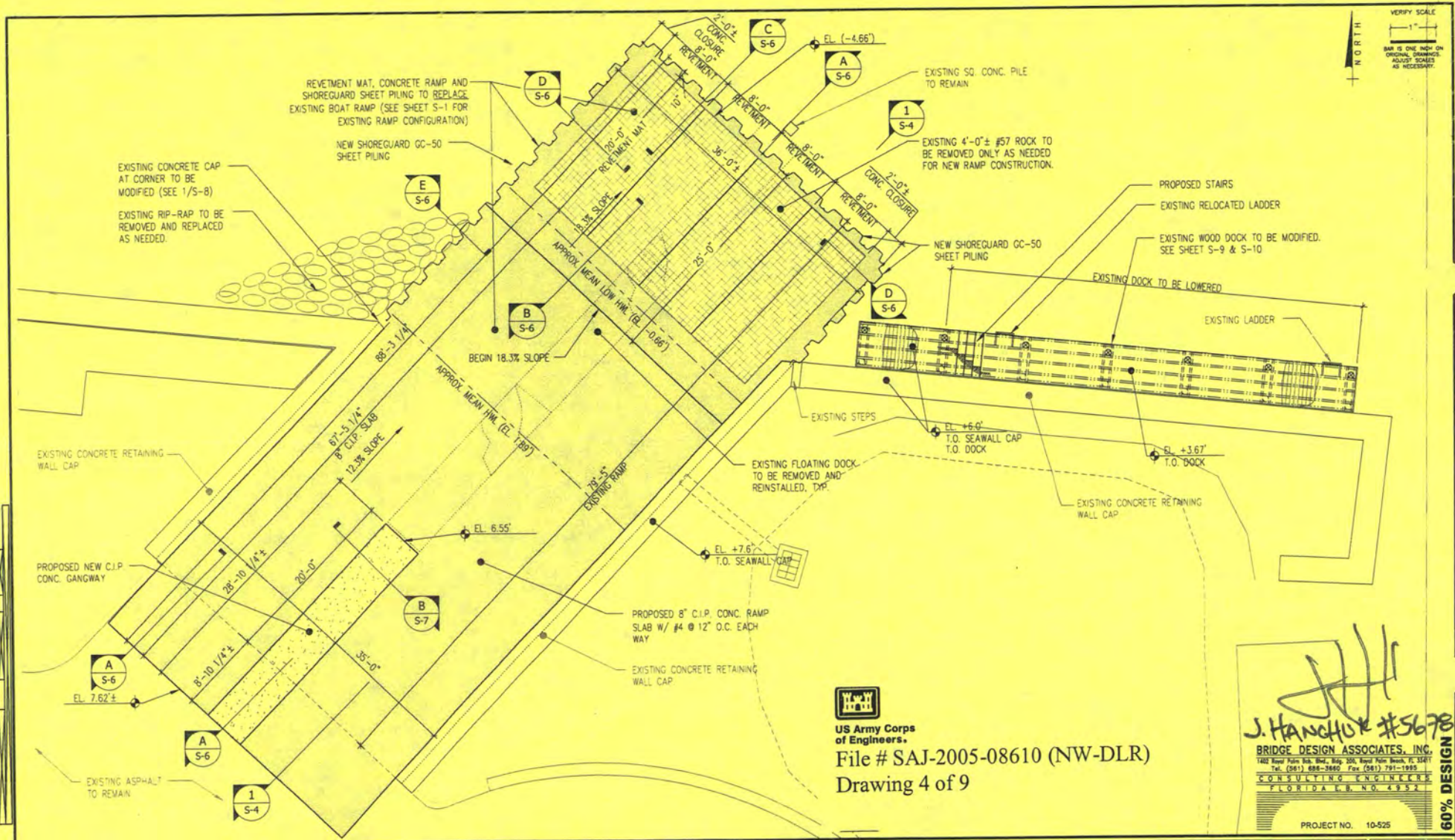
DESIGNED BY	J.C.H.				
DRAWN BY	C.A.				
CHECKED BY	J.C.H.				
DATE	JUNE, 2010	REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
 MANGROVE BOAT RAMP
 MODIFICATIONS
 RAMP SECTIONS - DEMOLITION

PROJECT NO. 10-106
 DRAWING NO. S-2
 FILE NO.

