BULKHEAD AND ASSOCIATED COASTAL IMPROVEMENTS PERMIT SKETCHES

is document, logether with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper relience on this document without written authorization and adoptation by Kindey-Horn and Associates, inc. shall be without liability to Ki

FOR

TRG NORTH FLAGLER VENTURE LTD LOCATED IN

SECTION 73, TOWNSHIP 43S, RANGE 43E



PROJECT LOCATION CITY OF WEST PALM BEACH, PALM BEACH COUNTY



PROJECT LOCATION





INDEX OF SHEETS

SHEET	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS
3	DEMOLITION PLAN
4	PLAN VIEW
5-6	PROFILE 1, 2, & 3
	GENERAL NOTES

AS NOTED

CHECKED BY

(C) 2016 KIMLEY-HORN AND ASSOCIATES, INC. 24TH STREET, SUITE 200, VERO BEACH, FL 32960 PHONE: 772–794–4100 FAX: 772–794–4130 WWW.KIMLEY-HORN.COM

DATE 12/12/2016 PROJECT NO.

044800006

COVER SHEET

TRG NORTH FLAGLER BULKHEAD AND ASSOCIATED COASTAL **IMPROVEMENTS**

T. FONTAINE III FLORIDA P.E. LICENSE NUMBER 73042

SHEET NUMBER

1 of 7

EXISTING DOCK TO REMAIN NORTH FOLIO NO. 74434304040020130 EXISTING BULKHEAD GROIN STRUCTURE TO REMAIN FOLIO NO. 74434304040020170 -LOW DENSITY MIXED HJ/HW SEAGRASS **APPROXIMATE** MHWL LOCATION PROPERTY LINE EXISTING BULKHEAD TO REMAIN FOLIO NO. 74434303260030000

LEGEND



APPROXIMATE LIMITS OF SEAGRASS



EXISTING CONTOUR

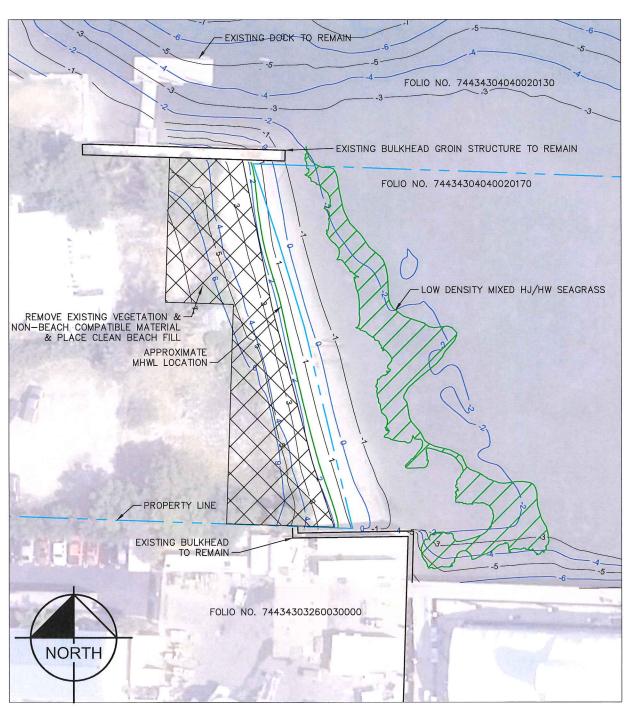
GRAPHIC SCALE IN FEET 0 25 50 100

NOTES

- ELEVATIONS BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- 2. SURVEY DATA FROM A SURVEY BY TERRAQUATIC, INC. SURVEYING & MAPPING. TITLED "SURVEY REFERENCE NUMBER 16-434" DATED 8-01-2016.
- 3. LOCATION OF SEAGRASS HABITATS FROM A SURVEY PERFORMED BY COASTAL ECO-GROUP, INC. TITLED 2016 TRG
 SEAGRASS SURVEY SEAGRASS HABITATS WITHIN PHASE I AND PHASE II SURVEY AREAS FIGURE 1. PROVIDED BY
 COASTAL ECO-GROUP, INC. SEAGRASS SURVEY PERFORMED JULY/AUGUST 2016.