AUG 11 2010

DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 37 OF 43



NORTH
 VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL, DIMENSIONS ADJUST SCALES AS NECESSARY



US Army Corps of Engineers
 File # SAJ-2005-08610 (NW-DLR)
 Drawing 4 of 9

J. HANCHUK #56787
 BRIDGE DESIGN ASSOCIATES, INC.
 1400 Kemp Mill Road, Suite 200, Sugar Land, Texas, U.S.A.
 Tel. (281) 686-3660 Fax (281) 791-1995
 CONSULTING ENGINEERS
 FLORIDA REG. NO. 4952
 PROJECT NO. 10-525
 60% DESIGN

CITY of DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
 Phone (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
 CIVIL ENGINEERS
 477 S. Rosemary Avenue, Suite 200, Palm Beach, Florida 33481
 Phone (561) 844-1111 & Fax (561) 844-1110
 www.mathewsconsulting.com

ENGINEER'S SEAL
 FOR THE CITY OF DELRAY BEACH

DESIGNED BY	J.C.H.				
DRAWN BY	C.A.				
CHECKED BY	J.C.H.				
DATE	JUNE, 2010	REVISION	DATE	DESCRIPTION	BY

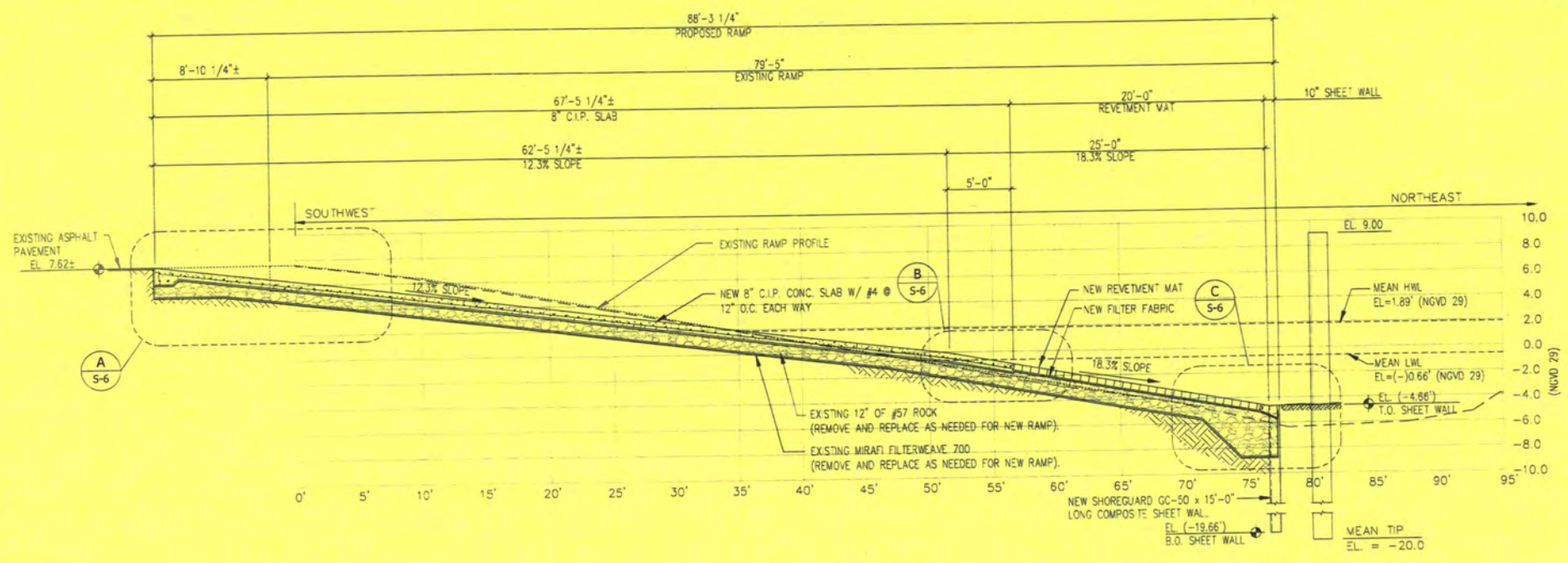
CITY OF DELRAY BEACH
 MANGROVE BOAT RAMP
 MODIFICATIONS
 PROPOSED RAMP PLAN

PROJECT NO. 10-106
 DRAWING NO. S-3
 FILE ID.