AS NOTED DESIGNED BY CTF	Kimley»Horn	DATE 12/12/2016	EXISTING CONDITIONS	DESIGN ENGINEER: CHARLES T. FONTAINE (I)	SHEET NUMBER
DRAWN BY	C) 2016 KIMLEY-HORN AND ASSOCIATES, INC. 445 24TH STREET, SUITE 200, VERO BEACH, FL 32960	PROJECT NO.	TRG NORTH FLAGLER	FLORIDA P.E. LICENSE NUMBER:	S
CHECKED BY CTF	PHONE: 772-794-4100 FAX: 772-794-4130 WWW.KIMLEY-HORN.COM	044800006	BULKHEAD AND ASSOCIATED COASTAL IMPROVEMENTS	DATE: (2/12/16	2 of 7
				- MARROWAL	

This document, logether with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which It was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, inc. abail be without liability to Kimley-Horn and Associates.



LEGEND



APPROXIMATE LIMITS OF SEAGRASS



EXISTING CONTOUR

GRAPHIC SCALE IN FEET 0 25 50 100

NOTES:

- 1. ELEVATIONS BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- SURVEY DATA FROM A SURVEY BY TERRAQUATIC, INC. SURVEYING & MAPPING. TITLED "SURVEY REFERENCE NUMBER 16-434" DATED 8-01-2016.
- 3. LOCATION OF SEAGRASS HABITATS FROM A SURVEY PERFORMED BY COASTAL ECO-GROUP, INC. TITLED 2016 TRG SEAGRASS SURVEY SEAGRASS HABITATS WITHIN PHASE I AND PHASE II SURVEY AREAS FIGURE 1. PROVIDED BY COASTAL ECO-GROUP, INC. SEAGRASS SURVEY PERFORMED JULY/AUGUST 2016.

AS NOTED DESIGNED BY CTF	Kimley»Horn	DATE 12/12/2016	DEMOLITION PLAN	CHARLES T, FONTAINE III	SHEET NUMBER
DRAWN BY	© 2016 KIMLEY-HORN AND ASSOCIATES, INC. 445 24TH STREET, SUITE 200, VERO BEACH, FL 32960	PROJECT NO.	TRG NORTH FLAGLER	FLORIDA P.E. LICENSE NUMBER:	
CHECKED BY CTF	PHONE: 772-794-4100 FAX: 772-794-4130 WWW.KIMLEY-HORN.COM	044800006	BULKHEAD AND ASSOCIATED COASTAL IMPROVEMENTS	73042 DATE: 12/12/16	3 of 7

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which It was prepared. Reuse of and improper reliance on this document without written authorization and odoptation by Kinley-Horn and Associates, inc. shall be without licibility to Kinley-Horn and Associates, inc.

FOLIO NO. 74434304040020130 TAPER FILL MATERIAL AT 1V TO 4H TO MATCH EXISTING BULKHEAD GROIN STRUCTURE CREST ELEVATION EXISTING BULKHEAD GROIN STRUCTURE TO REMAIN PROPOSED BULKHEAD FOLIO NO. 74434304040020170 0+00 1+00 2+00 PROFILE 1 PREDICTED
EQUILIBRATED TOE OF
FILL LOCATION LOW DENSITY MIXED HJ/HW SEAGRASS PROPOSED WOOD ACCESS RAMP TO BEACH AREA **APPROXIMATE** MHWL LOCATION -2+00 0+001 PROFILE 2 PROPOSED CLEAN BEACH FILL MATERIAL 0+00 1+00 PROFILE 3-2+00 PROPOSED WOOD ACCESS STAIRS TO BEACH AREA PROPERTY LINE EXISTING BULKHEAD TO REMAIN FOLIO NO. 74434303260030000 GRAPHIC SCALE IN FEET **LEGEND** 100 APPROXIMATE LIMITS OF SEAGRASS **NORTH** EXISTING CONTOUR

NOTES:

- 1. ELEVATIONS BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- 2. SURVEY DATA FROM A SURVEY BY TERRAQUATIC, INC. SURVEYING & MAPPING. TITLED "SURVEY REFERENCE NUMBER 16-434" DATED 8-01-2016.
- LOCATION OF SEAGRASS HABITATS FROM A SURVEY PERFORMED BY COASTAL ECO-GROUP, INC. TITLED 2016 TRG
 SEAGRASS SURVEY SEAGRASS HABITATS WITHIN PHASE I AND PHASE II SURVEY AREAS FIGURE 1. PROVIDED BY
 COASTAL ECO-GROUP, INC. SEAGRASS SURVEY PERFORMED JULY/AUGUST 2016.

AS NOTED DESIGNED BY CTF	Kimley»Horn	DATE 12/12/2016	PLAN VIEW	DESIGN ENGINEER: SHEET NUMBE
DRAWN BY	© 2016 KIMLEY-HORN AND ASSOCIATES, INC.	PROJECT NO.	TRG NORTH FLAGLER	FLORIDA P.E. LICENSE NUMBER:
CTF CHECKED BY CTF	445 24TH STREET, SUITE 200, VERO BEACH, FL 32960 PHONE: 772-794-4100 FAX: 772-794-4130 WWW.KIMLEY-HORN.COM	044800006	BULKHEAD AND ASSOCIATED COASTAL IMPROVEMENTS	73042 DATE: 12/14 4 of 7
				MANAGERE

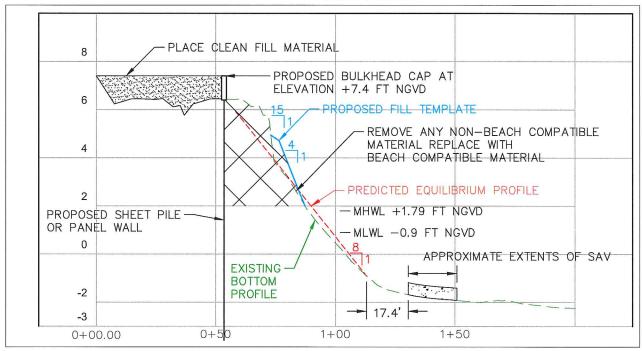
NO. 73042

41

PROFILE 1 - NORTH PROFILE PLACE CLEAN FILL MATERIAL 8 PROPOSED BULKHEAD CAP AT ELEVATION +7.4 FT NGVD 6 4 REMOVE ANY NON-BEACH COMPATIBLE MATERIAL REPLACE WITH BEACH COMPATIBLE MATERIAL 2 - MHWL +1.79 FT NGVD EXISTING BOTTOM PROFILE - MLWL -0.9 FT NGVD 0 APPROXIMATE EXTENT OF SAV PROPOSED SHEET PILE -2 OR PANEL WALL -3 0 + 500+00.001 + 50

umant, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client, for which it was prepared. Reuse of and improper retinace on this document without written authorization and adoptation by Kimler-Horn and Associates, inc., shall be without liability to Kimler-Horn and Associates, in