AUG 11 2010

DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 38 OF 43

VERIFY SCALE
 1" = 10'-0"
 THIS IS ONE INCH ON
 ORIGINAL DRAWINGS.
 ALWAYS SCALE
 AS NECESSARY.



1 PROPOSED RAMP SECTION
 S-4 Scale: 1/4"=1'-0"



US Army Corps
 of Engineers
 File # SAJ-2005-08610 (NW-DLR)
 Drawing 5 of 9

J. HANCOCK #56787
 BRIDGE DESIGN ASSOCIATES, INC.
 1402 Royal Palm Blvd., Suite 300, Royal Palm Beach, FL 33411
 Tel. (561) 888-3880 Fax (561) 791-1999
 CONSULTING ENGINEERS
 FLORIDA C.E. NO. 4892
 PROJECT NO. 10-625
60% DESIGN



CITY of DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
 Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
 CIVIL ENGINEERS
 277 S. Rowley Avenue, Suite 200, West Palm Beach, Florida 33411
 Phone: (561) 858-6171 Fax: (561) 858-6171
 www.mathewsconsulting.com

ENGINEER'S SEAL
 FOR THE
 CITY OF DELRAY BEACH

DESIGNED BY	J.C.H.				
DRAWN BY	C.A.				
CHECKED BY	J.C.H.				
DATE	JUNE, 2010	REVISION	DATE	DESCRIPTION	BY

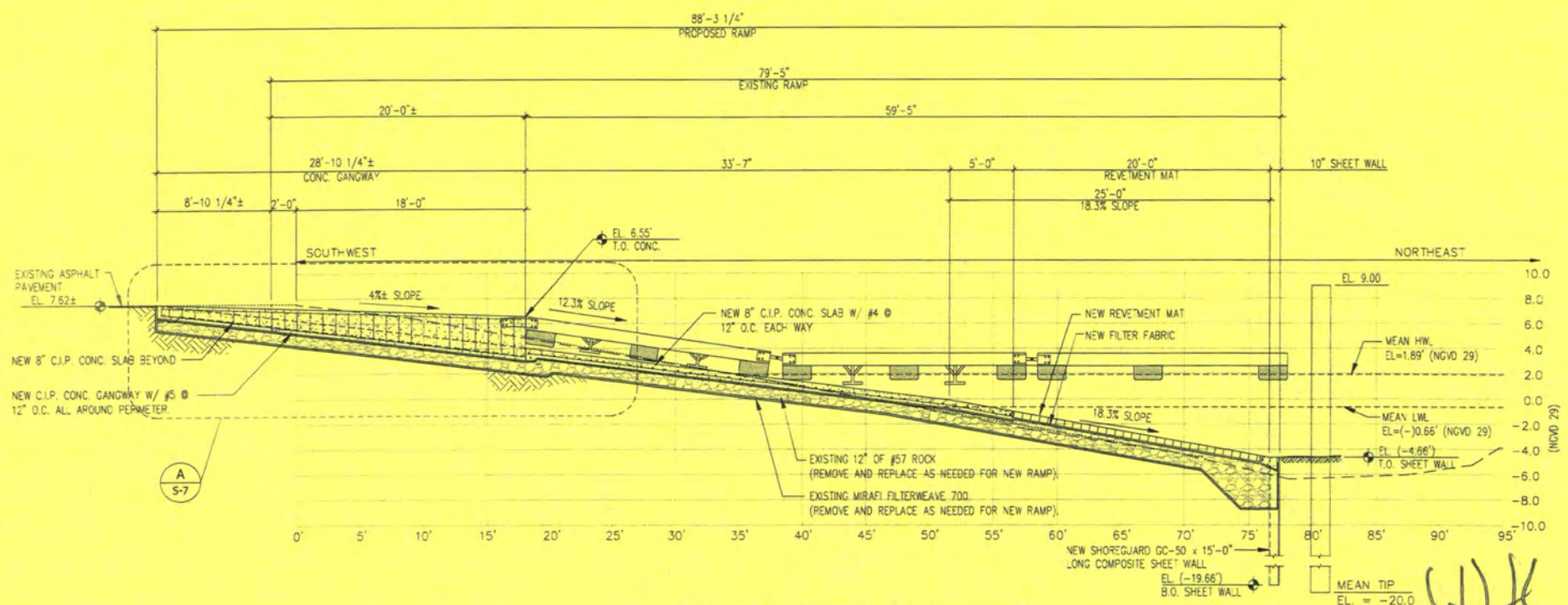
CITY OF DELRAY BEACH
 MANGROVE BOAT RAMP
 MODIFICATIONS
 PROPOSED RAMP SECTIONS - SHEET 1