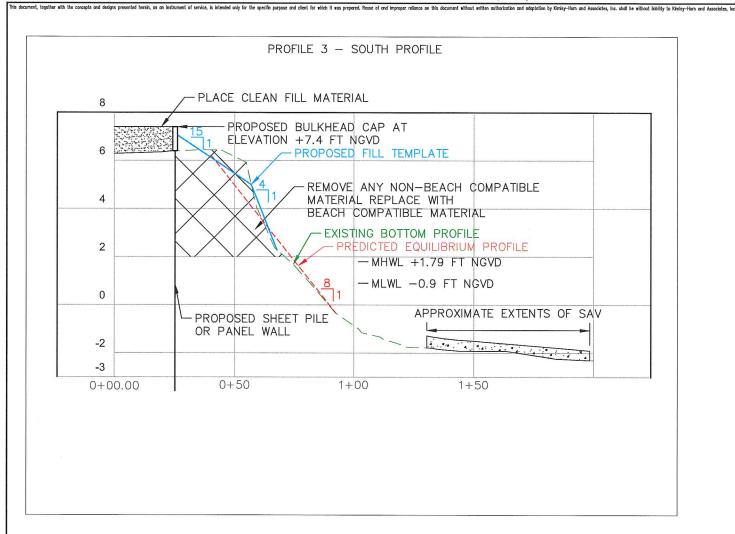
PROFILE 2 - CENTER PROFILE



NOTES:

- 1. WATER ELEVATION DATA FROM NOAA TIDE STATION 8722371. MEAN HIGH TIDE ELEVATION EQUAL TO ABOUT +1,79 FT NGVD 1929.
- 2. ELEVATIONS BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- 3. SURVEY DATA FROM A SURVEY BY TERRAQUATIC, INC. SURVEYING & MAPPING. TITLED "SURVEY REFERENCE NUMBER 16-434" DATED 8-01-2016.
- 4. LOCATION OF SEAGRASS HABITATS FROM A SURVEY PERFORMED BY COASTAL ECO-GROUP, INC. TITLED 2016 TRG SEAGRASS SURVEY SEAGRASS HABITATS WITHIN PHASE I AND PHASE II SURVEY AREAS FIGURE 1. PROVIDED BY COASTAL ECO-GROUP, INC. SEAGRASS SURVEY PERFORMED JULY/AUGUST 2016.
- 5. THE FILL TEMPLATE INCLUDES THE PLACEMENT OF APPROXIMATELY 80 CY OF CLEAN BEACH FILL MATERIAL.
- 6. UP TO APPROXIMATELY 1,200 CY OF NON-BEACH COMPATIBLE MATERIAL WILL BE REMOVED AND REPLACED WITH CLEAN BEACH FILL MATERIAL.

AS NOTED DESIGNED BY CTF		DATE 12/12/2016	PROFILE VIEW	DESIGN ENGINEER:	SHEET NUMBER
DRAWN BY CTF CHECKED BY CTF	© 2016 KIMLEY—HORN AND ASSOCIATES, INC. 445 24TH STREET, SUITE 200, VERO BEACH, FL 32960 PHONE: 772—794—4100 FAX: 772—794—4130 WWW.KIMLEY—HORN.COM	PROJECT NO. 044800006	TRG NORTH FLAGLER BULKHEAD AND ASSOCIATED COASTAL IMPROVEMENTS	FLORIDA P.E. LICENSE NUMBER: 73042 DATE: 212/6	5 of 7



NOTES:

AS NOTED
DESIGNED BY

DRAWN BY

CHECKED BY

CTF

CTF

CTF

- 1. WATER ELEVATION DATA FROM NOAA TIDE STATION 8722371. MEAN HIGH TIDE ELEVATION EQUAL TO ABOUT +1.79 FT NGVD 1929.
- 2. ELEVATIONS BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- 3. SURVEY DATA FROM A SURVEY BY TERRAQUATIC, INC. SURVEYING & MAPPING. TITLED "SURVEY REFERENCE NUMBER 16-434" DATED 8-01-2016.
- 4. LOCATION OF SEAGRASS HABITATS FROM A SURVEY PERFORMED BY COASTAL ECO-GROUP, INC. TITLED 2016 TRG SEAGRASS SURVEY - SEAGRASS HABITATS WITHIN PHASE I AND PHASE II SURVEY AREAS - FIGURE 1. PROVIDED BY COASTAL ECO-GROUP, INC. SEAGRASS SURVEY PERFORMED JULY/AUGUST 2016.
- 5. THE FILL TEMPLATE INCLUDES THE PLACEMENT OF APPROXIMATELY 80 CY OF CLEAN BEACH FILL MATERIAL.
- 6. UP TO APPROXIMATELY 1,200 CY OF NON-BEACH COMPATIBLE MATERIAL WILL BE REMOVED AND REPLACED WITH CLEAN BEACH FILL MATERIAL.