PROJECT NO.
 10-106
 DRAWING NO.
 S-4
 FILE NO.

DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 39 OF 43

VERIFY SCALE

 BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.



2 PROPOSED RAMP SECTION
 S-5 Scale: 1/4"=1'-0"



US Army Corps of Engineers

File # SAJ-2005-08610 (NW-DLR)
 Drawing 6 of 9

J. Hanchuk #56787
BRIDGE DESIGN ASSOCIATES, INC.
 CONSULTING ENGINEER
 FLORIDA C.E. NO. 4932
 PROJECT NO. 10-525

60% DESIGN

CITY OF DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
 Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
 CIVIL ENGINEERS
 477 S. Rosemary Avenue, Suite 200, West Palm Beach, Florida 33411
 Phone: 561-854-7170 Fax: 561-854-8775

ENGINEER'S SEAL
 FOR THE CITY OF DELRAY BEACH

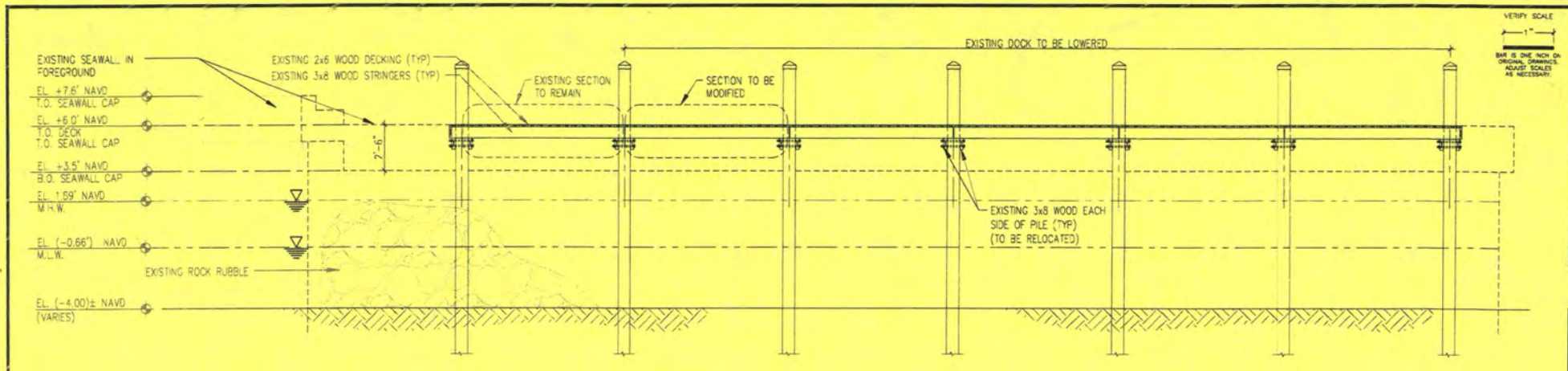
CHECKED BY	J.C.H.	DATE	REVISION	DATE	DESCRIPTION	BY
		JUNE, 2010				

CITY OF DELRAY BEACH
 MANGROVE BOAT RAMP
 MODIFICATIONS
 PROPOSED RAMP SECTIONS - SHEET 2

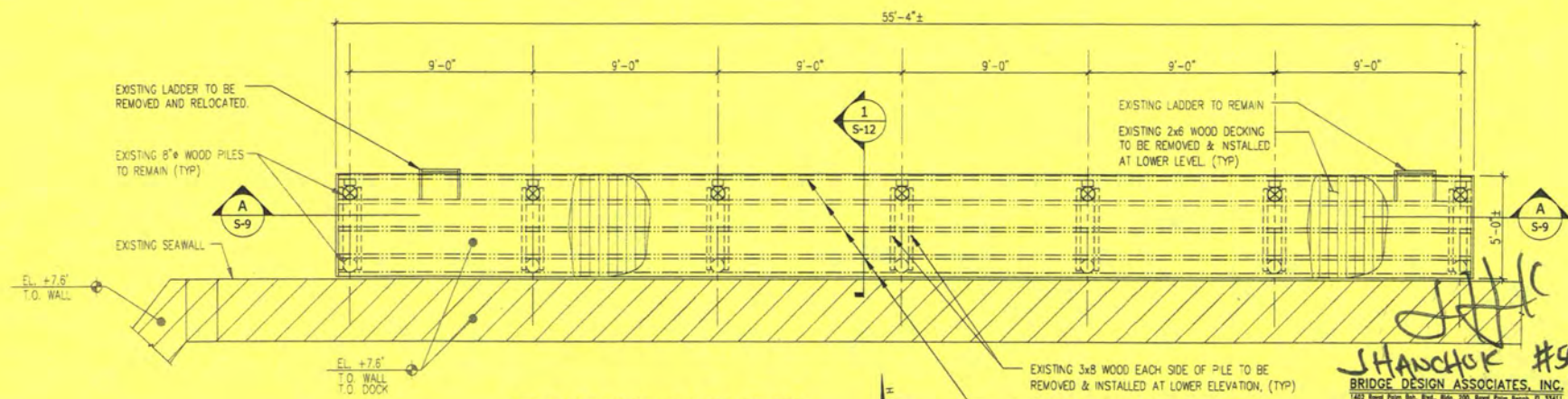
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 DRAWING NO. S-5
 FILE NO.

AUG 1 2010

DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 40 OF 43



A EXISTING DOCK SECTION
S-9 Scale: 3/8"=1'-0"



B EXISTING DOCK PLAN
S-9 Scale: 3/8"=1'-0"

J. Hancock #46787
BRIDGE DESIGN ASSOCIATES, INC.
 1402 Reed Point Blvd., Bldg. 300 Reed Point Beach, FL 33471
 Tel. (561) 886-3880 Fax (561) 791-1999
CONSULTING ENGINEER
 FLORIDA LICENSE NO. 4932
 PROJECT NO. 10-025
60% DESIGN

CITY OF DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
 Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
 CIVIL ENGINEERS
 477 S. Rosemary Avenue, Suite 200, West Palm Beach, Florida 33409
 Phone: (561) 855-6173 Fax: (561) 855-6179
 www.matthewsconsulting.com

ENGINEER'S SEAL	DESIGNED BY: J.C.H.	DATE: JUNE 20/0
	DRAWN BY: C.A.	REVISION: DATE
	CHECKED BY: J.C.H.	DESCRIPTION
		BY

CITY OF DELRAY BEACH MANGROVE BOAT RAMP MODIFICATIONS		PROJECT NO. 10-106
EXISTING DAY DOCK PLAN & SECTION - DEMOLITION		DRAWING NO. S-9
		FILE NO.

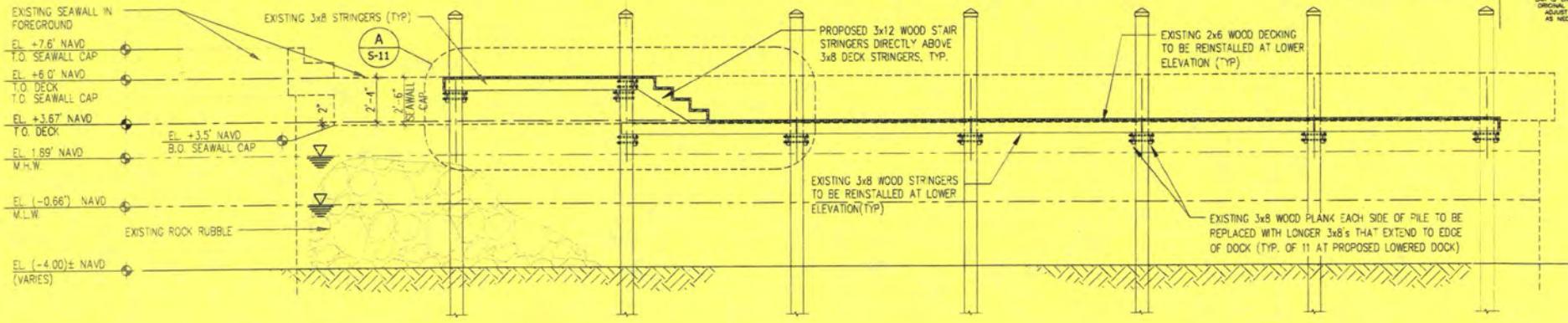
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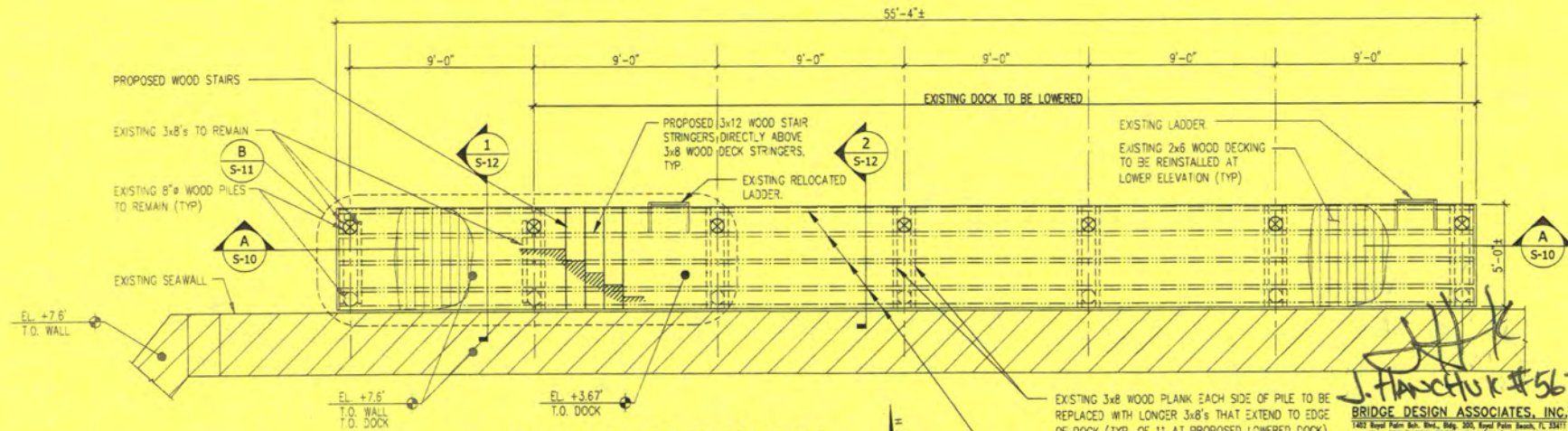
US Army Corps of Engineers.
 File # SAI-2005-08610 (NW-DLR)
 Drawing 7 of 9

DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 41 OF 43

VERIFY SCALE
1" = 1'-0"
BAR IS ONE INCH ON ORIGINAL DRAWINGS, ADJUST SCALES AS NECESSARY.



A PROPOSED DOCK SECTION
S-10 Scale: 3/8"=1'-0"



B PROPOSED DOCK PLAN
S-10 Scale: 3/8"=1'-0"

J. HANCOCK #56787
BRIDGE DESIGN ASSOCIATES, INC.
1402 Royal Palm Bch. Blvd., Bldg. 200, Royal Palm Beach, FL 33411
Tel. (561) 686-1990 Fax (561) 791-1995
CORNSULTRNG ENGRS INC
FLORIDA LICENSE NO. 4353
PROJECT NO. 10-525

60% DESIGN



CITY OF DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
CIVIL ENGINEERS
477 S. Rosemary Avenue, Suite 302, West Palm Beach, Florida 33401
Phone: 561-855-6178 Fax: 561-855-9179
www.matthewsconsulting.com

ENGINEER'S SEAL	DESIGNED BY: J.C.R.	PROJECT NO.:	10-106
	DRAWN BY: C.A.	DRAWING NO.:	S-10
	CHECKED BY: J.C.R.	FILE NO.:	
FOR THE CITY OF DELRAY BEACH	DATE: JUNE, 2010	REVISION:	DATE:
		DESCRIPTION:	BY:

CITY OF DELRAY BEACH
MANGROVE BOAT RAMP
MODIFICATIONS
PROPOSED DAY DOCK PLAN & SECTION
SHEET 1

AUG 11 2010

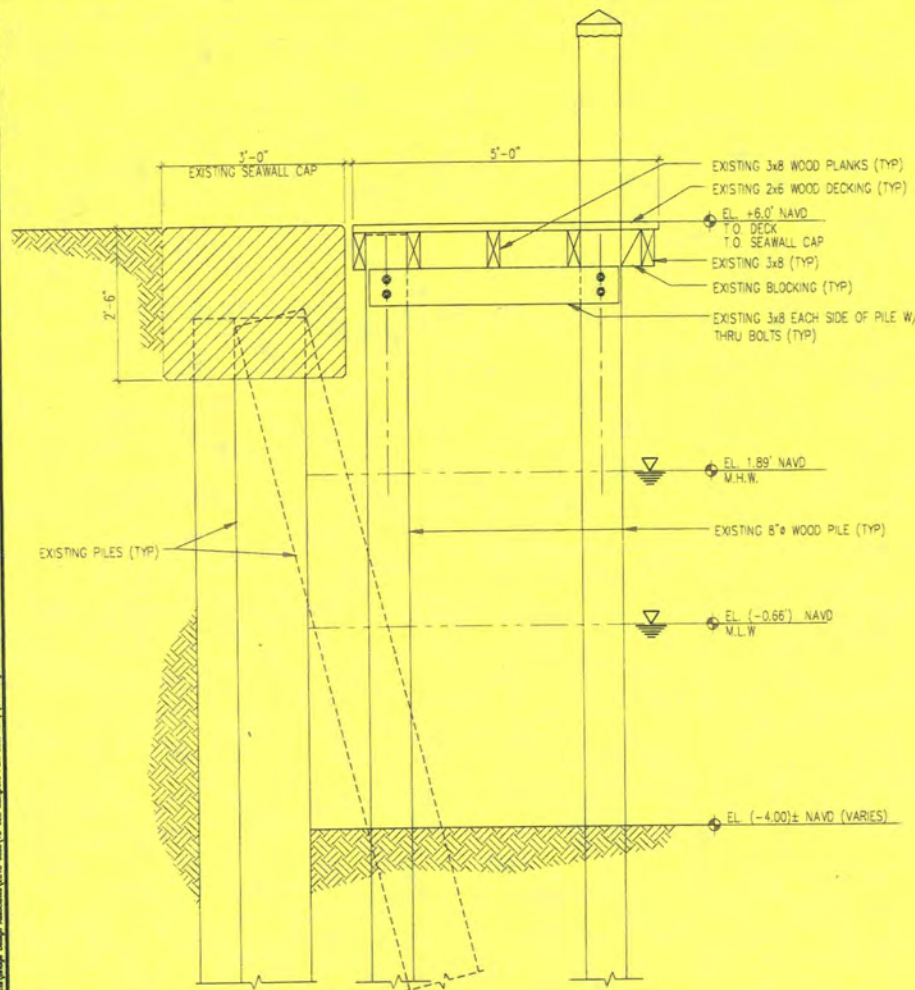


US Army Corps of Engineers.

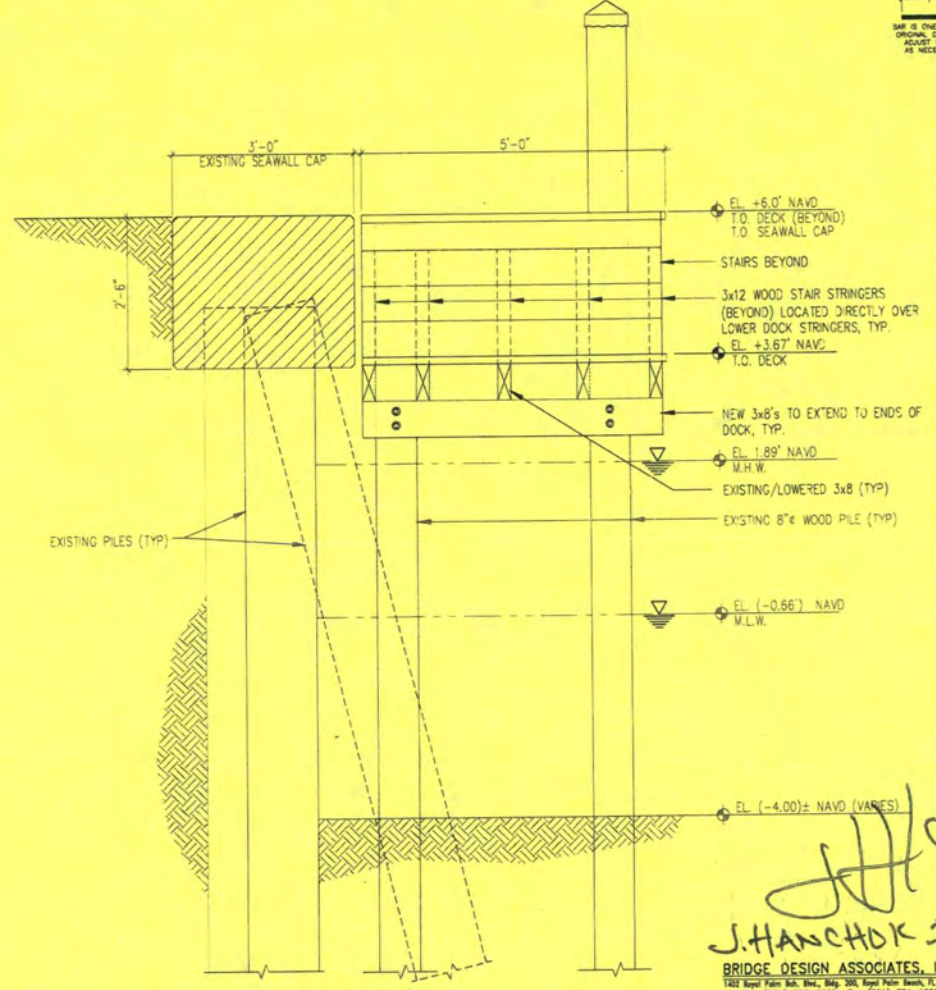
File # SAJ-2005-08610 (NW-DLR)
Drawing 8 of 9

DACW17-9-25-0131
CITY OF DELRAY BEACH
EXHIBIT "B"
PG 42 OF 43

VERIFY SCALE
 1" = 1'-0"
 BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.



1 SECTION
 S-12 Scale: 1"=1'-0"



2 SECTION
 S-12 Scale: 1"=1'-0"

J. HANCHOK #56787

BRIDGE DESIGN ASSOCIATES, INC.
 1482 Kemp Palm Bldg., Suite 300, Royal Palm Beach, FL 33411
 Tel. (561) 896-3990 Fax (561) 791-1995
CONSULTING ENGINEERS
 FLORIDA C.E. NO. 4852

PROJECT NO. 10-525

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CITY of DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
 Phone: (561) 243-7322 Fax: (561) 243-7314

MATHEWS CONSULTING
 CIVIL ENGINEERS
 477 S. Rosemary Avenue, Suite 202, West Palm Beach, Florida 33409
 Phone: (561) 834-7170 Fax: (561) 834-4770

ENGINEER'S SEAL

DESIGNED BY	J.C.H.
DRAWN BY	C.A.
CHECKED BY	J.C.H.
DATE	JUNE, 2010
REVISION	DATE
DESCRIPTION	BY

CITY OF DELRAY BEACH
 MANGROVE BOAT RAMP
 MODIFICATIONS

DOCK DETAILS

PROJECT NO. 10-106

DRAWING NO. S-12

FILED

AUG 1 1 2010



US Army Corps of Engineers

File # SAJ-2005-08610 (NW-DLR)

Drawing 9 of 9

DACW17-9-25-0131
 CITY OF DELRAY BEACH
 EXHIBIT "B"
 PG 43 OF 43