			4
(imley»Horn	DATE 12/12/2016	PROFILE VIEW	N ENGINEER: SHEET NUMBER RLES T. FONTAINE JIII
) 2016 KIMLEY—HORN AND ASSOCIATES, INC. 4TH STREET, SUITE 200, VERO BEACH, FL 32960 HONE: 772—794—4100 FAX: 772—794—4130 WWW.KIMLEY—HORN.COM	PROJECT NO. 044800006	TRG NORTH FLAGLER BULKHEAD AND ASSOCIATED COASTAL IMPROVEMENTS DATE	DA P.É. LICENSE NÚMBER: 73042 :: 2 2 6 6 of 7

GENERAL NOTES:

- 1. THESE DRAWINGS ARE "PERMIT SKETCHES" INTENDED TO FACILITATE THE EVALUATION OF THE PROPOSED PROJECT. THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION.
- 2. AERIAL OBTAINED FROM FDOT APLUS SYSTEM AND IS DATED 2015.
- 3. WATER ELEVATION DATA FROM NOAA TIDE STATION 8722371, MEAN HIGH TIDE ELEVATION EQUAL TO ABOUT +1.79 FT NGVD 1929.
- ELEVATIONS BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- SURVEY DATA FROM A SURVEY BY TERRAQUATIC, INC. SURVEYING & MAPPING. TITLED "SURVEY REFERENCE NUMBER 16-434" DATED 8-01-2016.
- 6. LOCATION OF SEAGRASS HABITATS FROM A SURVEY PERFORMED BY COASTAL ECO-GROUP, INC. TITLED 2016 TRG SEAGRASS SURVEY - SEAGRASS HABITATS WITHIN PHASE I AND PHASE II SURVEY AREAS - FIGURE 1. PROVIDED BY COASTAL ECO-GROUP, INC. SEAGRASS SURVEY PERFORMED JULY/AUGUST 2016.
- 7. PROPOSED FILL TO BE CLEAN BEACH COMPATIBLE FILL MATERIAL.
- THE CONTRACTOR SHALL INSTALL & MAINTAIN TURBIDITY CURTAIN BARRIER AROUND THE PROPOSED BULKHEAD, FILL REMOVAL, AND FILL PLACEMENT ACTIVITIES.
- 9. NO FILL TO BE PLACED OR REMOVED FROM SEAWARD OF THE MHWL.
- 10. PROPOSED BULKHEAD TO BE CONSTRUCTED AT OR LANDWARD OF THE MHWL.

SCALE	
AS	NOTED
DESIGNED	BY
	CTF
DDAWN DY	,

CHECKED BY

CTF

CTF

Kimley»Horn
© 2016 KIMLEY—HORN AND ASSOCIATES, INC. 445 24TH STREET, SUITE 200, VERO BEACH, FL 32960 PHONE: 772—794—4100 FAX: 772—794—4130 WWW.KIMLEY—HORN.COM

DATE
12/12/2016
PROJECT NO.

044800006

GENERAL NOTES

BULKHEAD AND ASSOCIATED COASTAL

IMPROVEMENTS

Cla 18	500
CHARLES T. FONTAIN	E- III
FLORIDA P.E. LICENSE NUM	MBER:
73042	92
FLORIDA P.E. LICENSE NUM	4

DESIGN ENGINEER: