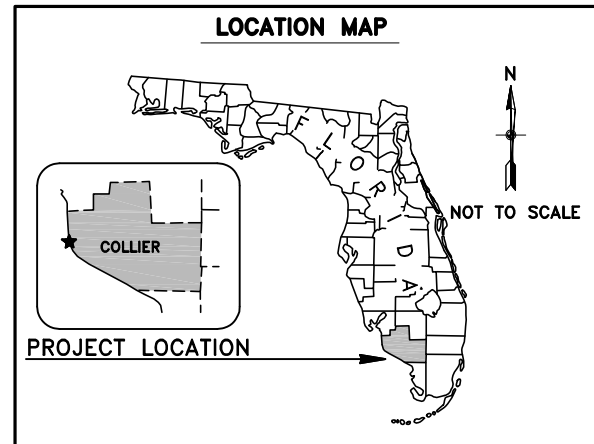


# CONSTRUCTION PLANS

## DOCTORS PASS SOUTH JETTY REHABILITATION AND NAPLES BEACH EROSION CONTROL STRUCTURES PROJECT

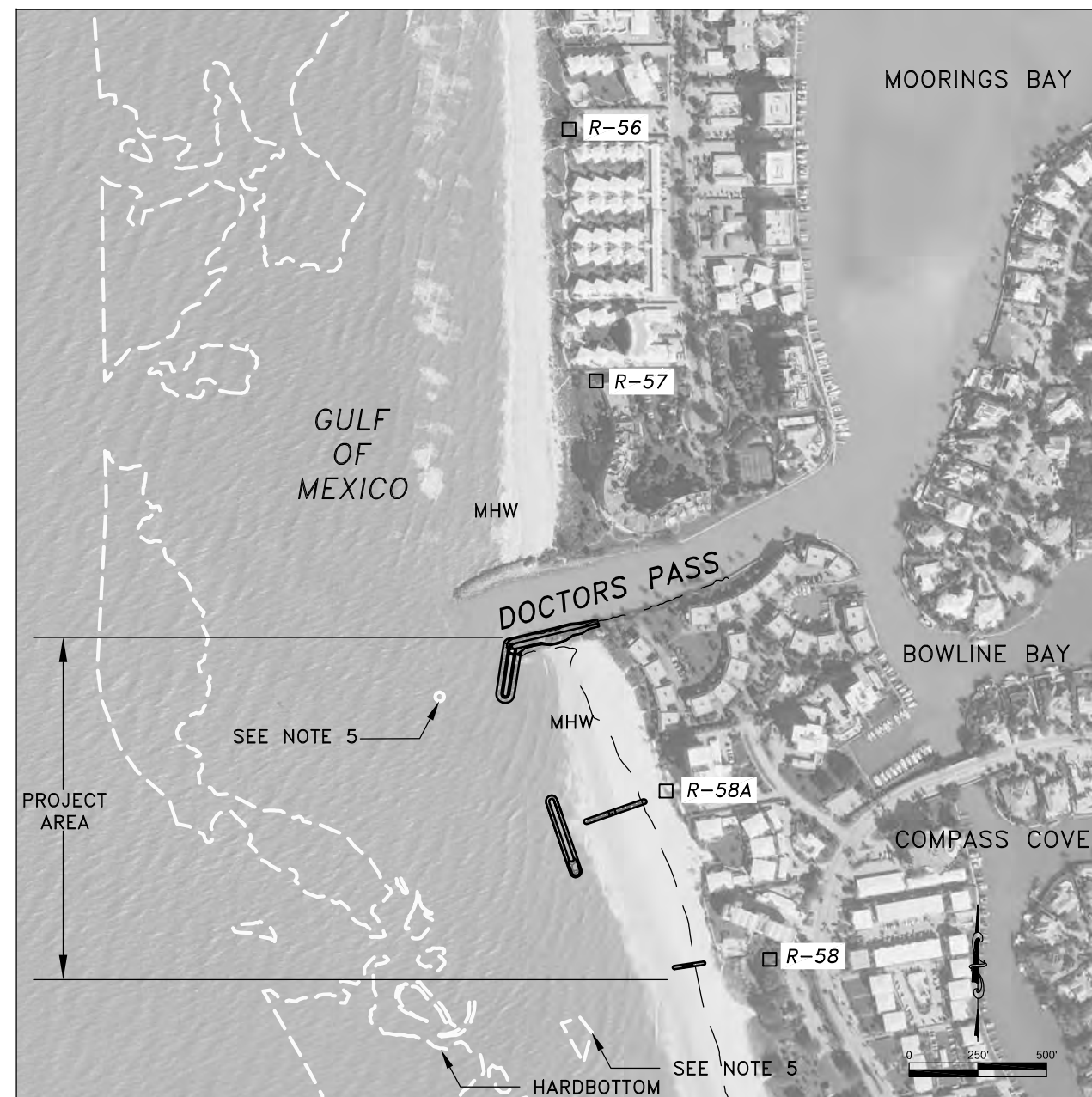
### COLLIER COUNTY, FLORIDA



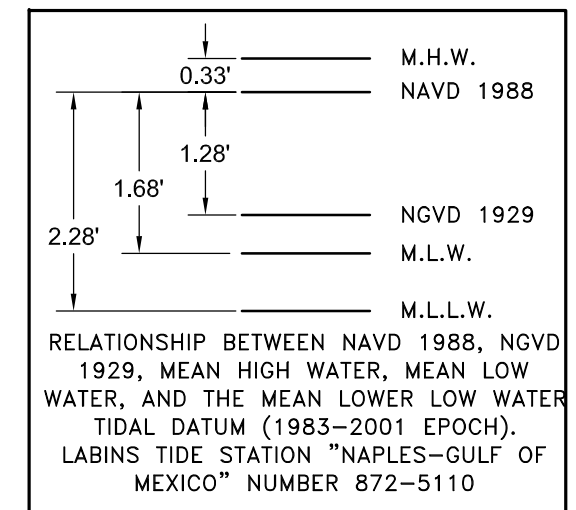
**NOTES:**

1. AERIAL PHOTOGRAPH ON SHEET 1 DATED JANUARY 2014. AERIAL ON SHEET 2 THROUGH 6 DATED NOVEMBER 2016. BOTH IMAGES PROVIDED COURTESY OF COLLIER COUNTY PROPERTY APPRAISER'S OFFICE.
2. COORDINATES SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN DATUM OF 1983, EAST ZONE (NAD83).
3. ELEVATIONS SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. THE HARDBOTTOM SHOWN REPRESENTS THE RESULTS OF THE SIDE SCAN SONAR DATED AUGUST 2009 PROVIDED BY CP&E.
5. TWO ADDITIONAL AREAS OF HARDBOTTOM ARE SHOWN BASED ON THA REPORT 2015.
6. NOTE: THESE PERMIT DRAWINGS SHALL NOT BE CONSIDERED VALID FOR CONSTRUCTION PURPOSES UNLESS SIGNED AND SEALED.

MONUMENT CONTROL INFORMATION - PUBLISHED BY THE DEP				
MONUMENT	EASTING (FEET NAD83)	NORTHING (FEET NAD83)	AZIMUTH (DEGREES)	ELEVATION (FEET NAVD)
R-56	389065.2	671211.8	270	4.68
T-57	389142.0	670447.6	270	1.51
R-58A	389353.6	669202.4	270	-
R-58	389668.6	668693.6	270	6.56
R-59	667728.9	389847.3	270	5.42



- SHEET INDEX**
1. COVER SHEET AND LOCATION MAP
  2. EXISTING CONDITIONS
  3. SITE PLAN - PROPOSED CONDITIONS
  4. SITE PLAN - STRUCTURES SURVEY LAYOUT
  5. BREAKWATER & DETACHED GROIN DETAILS
  6. SPUR & GROIN REHABILITATION DETAILS
  7. SITE PLAN - SOUTH JETTY EXISTING CONDITIONS
  8. SITE PLAN - SOUTH JETTY PROPOSED CONDITIONS
  9. CROSS SECTION - JETTY PROFILES 00+00 TO 02+00
  10. CROSS SECTION - JETTY PROFILES 02+25 TO 03+50
  11. DAYMARKER DETAILS
  12. CONSTRUCTION ACCESS



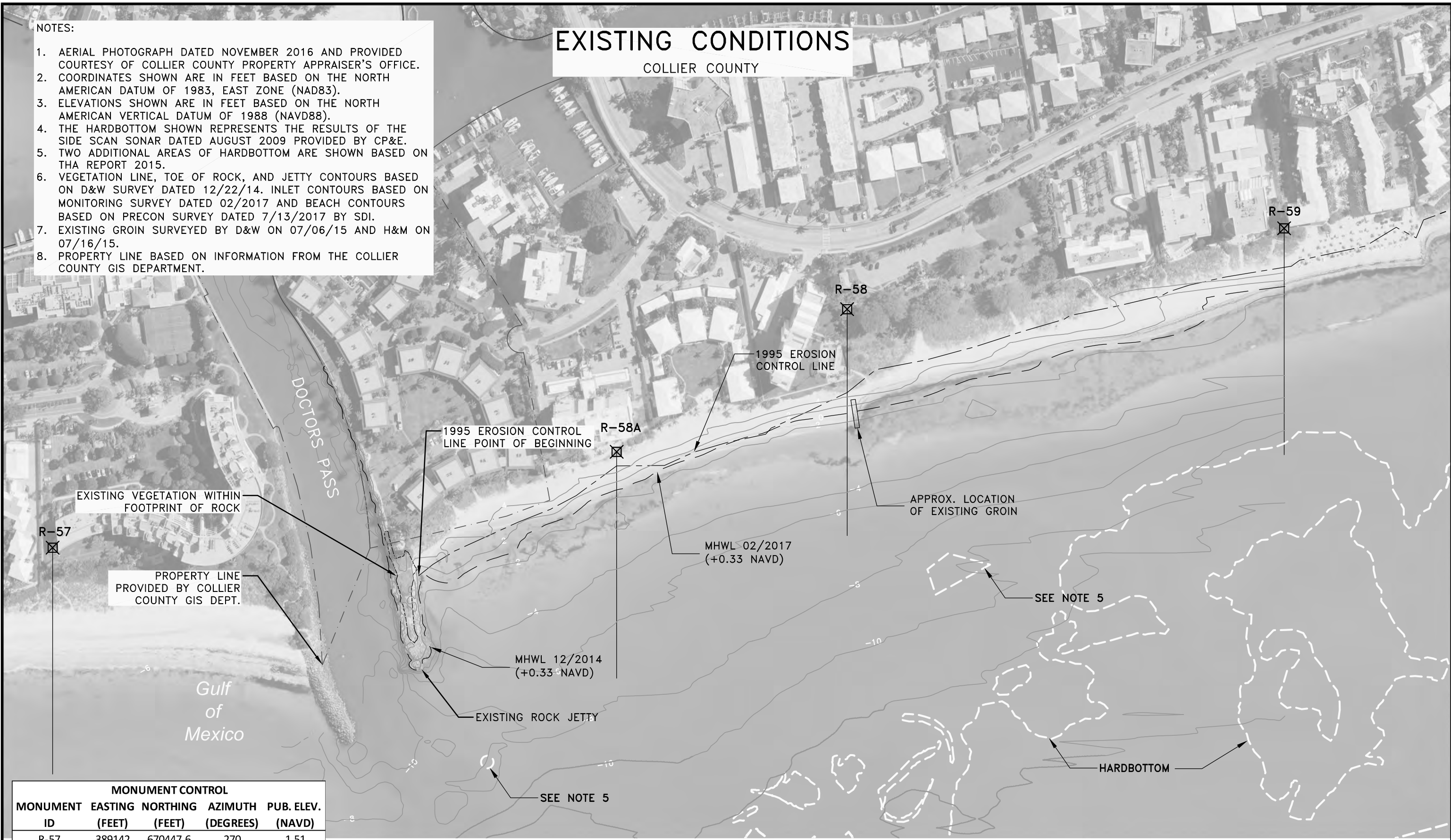
<b>HUMISTON &amp; MOORE ENGINEERS</b> <small>COASTAL ENGINEERING DESIGN AND PERMITTING</small>	SOUTH JETTY & EROSION CONTROL STRUCTURES COVER SHEET AND LOCATION MAP		
	FOR: COLLIER COUNTY		
	DATE: 7/13/17	FILE: PLANS	SCALE: 1"=500'
	JOB: 24-018	DATUM: NAVD88	FIGURE: 1 OF 12
			5679 STRAND COURT NAPLES, FL 34110 FAX: (239) 594-2025 PHONE: (239) 594-2021 www.humistonandmoore.com

NOTES:

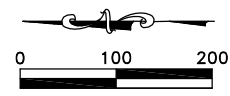
1. AERIAL PHOTOGRAPH DATED NOVEMBER 2016 AND PROVIDED COURTESY OF COLLIER COUNTY PROPERTY APPRAISER'S OFFICE.
2. COORDINATES SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN DATUM OF 1983, EAST ZONE (NAD83).
3. ELEVATIONS SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. THE HARDBOTTOM SHOWN REPRESENTS THE RESULTS OF THE SIDE SCAN SONAR DATED AUGUST 2009 PROVIDED BY CP&E.
5. TWO ADDITIONAL AREAS OF HARDBOTTOM ARE SHOWN BASED ON THA REPORT 2015.
6. VEGETATION LINE, TOE OF ROCK, AND JETTY CONTOURS BASED ON D&W SURVEY DATED 12/22/14. INLET CONTOURS BASED ON MONITORING SURVEY DATED 02/2017 AND BEACH CONTOURS BASED ON PRECON SURVEY DATED 7/13/2017 BY SDI.
7. EXISTING GROIN SURVEYED BY D&W ON 07/06/15 AND H&M ON 07/16/15.
8. PROPERTY LINE BASED ON INFORMATION FROM THE COLLIER COUNTY GIS DEPARTMENT.

# EXISTING CONDITIONS

COLLIER COUNTY



MONUMENT CONTROL				
MONUMENT ID	EASTING (FEET)	NORTHING (FEET)	AZIMUTH (DEGREES)	PUB. ELEV. (NAVD)
R-57	389142	670447.6	270	1.51
R-58A	389353.6	669202.4	270	-
R-58	389668.6	668693.6	270	6.56
R-59	389847.3	667728.9	270	5.42



**HUMISTON & MOORE ENGINEERS**  
COASTAL ENGINEERING DESIGN AND PERMITTING

SOUTH JETTY & EROSION CONTROL STRUCTURES EXISTING CONDITIONS		
FOR: COLLIER COUNTY		
DATE: 7/13/17	FILE: PLANS	SCALE: 1"=200'
JOB: 24-018	DATUM: NAVD88	FIGURE: 2 OF 12

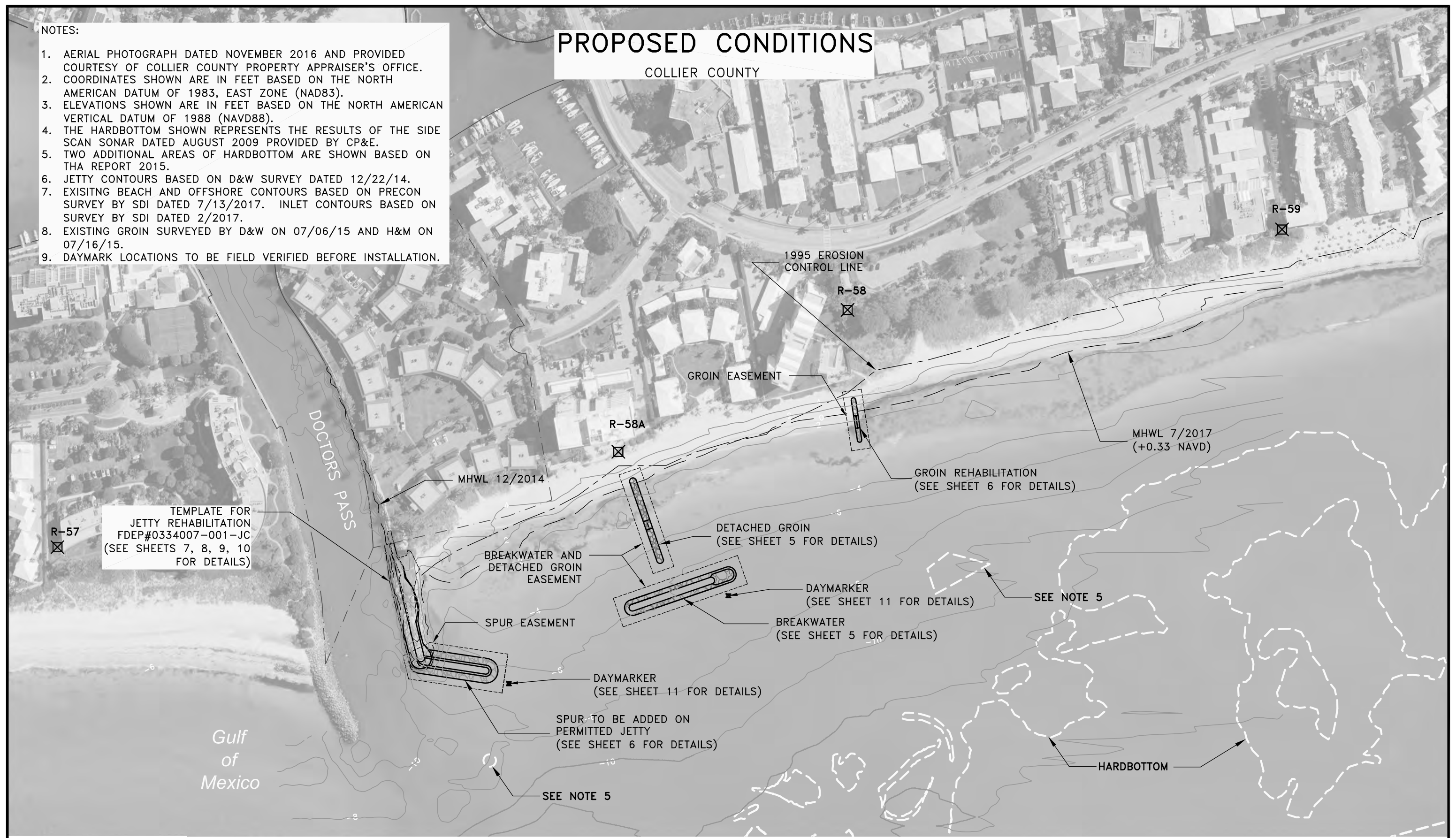
5679 STRAND COURT  
NAPLES, FL 34110  
FAX: (239) 594-2025  
PHONE: (239) 594-2021  
www.humistonandmoore.com

NOTES:

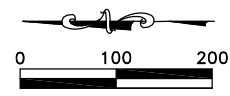
1. AERIAL PHOTOGRAPH DATED NOVEMBER 2016 AND PROVIDED COURTESY OF COLLIER COUNTY PROPERTY APPRAISER'S OFFICE.
2. COORDINATES SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN DATUM OF 1983, EAST ZONE (NAD83).
3. ELEVATIONS SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. THE HARDBOTTOM SHOWN REPRESENTS THE RESULTS OF THE SIDE SCAN SONAR DATED AUGUST 2009 PROVIDED BY CP&E.
5. TWO ADDITIONAL AREAS OF HARDBOTTOM ARE SHOWN BASED ON THA REPORT 2015.
6. JETTY CONTOURS BASED ON D&W SURVEY DATED 12/22/14.
7. EXISTING BEACH AND OFFSHORE CONTOURS BASED ON PRECON SURVEY BY SDI DATED 7/13/2017. INLET CONTOURS BASED ON SURVEY BY SDI DATED 2/2017.
8. EXISTING GROIN SURVEYED BY D&W ON 07/06/15 AND H&M ON 07/16/15.
9. DAYMARK LOCATIONS TO BE FIELD VERIFIED BEFORE INSTALLATION.

# PROPOSED CONDITIONS

COLLIER COUNTY



TEMPLATE FOR  
JETTY REHABILITATION  
FDEP#0334007-001-JC  
(SEE SHEETS 7, 8, 9, 10  
FOR DETAILS)



**HUMISTON & MOORE ENGINEERS**  
COASTAL ENGINEERING DESIGN AND PERMITTING

SOUTH JETTY & EROSION CONTROL STRUCTURES SITE PLAN - PROPOSED CONDITIONS		
FOR: COLLIER COUNTY		
DATE: 7/13/17	FILE: PLANS	SCALE: 1"=200'
JOB: 24-018	DATUM: NAVD88	FIGURE: 3 OF 12

5679 STRAND COURT  
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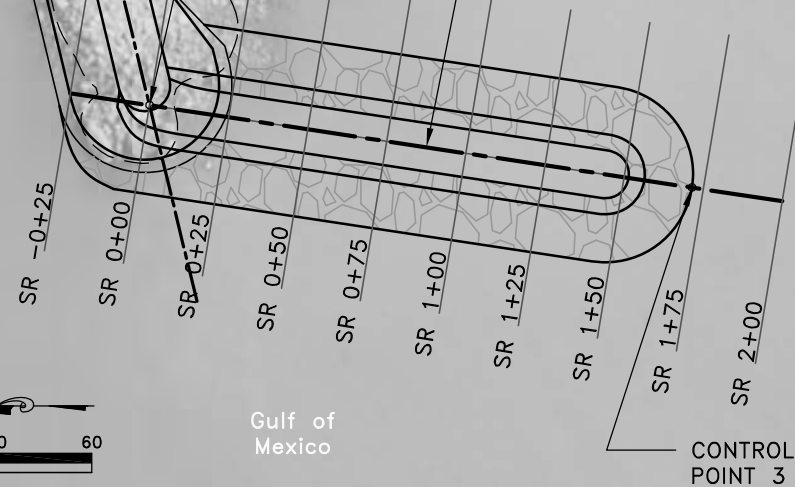
Doctors Pass Attached Spur (SR) Survey Details				
Station ID	Northing (Feet)	Easting (Feet)	Azimuth (Degrees)	Range (Feet)
SR -0+25	669664.08	388893.00	99.0	100.0
SR 0+00	669639.36	388889.25	99.0	100.0
SR 0+25	669614.64	388885.50	99.0	100.0
SR 0+50	669589.93	388881.75	99.0	100.0
SR 0+75	669565.21	388878.00	99.0	100.0
SR 1+00	669540.49	388874.25	99.0	100.0
SR 1+25	669515.77	388870.50	99.0	100.0
SR 1+50	669491.05	388866.75	99.0	100.0
SR 1+75	669466.33	388863.00	99.0	100.0
SR 2+00	669441.61	388859.25	99.0	100.0

\*PRE, POST AND PROGRESS SURVEYS TO INCLUDE SURVEY ALONG BASELINE

BASELINE FOR JETTY REHABILITATION

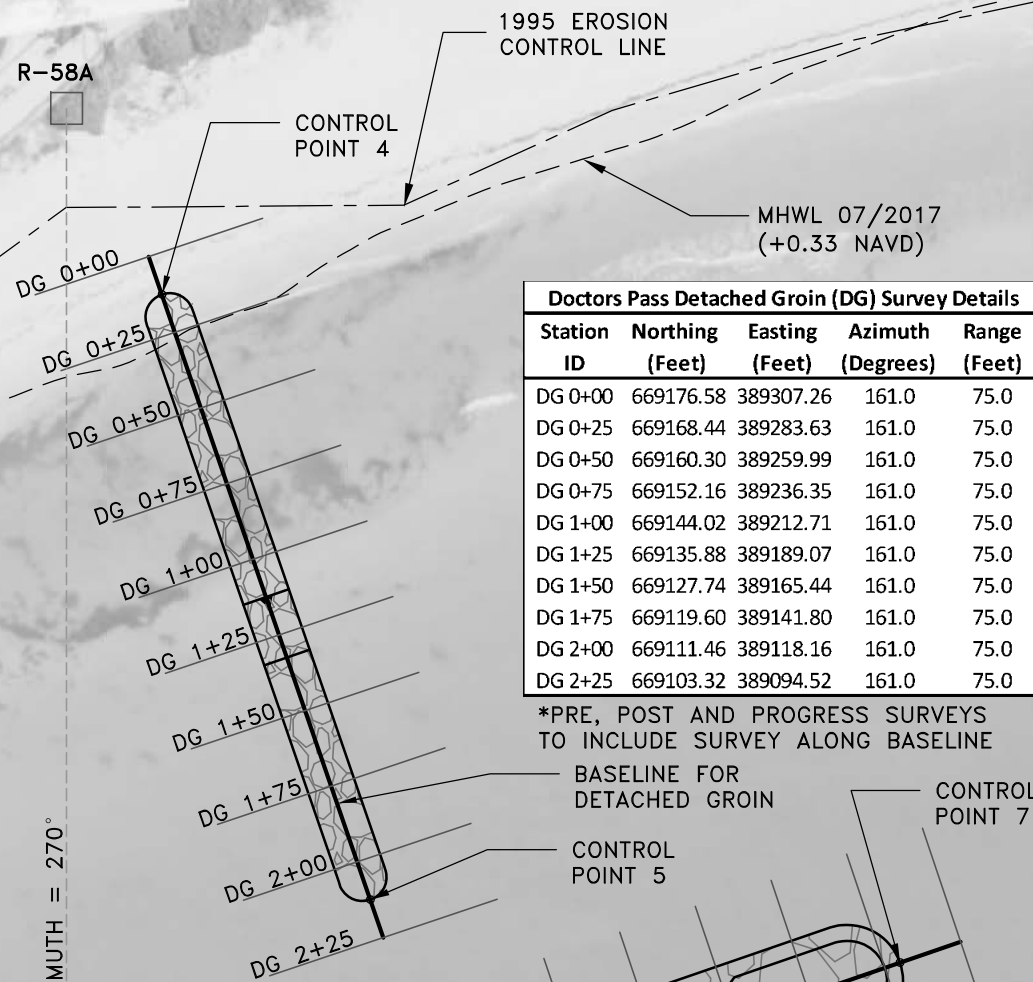
CONTROL POINT 2  
BASELINE P.I.  
N: 669639.4  
E: 388889.3

BASELINE FOR ATTACHED SPUR



NOTES:

1. AERIAL PHOTOGRAPH DATED NOVEMBER 2016 AND PROVIDED COURTESY OF COLLIER COUNTY PROPERTY APPRAISER'S OFFICE.
2. COORDINATES SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN DATUM OF 1983, EAST ZONE (NAD83).
3. ELEVATIONS SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. POSITIONING DATA IN TABLES REPRESENT THE BASELINE OF PROFILES TO BE COLLECTED.
5. EACH PROFILE SHALL INCLUDE A SUFFICIENT NUMBER OF DATA POINTS TO DEVELOP AN ENVELOPE OF THE HIGH AND LOW ELEVATIONS OF THE IRREGULAR SURFACE OF THE ROCK.

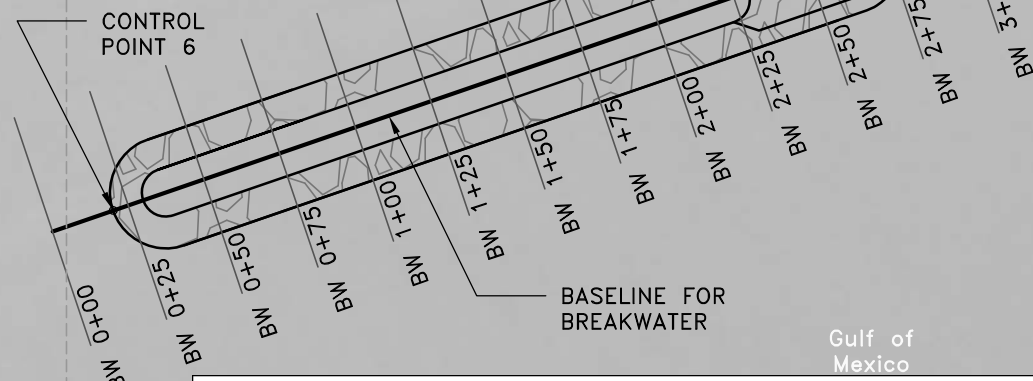


Doctors Pass Detached Groin (DG) Survey Details				
Station ID	Northing (Feet)	Easting (Feet)	Azimuth (Degrees)	Range (Feet)
DG 0+00	669176.58	389307.26	161.0	75.0
DG 0+25	669168.44	389283.63	161.0	75.0
DG 0+50	669160.30	389259.99	161.0	75.0
DG 0+75	669152.16	389236.35	161.0	75.0
DG 1+00	669144.02	389212.71	161.0	75.0
DG 1+25	669135.88	389189.07	161.0	75.0
DG 1+50	669127.74	389165.44	161.0	75.0
DG 1+75	669119.60	389141.80	161.0	75.0
DG 2+00	669111.46	389118.16	161.0	75.0
DG 2+25	669103.32	389094.52	161.0	75.0

\*PRE, POST AND PROGRESS SURVEYS TO INCLUDE SURVEY ALONG BASELINE

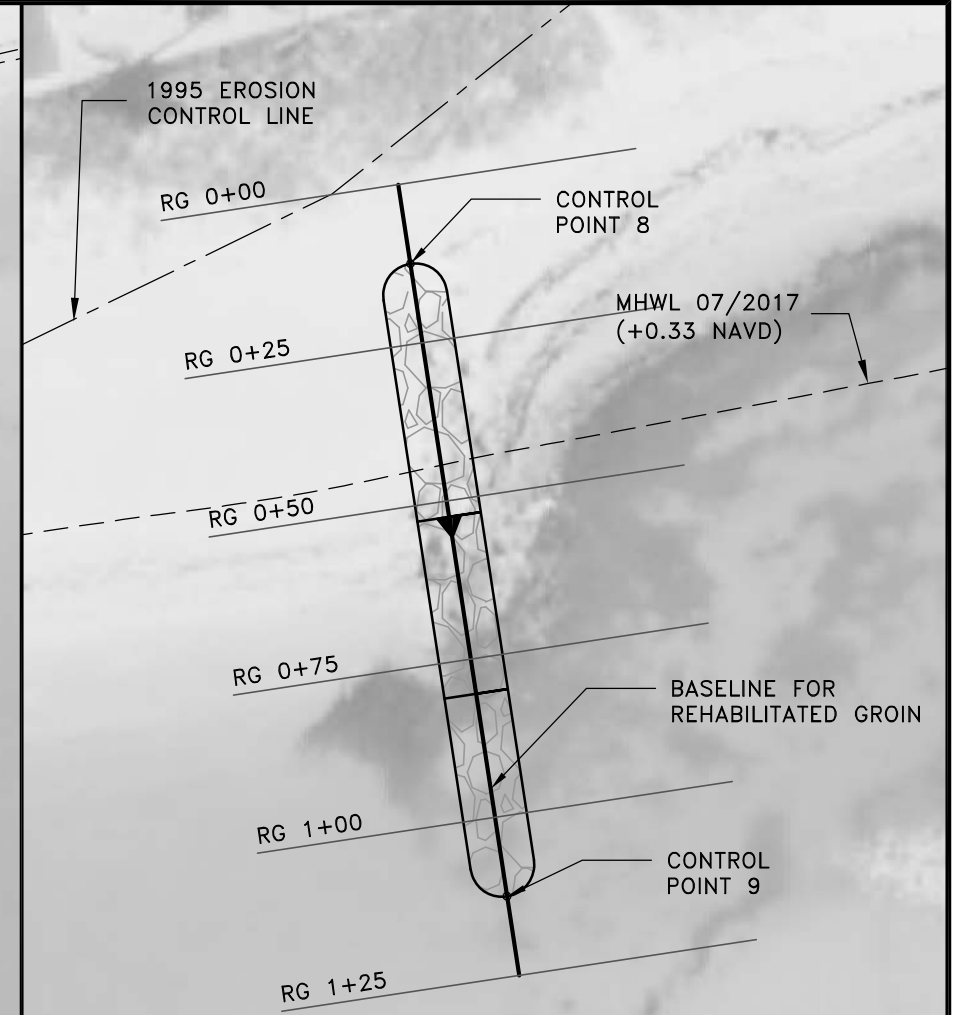
BASELINE FOR DETACHED GROIN  
CONTROL POINT 5

AZIMUTH = 270°



Doctors Pass Breakwater (BW) Survey Details									
Station ID	Northing (Feet)	Easting (Feet)	Azimuth (Degrees)	Range (Feet)	Station ID	Northing (Feet)	Easting (Feet)	Azimuth (Degrees)	Range (Feet)
BW 0+00	669206.63	388995.47	71.0	75.0	BW 1+75	669041.18	389052.47	71.0	75.0
BW 0+25	669183.00	389003.61	71.0	75.0	BW 2+00	669017.54	389060.61	71.0	75.0
BW 0+50	669159.36	389011.76	71.0	75.0	BW 2+25	668993.9	389068.75	71.0	75.0
BW 0+75	669135.72	389019.90	71.0	75.0	BW 2+50	668970.27	389076.9	71.0	75.0
BW 1+00	669112.09	389028.04	71.0	75.0	BW 2+75	668946.63	389085.04	71.0	75.0
BW 1+25	669088.45	389036.18	71.0	75.0	BW 3+00	668922.99	389093.18	71.0	75.0
BW 1+50	669064.81	389044.33	71.0	75.0					


\*PRE, POST AND PROGRESS SURVEYS TO INCLUDE SURVEY ALONG BASELINE



Doctors Pass Rehabilitated Groin (RG) Survey Details				
Station ID	Northing (Feet)	Easting (Feet)	Azimuth (Degrees)	Range (Feet)
RG 0+00	668683.24	389486.08	171.0	75.0
RG 0+25	668679.47	389461.36	171.0	75.0
RG 0+50	668675.69	389436.65	171.0	75.0
RG 0+75	668671.92	389411.94	171.0	75.0
RG 1+00	668668.15	389387.22	171.0	75.0
RG 1+25	668664.37	389362.51	171.0	75.0

\*PRE, POST AND PROGRESS SURVEYS TO INCLUDE SURVEY ALONG BASELINE

CONTROL POINT	EASTING (FEET)	NORTHING (FEET)
1	389151.1	669702.7
2	388889.3	669639.4
3	388863.5	669469.8
4	389295.5	669172.4
5	389106.3	669107.4
6	389002.0	669187.7
7	389086.7	668941.9
8	389473.7	668681.4
9	389374.9	668666.3

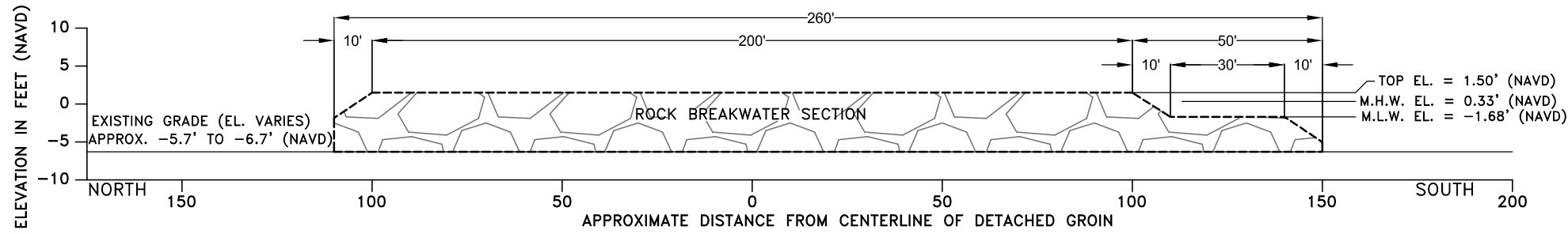


**HUMISTON & MOORE ENGINEERS**  
COASTAL ENGINEERING DESIGN AND PERMITTING

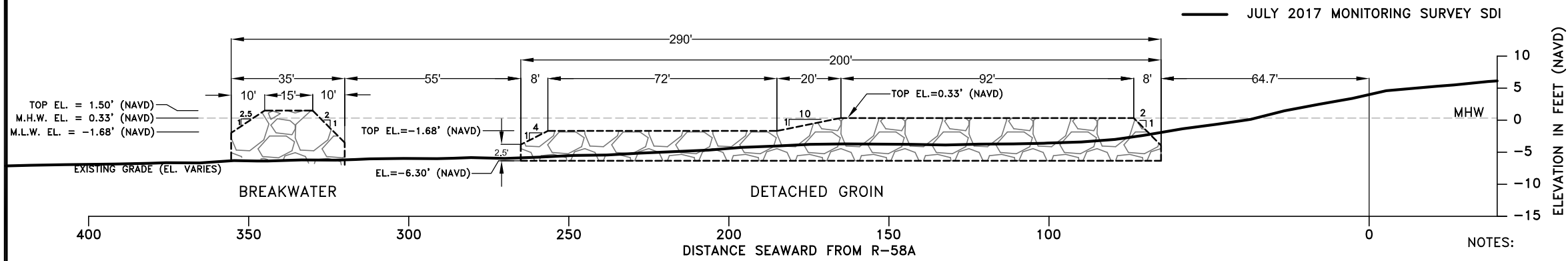
**SOUTH JETTY & EROSION CONTROL STRUCTURES SITE PLAN - STRUCTURES SURVEY LAYOUT**  
FOR: COLLIER COUNTY

DATE: 7/13/17 FILE: PLANS SCALE: SHOWN  
JOB: 24-018 DATUM: NAVD88 FIGURE: 4 OF 12

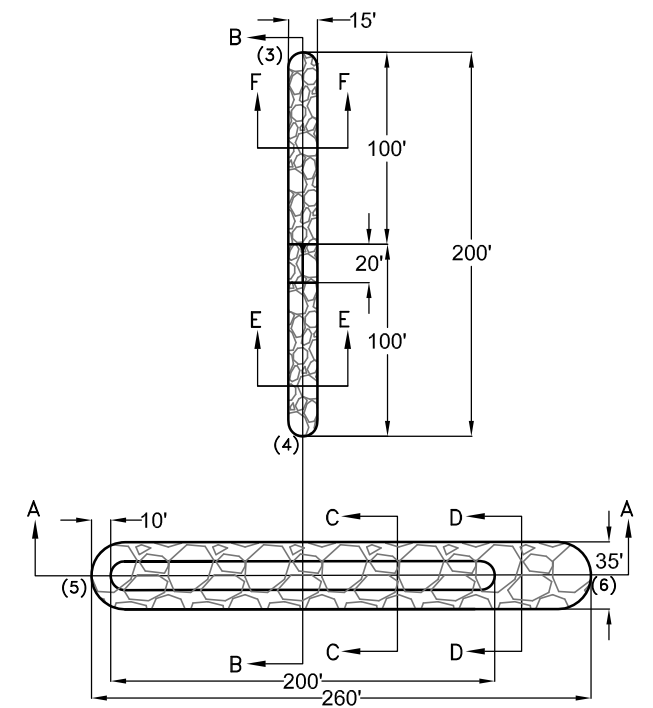
5679 STRAND COURT  
NAPLES, FL 34110  
FAX: (239) 594-2025  
PHONE: (239) 594-2021  
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SECTION "A - A"

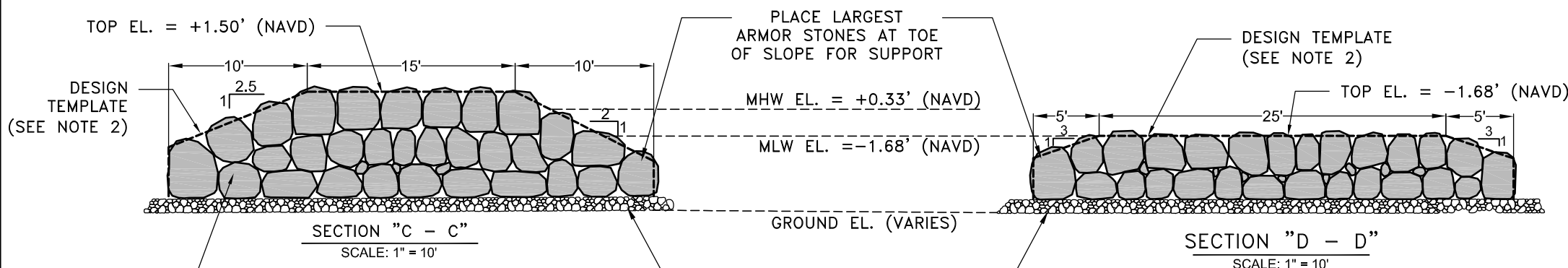


SECTION "B - B"



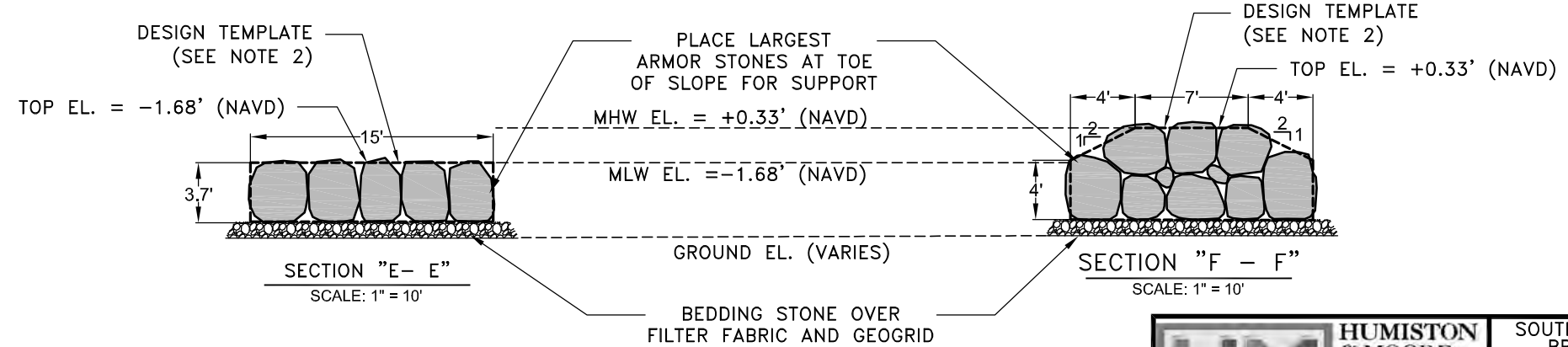
NOTES:

- 1) ROCK.
  - A) ARMOR STONE - BREAKWATER  
DENSITY: 145 - 165 LBS./CU. FT. OR GREATER.  
SIZE: 50% GREATER THAN 4 TONS.  
MINIMUM SIZE: 3 TONS.  
MAXIMUM SIZE: 6 TONS.
  - B) ARMOR STONE - GROIN  
DENSITY: 145 - 165 LBS./CU. FT. OR GREATER.  
SIZE: 50% GREATER THAN 2 TONS.  
MINIMUM SIZE: 1 TON.  
MAXIMUM SIZE: 3 TONS.
  - C) BEDDING STONE - BREAKWATER & GROIN  
DENSITY: 140 LBS./CU. FT. OR GREATER.  
SIZE: 2" TO 10", 50% GREATER THAN 4".  
LAYER THICKNESS: 9" TO 15" ABOVE DESIGN FOUNDATION GRADE.
- 2) ARMOR STONE TOLERANCE IS  $\pm 0.5'$ . AT LEAST 50% OF ARMOR STONE ON SURFACE OF STRUCTURES MUST BE AT OR ABOVE DESIGN TEMPLATE.
- 3) FILTER CLOTH TO BE PLACED WITH A MINIMUM OVERLAP OF THREE FEET OR SEWN SEAMS
- 4) FILTER CLOTH AND GEOGRID TO EXTEND BEYOND THE EDGE OF BEDDING STONE A MINIMUM OF 6" AND A MAXIMUM OF 12".
- 5) TENSAR BIAXIAL GEOGRID BX-1300 (SS-3) OR EQUIVALENT, TO BE PLACED ABOVE FILTER CLOTH AND BENEATH BEDDING STONE.
- 6) A GEOGRID COMPOSITE CONSISTING OF WOVEN FILTER FABRIC SUCH AS TENSAR GC654050, OR EQUIVALENT AND BIAXIAL GEOGRID MAY BE USED UPON APPROVAL BY THE PROJECT ENGINEER.
- 7) ALL ELEVATIONS AS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88.)
- 8) DIMENSIONS SHOWN ARE IN FEET.
- 9) ROCK AS SHOWN IN DETAIL IS FOR ILLUSTRATIVE PURPOSE ONLY




SECTION "C - C"  
SCALE: 1" = 10'

SECTION "D - D"  
SCALE: 1" = 10'



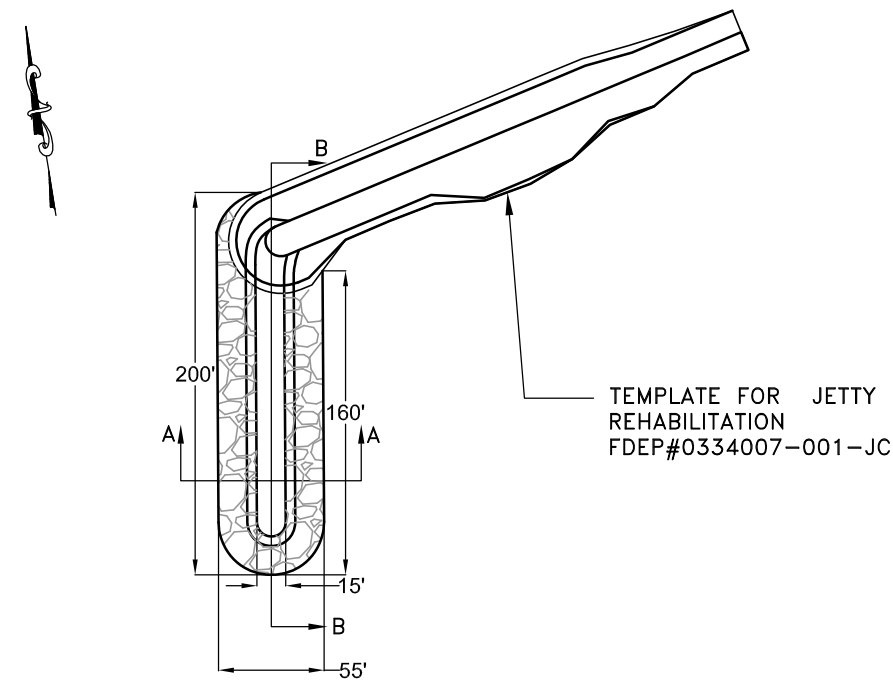
SECTION "E - E"  
SCALE: 1" = 10'

SECTION "F - F"  
SCALE: 1" = 10'

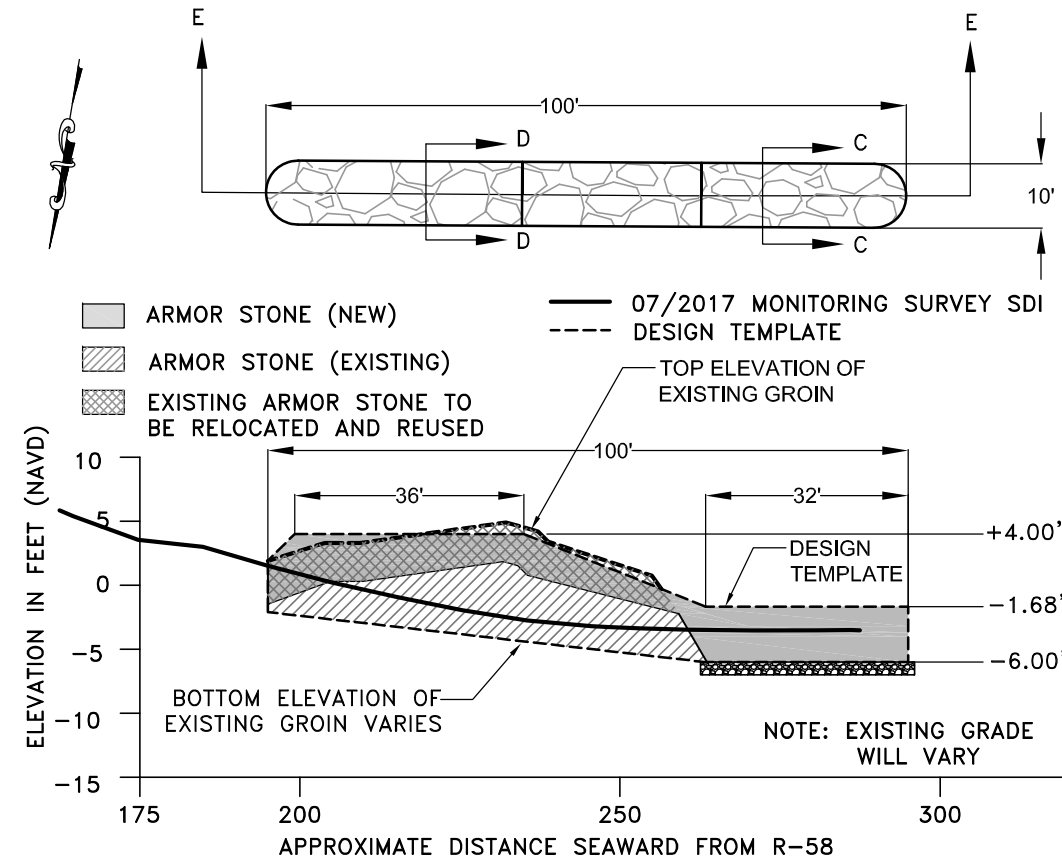
	<b>HUMISTON &amp; MOORE ENGINEERS</b>		SOUTH JETTY & EROSION CONTROL STRUCTURES BREAKWATER & DETACHED GROIN DETAILS	
	COASTAL ENGINEERING DESIGN AND PERMITTING		FOR: COLLIER COUNTY	
	DATE: 7/13/17	FILE: PLANS	SCALE: SHOWN	
	JOB: 24-018	DATUM: NAVD88	FIGURE: 5 OF 12	

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FAX: (239) 594-2025  
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# SPUR DETAIL



# GROIN REHABILITATION DETAIL



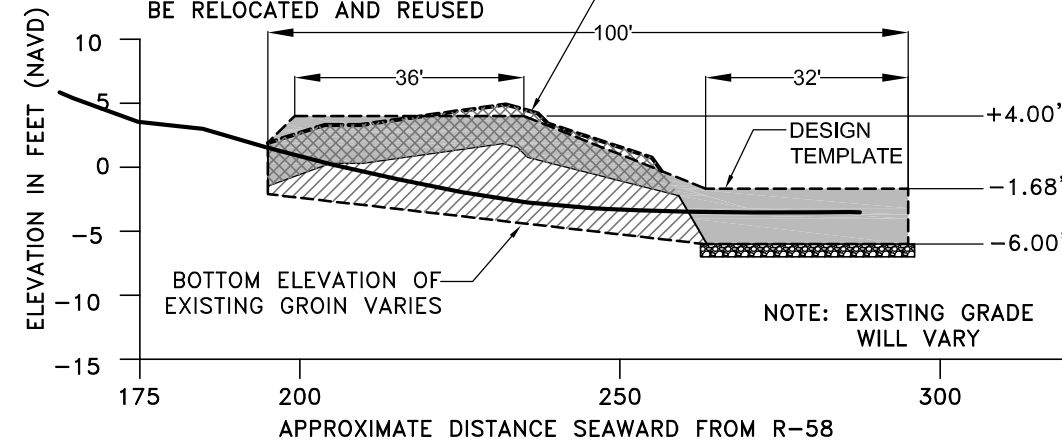
NOTES:

- 1) ROCK.
  - A) ARMOR STONE – SPUR  
DENSITY: 145 – 165 LBS./CU. FT. OR GREATER.  
SIZE: 50% GREATER THAN 4 TONS.  
MINIMUM SIZE: 3 TONS.  
MAXIMUM SIZE: 6 TONS.
  - B) ARMOR STONE – GROIN REHABILITATION  
DENSITY: 145 – 165 LBS./CU. FT. OR GREATER.  
SIZE: 50% GREATER THAN 2 TONS.  
MINIMUM SIZE: 1 TON.  
MAXIMUM SIZE: 3 TONS.
  - C) BEDDING STONE – SPUR & SEAWARD PART OF GROIN  
DENSITY: 140 LBS./CU. FT. OR GREATER.  
SIZE: 2" TO 10", 50% GREATER THAN 4".  
LAYER THICKNESS: 9" TO 15" ABOVE DESIGN FOUNDATION GRADE.
- 2) ARMOR STONE TOLERANCE IS  $\pm 0.5'$ . AT LEAST 50% OF ARMOR STONE ON SURFACE OF STRUCTURES MUST BE AT OR ABOVE DESIGN TEMPLATE.
- 3) FILTER CLOTH TO BE PLACED WITH A MINIMUM OVERLAP OF THREE FEET OR SEWN SEAMS
- 4) FILTER CLOTH AND GEOGRID TO EXTEND BEYOND THE EDGE OF BEDDING STONE A MINIMUM OF 6" AND A MAXIMUM OF 12".
- 5) TENSAR BIAXIAL GEOGRID BX-1300 (SS-3) OR EQUIVALENT, TO BE PLACED ABOVE FILTER CLOTH AND BENEATH BEDDING STONE.
- 6) A GEOGRID COMPOSITE CONSISTING OF WOVEN FILTER FABRIC SUCH AS TENSAR GC654050, OR EQUIVALENT AND BIAXIAL GEOGRID MAY BE USED UPON APPROVAL BY THE PROJECT ENGINEER.
- 7) ALL ELEVATIONS AS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 8) DIMENSIONS SHOWN ARE IN FEET.
- 9) ROCK AS SHOWN IN DETAIL IS FOR ILLUSTRATIVE PURPOSE ONLY
- 10) EXISTING ROCK OUTSIDE OF THE NEW TEMPLATE BUT WITHIN THE FOOTPRINT OF STRUCTURE MAY BE RELOCATED TO CREATE A TIGHTER STRUCTURE OR MORE CONSISTENT SHAPE.
- 11) SEE SHEET 4 FOR STATION REFERENCE.

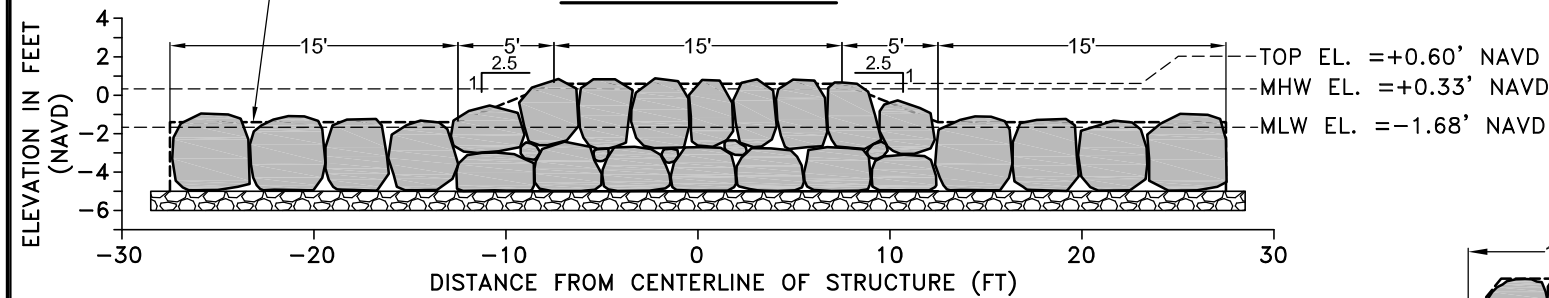
TEMPLATE FOR JETTY REHABILITATION  
FDEP#0334007-001-JC

- ARMOR STONE (NEW)
- ARMOR STONE (EXISTING)
- EXISTING ARMOR STONE TO BE RELOCATED AND REUSED

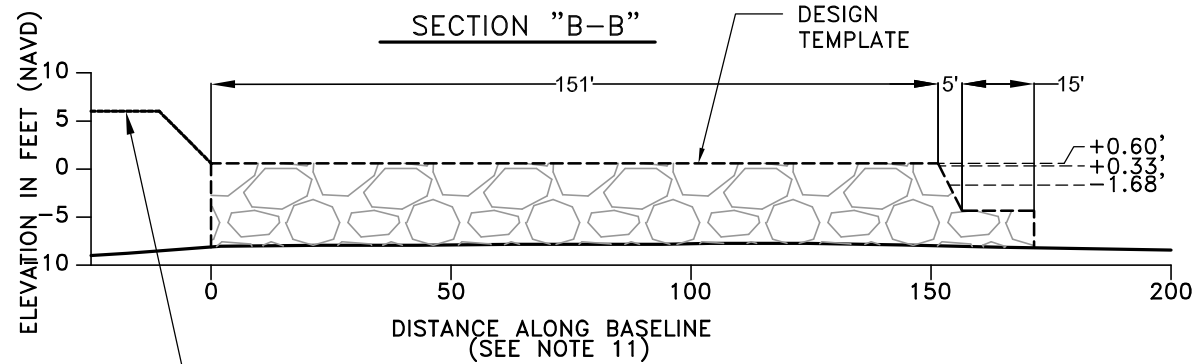
- 07/2017 MONITORING SURVEY SDI
- DESIGN TEMPLATE



## SECTION "A-A"

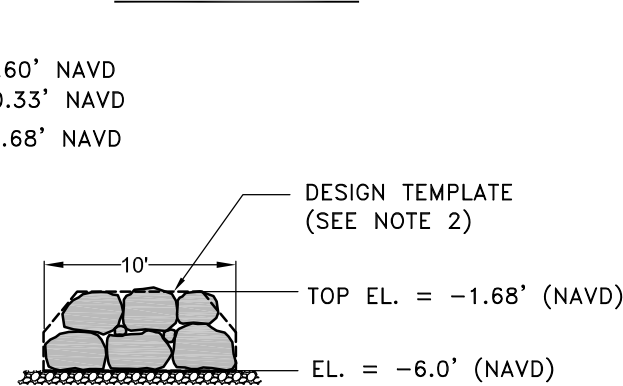


## SECTION "B-B"



TRANSITION FROM SOUTH JETTY

## SECTION "E - E"

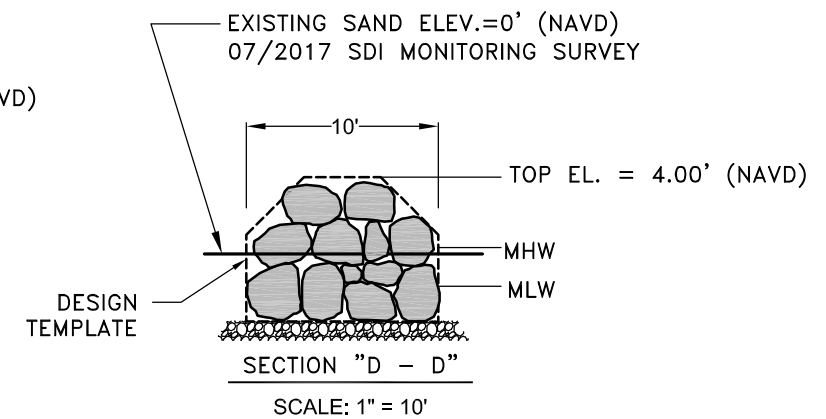


SCALE: 1" = 10'

## SECTION "C-C"



SCALE: 1" = 10'



SCALE: 1" = 10'

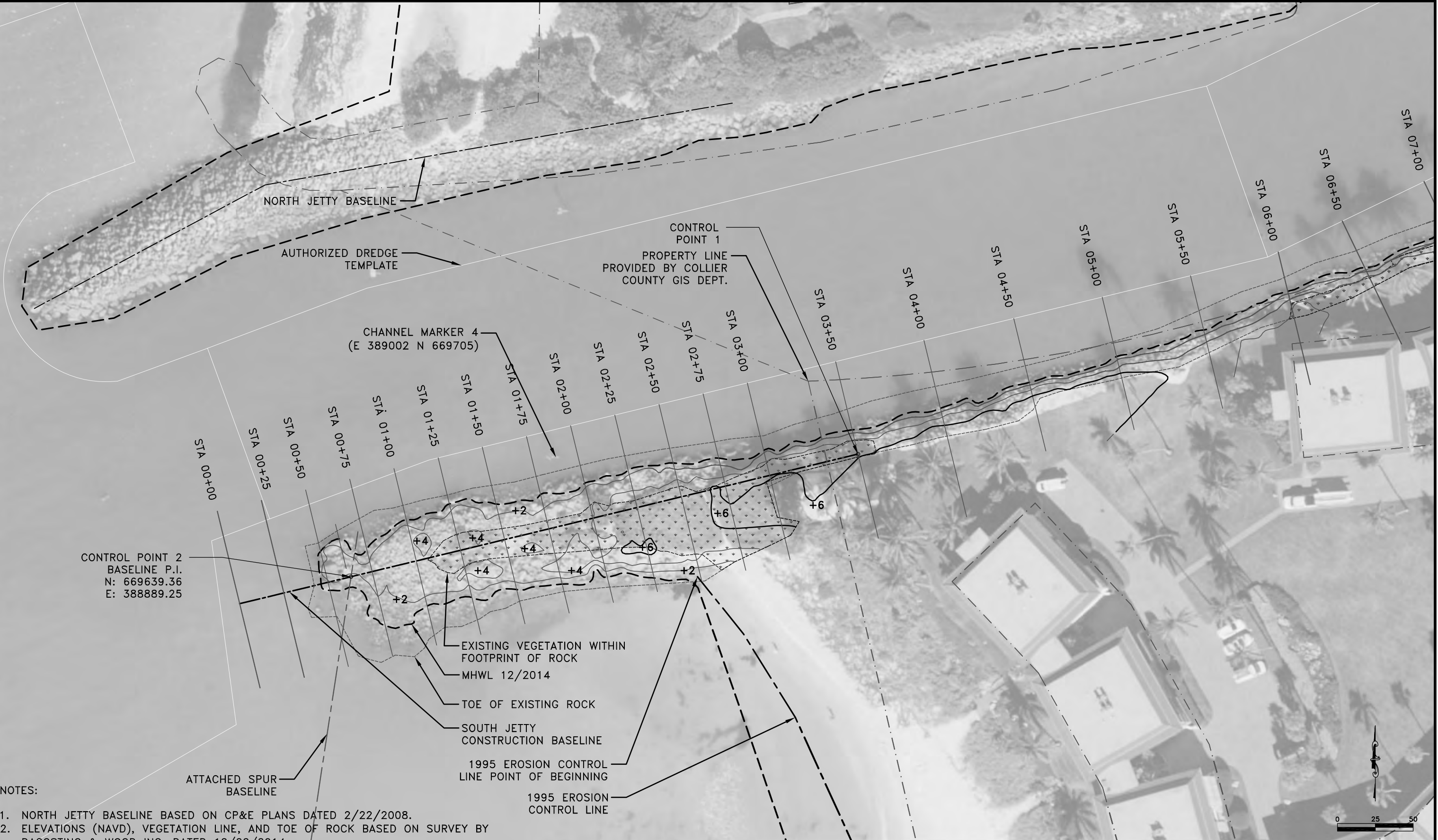


**HUMISTON & MOORE ENGINEERS**  
COASTAL ENGINEERING DESIGN AND PERMITTING

SOUTH JETTY & EROSION CONTROL STRUCTURES  
SPUR & GROIN REHABILITATION DETAILS  
FOR: COLLIER COUNTY  
DATE: 7/13/17 FILE: PLANS SCALE: SHOWN  
JOB: 24-018 DATUM: NAVD88 FIGURE: 6 OF 12

5679 STRAND COURT  
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F:\Collier\400-24018-Doctors-Pass\2015-Structures-and-Jetty\DWG\Construction Plans\2017-07-13-Update-Survey\2017-07-13 Jetty Rehab.dwg Print: Jul 18, 2017



NOTES:

1. NORTH JETTY BASELINE BASED ON CP&E PLANS DATED 2/22/2008.
2. ELEVATIONS (NAVD), VEGETATION LINE, AND TOE OF ROCK BASED ON SURVEY BY DAGOSTINO & WOOD INC. DATED 12/22/2014.
3. JETTY CONTOURS BASED ON D&W SURVEY DATED 12/22/14. PROPERTY LINE BASED ON INFORMATION FROM THE COLLIER COUNTY GIS DEPARTMENT.
4. PRE, POST AND PROGRESS SURVEYS TO INCLUDE SURVEY ALONG BASELINE.

ATTACHED SPUR BASELINE

EXISTING VEGETATION WITHIN FOOTPRINT OF ROCK

MHWL 12/2014

TOE OF EXISTING ROCK

SOUTH JETTY CONSTRUCTION BASELINE

1995 EROSION CONTROL LINE POINT OF BEGINNING

1995 EROSION CONTROL LINE

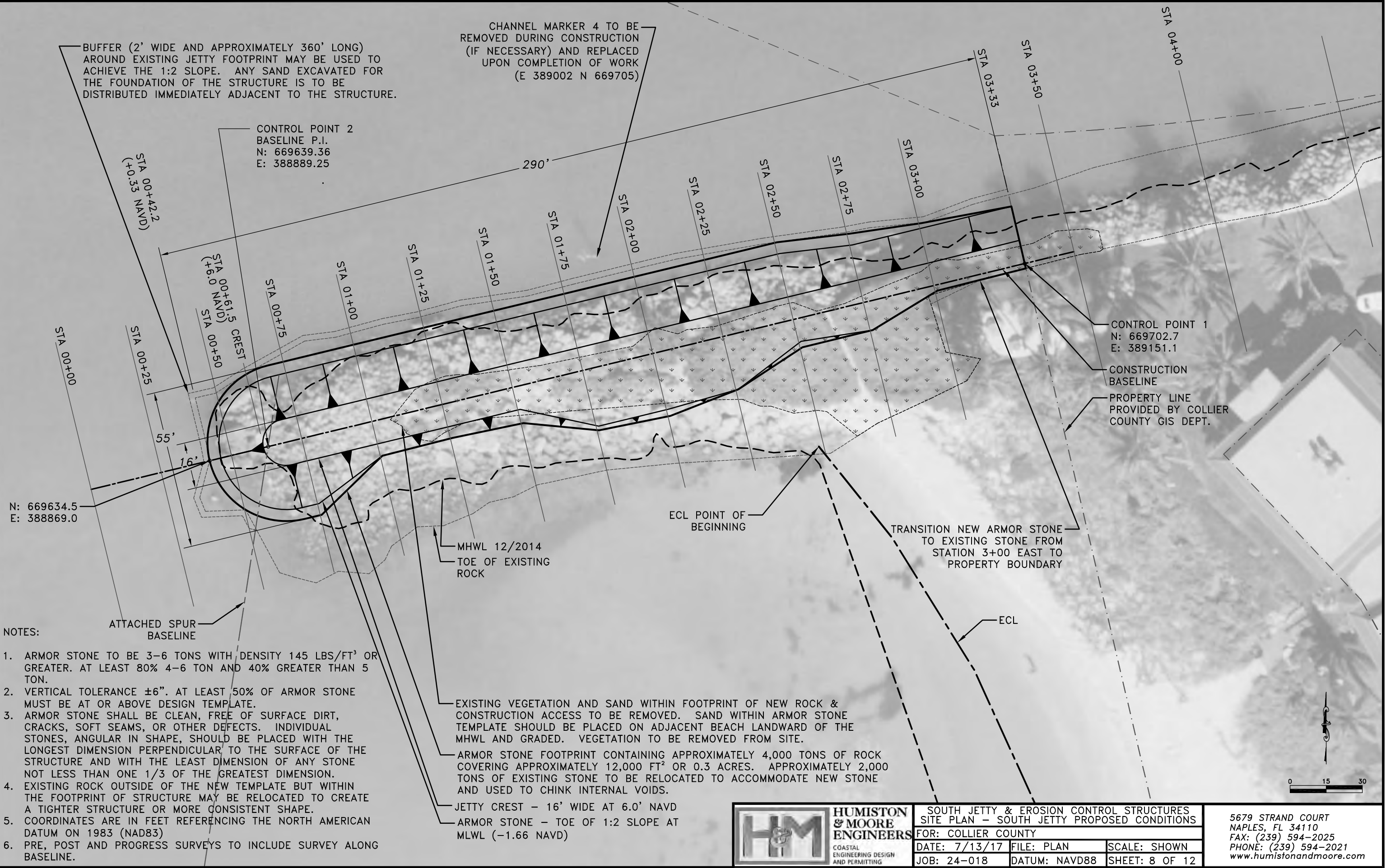
**HUMISTON & MOORE ENGINEERS**  
COASTAL ENGINEERING DESIGN AND PERMITTING

SOUTH JETTY & EROSION CONTROL STRUCTURES SITE PLAN - SOUTH JETTY EXISTING CONDITIONS FOR: COLLIER COUNTY		
DATE: 7/13/17	FILE: PLAN	SCALE: SHOWN
JOB: 24-018	DATUM: NAVD88	SHEET: 7 OF 12

5679 STRAND COURT  
NAPLES, FL 34110  
FAX: (239) 594-2025  
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BUFFER (2' WIDE AND APPROXIMATELY 360' LONG) AROUND EXISTING JETTY FOOTPRINT MAY BE USED TO ACHIEVE THE 1:2 SLOPE. ANY SAND EXCAVATED FOR THE FOUNDATION OF THE STRUCTURE IS TO BE DISTRIBUTED IMMEDIATELY ADJACENT TO THE STRUCTURE.

CHANNEL MARKER 4 TO BE REMOVED DURING CONSTRUCTION (IF NECESSARY) AND REPLACED UPON COMPLETION OF WORK (E 389002 N 669705)

CONTROL POINT 2  
BASELINE P.I.  
N: 669639.36  
E: 388889.25

CONTROL POINT 1  
N: 669702.7  
E: 389151.1

N: 669634.5  
E: 388869.0

NOTES:

1. ARMOR STONE TO BE 3-6 TONS WITH DENSITY 145 LBS/FT<sup>3</sup> OR GREATER. AT LEAST 80% 4-6 TON AND 40% GREATER THAN 5 TON.
2. VERTICAL TOLERANCE ±6". AT LEAST 50% OF ARMOR STONE MUST BE AT OR ABOVE DESIGN TEMPLATE.
3. ARMOR STONE SHALL BE CLEAN, FREE OF SURFACE DIRT, CRACKS, SOFT SEAMS, OR OTHER DEFECTS. INDIVIDUAL STONES, ANGULAR IN SHAPE, SHOULD BE PLACED WITH THE LONGEST DIMENSION PERPENDICULAR TO THE SURFACE OF THE STRUCTURE AND WITH THE LEAST DIMENSION OF ANY STONE NOT LESS THAN ONE 1/3 OF THE GREATEST DIMENSION.
4. EXISTING ROCK OUTSIDE OF THE NEW TEMPLATE BUT WITHIN THE FOOTPRINT OF STRUCTURE MAY BE RELOCATED TO CREATE A TIGHTER STRUCTURE OR MORE CONSISTENT SHAPE.
5. COORDINATES ARE IN FEET REFERENCING THE NORTH AMERICAN DATUM ON 1983 (NAD83)
6. PRE, POST AND PROGRESS SURVEYS TO INCLUDE SURVEY ALONG BASELINE.

EXISTING VEGETATION AND SAND WITHIN FOOTPRINT OF NEW ROCK & CONSTRUCTION ACCESS TO BE REMOVED. SAND WITHIN ARMOR STONE TEMPLATE SHOULD BE PLACED ON ADJACENT BEACH LANDWARD OF THE MHWL AND GRADED. VEGETATION TO BE REMOVED FROM SITE.

ARMOR STONE FOOTPRINT CONTAINING APPROXIMATELY 4,000 TONS OF ROCK COVERING APPROXIMATELY 12,000 FT<sup>2</sup> OR 0.3 ACRES. APPROXIMATELY 2,000 TONS OF EXISTING STONE TO BE RELOCATED TO ACCOMMODATE NEW STONE AND USED TO CHINK INTERNAL VOIDS.

JETTY CREST - 16' WIDE AT 6.0' NAVD  
ARMOR STONE - TOE OF 1:2 SLOPE AT MLWL (-1.66 NAVD)



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COASTAL ENGINEERING DESIGN AND PERMITTING

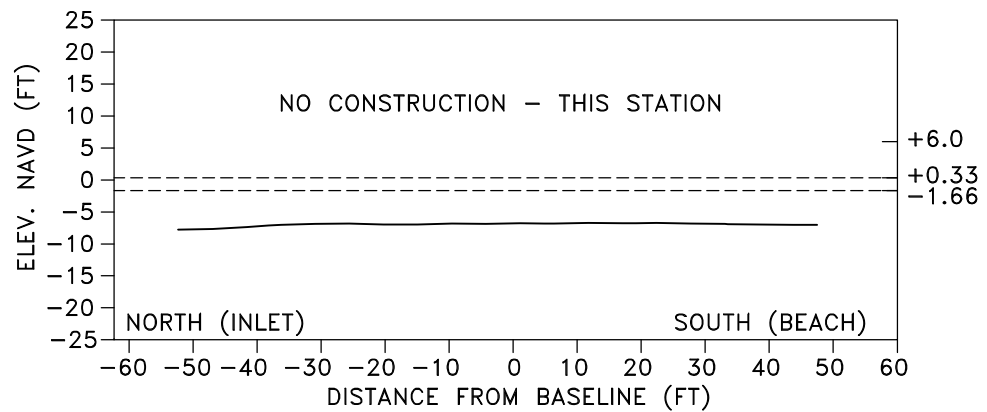
SOUTH JETTY & EROSION CONTROL STRUCTURES SITE PLAN - SOUTH JETTY PROPOSED CONDITIONS FOR: COLLIER COUNTY		
DATE: 7/13/17	FILE: PLAN	SCALE: SHOWN
JOB: 24-018	DATUM: NAVD88	SHEET: 8 OF 12

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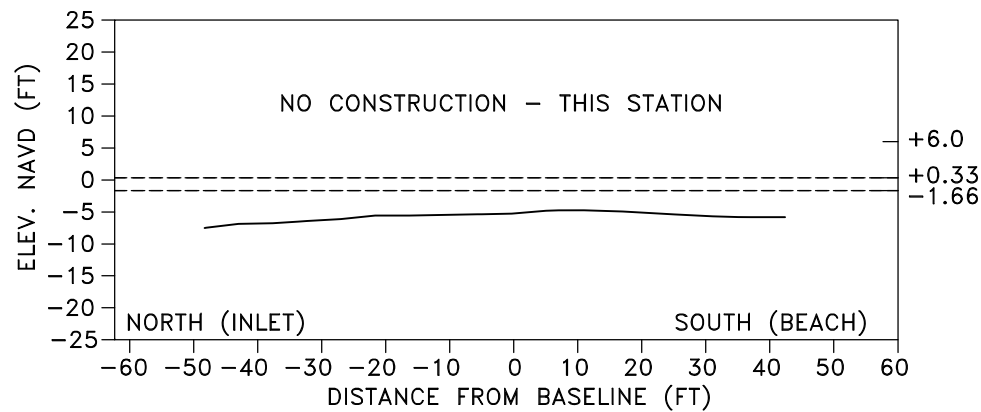


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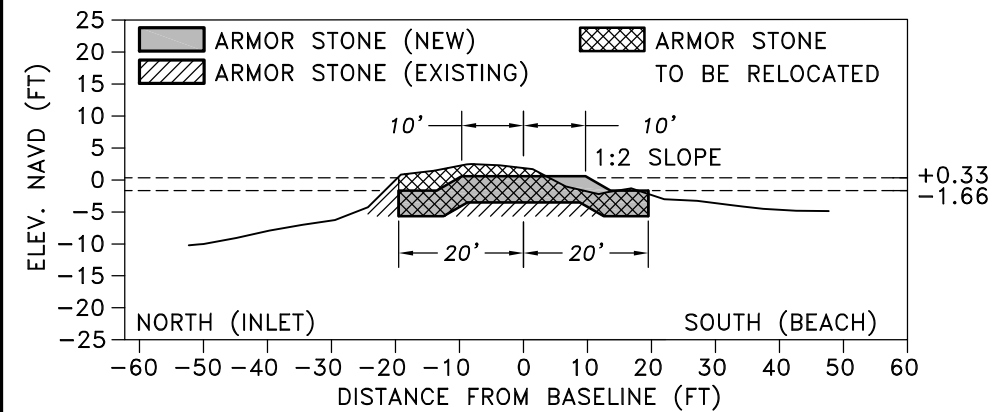
**PROFILE 00+00**



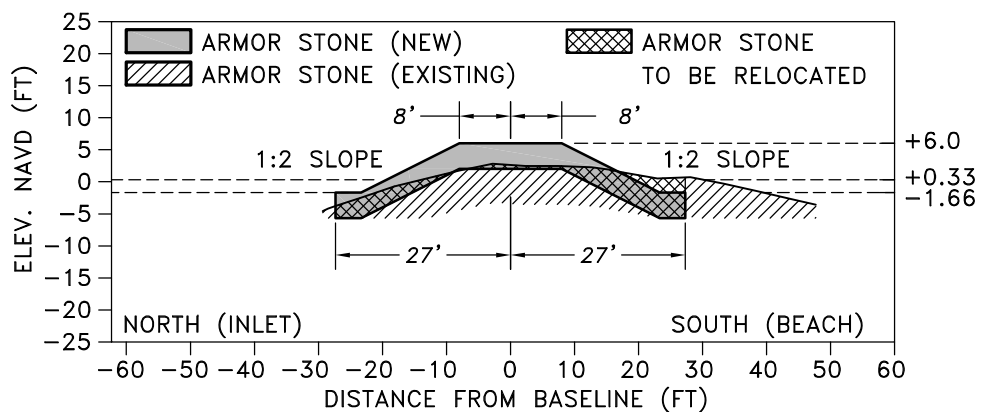
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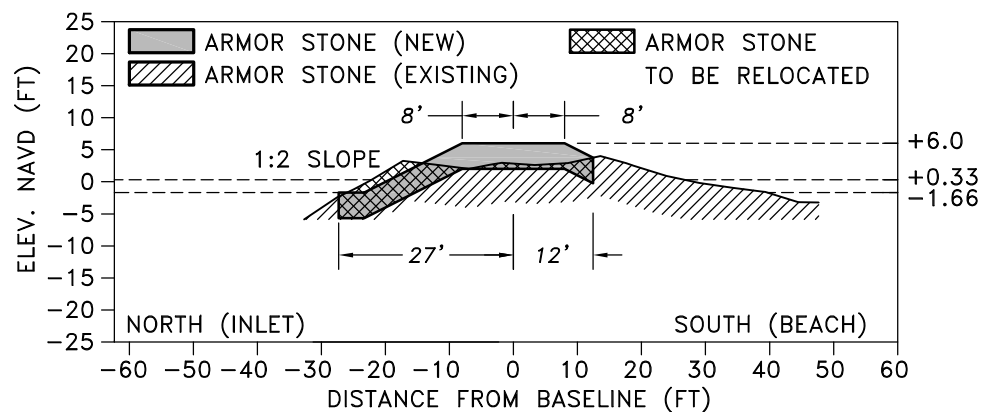
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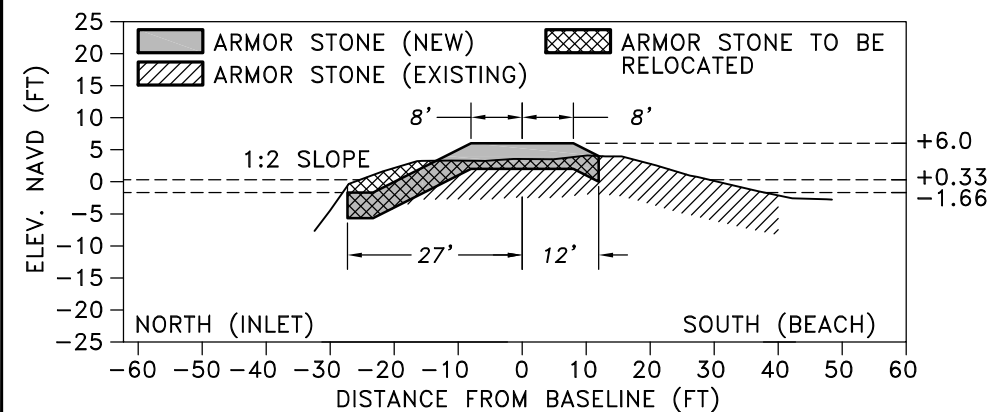
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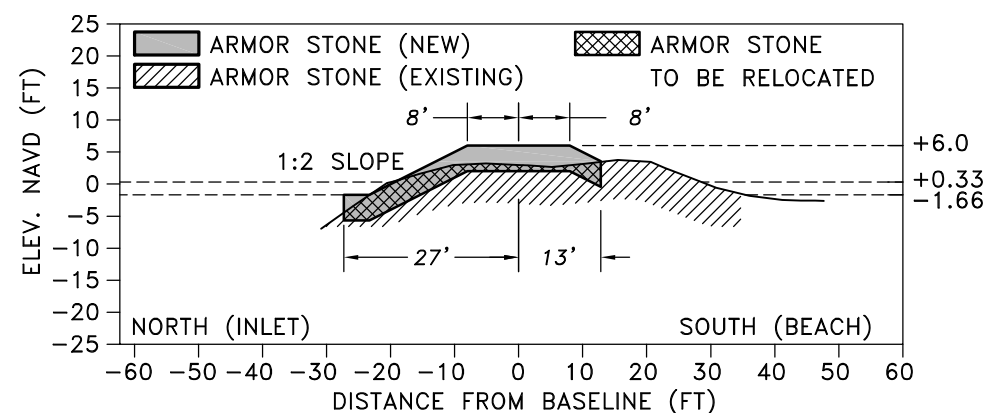
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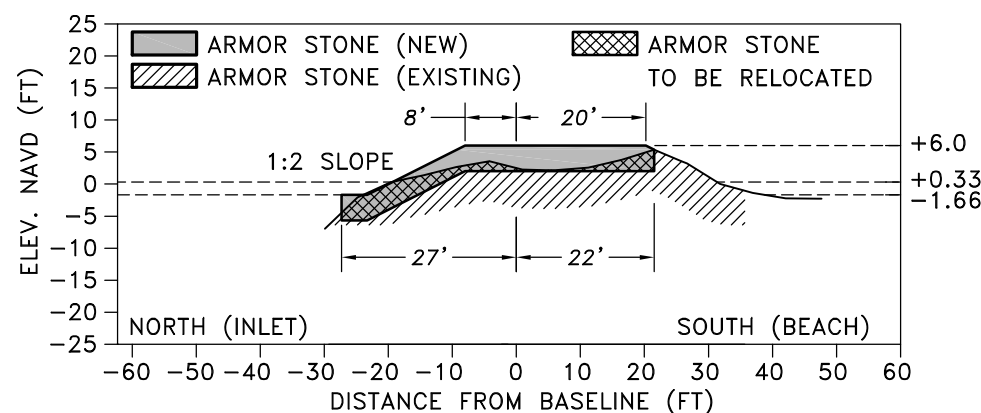
**PROFILE 01+25**



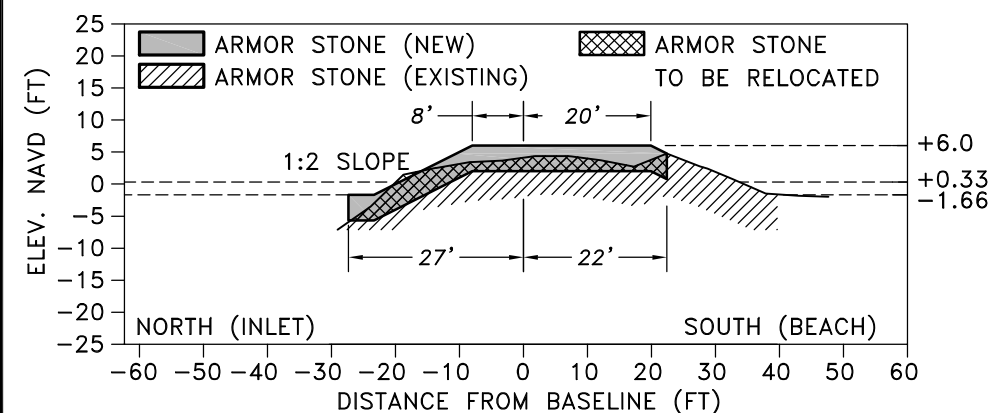
**PROFILE 01+50**



**PROFILE 01+75**



**PROFILE 02+00**

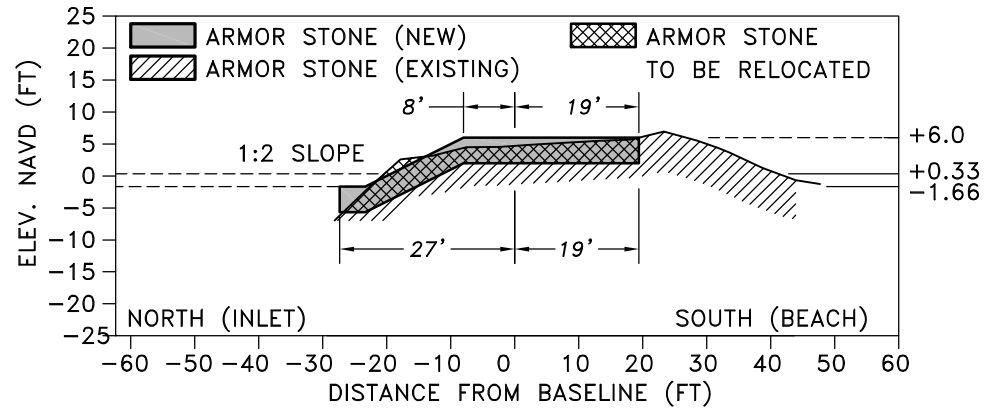


**SOUTH JETTY & EROSION CONTROL STRUCTURES  
CROSS SECTIONS - JETTY PROFILES**  
FOR: COLLIER COUNTY  
DATE: 7/13/17 FILE: PLAN SCALE: SHOWN  
JOB: 24-018 DATUM: NAVD88 SHEET: 9 OF 12

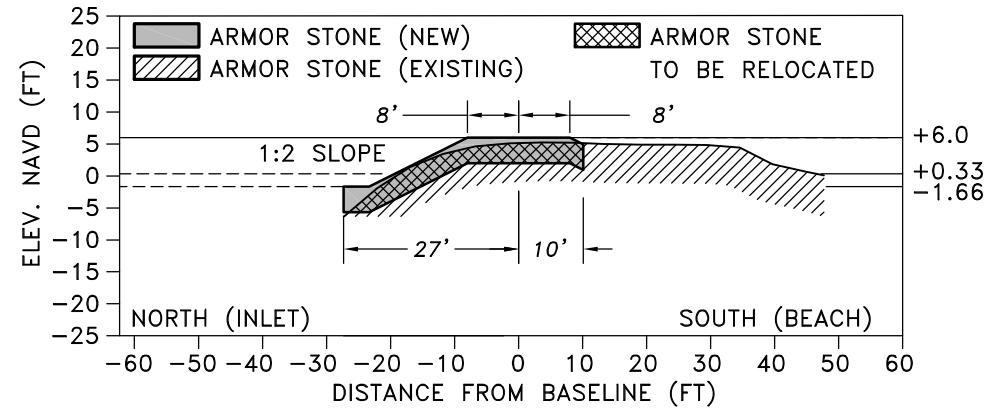
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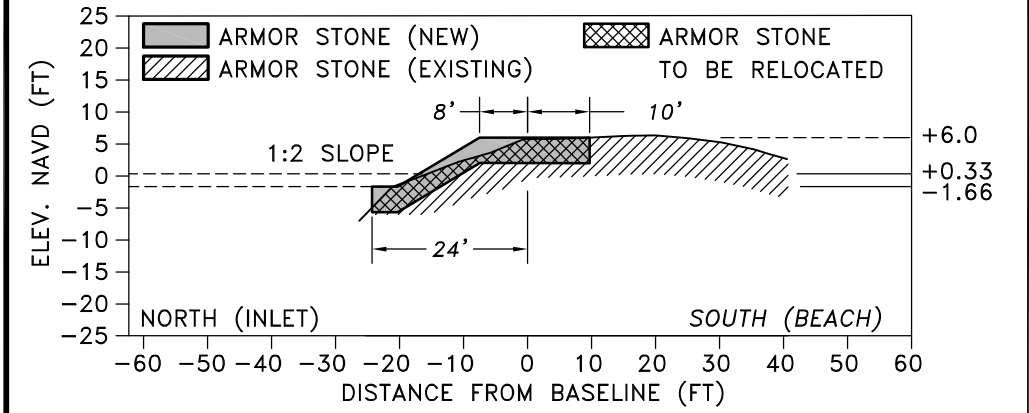
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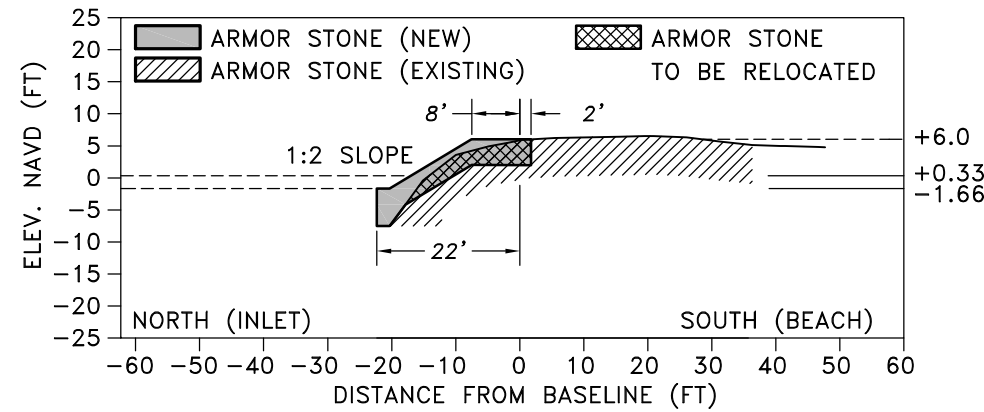
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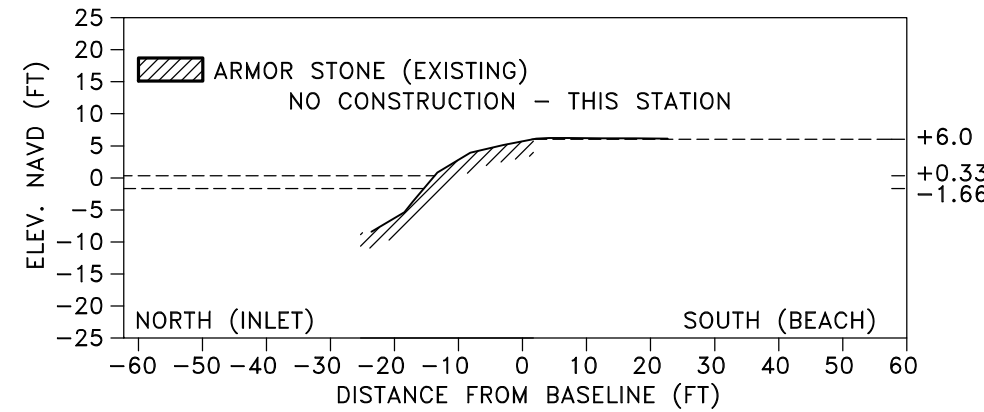
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**PROFILE 03+00**



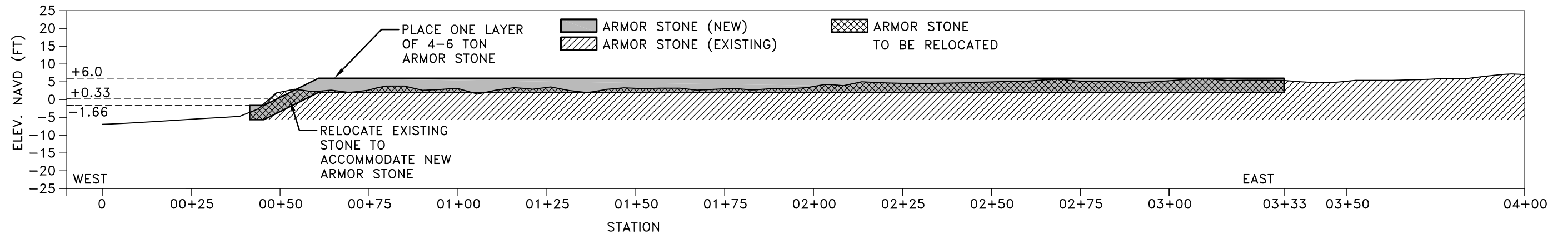
**PROFILE 03+50**



**NOTES:**

1. EXISTING ARMOR STONE RELOCATED TO ACCOMMODATE NEW STONE TO BE USED TO CHINK INTERNAL VOIDS IN NEWLY PLACED STONE.
2. ESTIMATED AMOUNT OF ARMOR STONE REQUIRED COULD VARY BY 50% OR MORE DUE CONSTRUCTION METHODS AND USE OF EXISTING ROCK LOCATED WITHIN THE TEMPLATE LIMITS.
3. EXISTING ROCK & VEGETATION LOCATION BASED ON SURVEY BY DAGOSTINO & WOOD DATED 12/22/14.
4. ELEVATIONS SHOWN ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

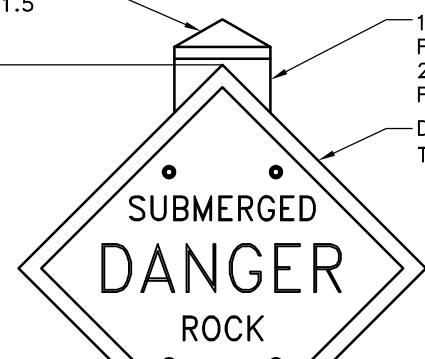
**PROFILE CONSTRUCTION BASELINE**



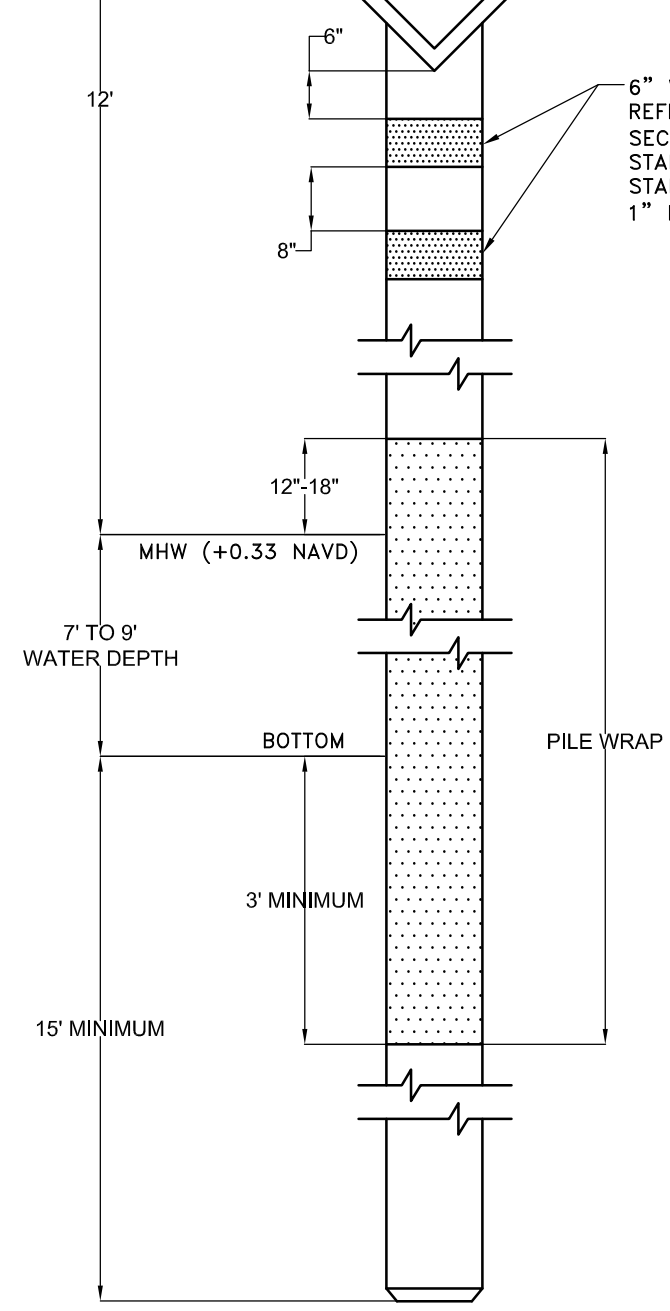
SOUTH JETTY & EROSION CONTROL STRUCTURES  
CROSS SECTIONS - JETTY PROFILES  
FOR: COLLIER COUNTY  
DATE: 7/13/17 FILE: PLAN SCALE: SHOWN  
JOB: 24-018 DATUM: NAVD88 SHEET: 10 OF 12

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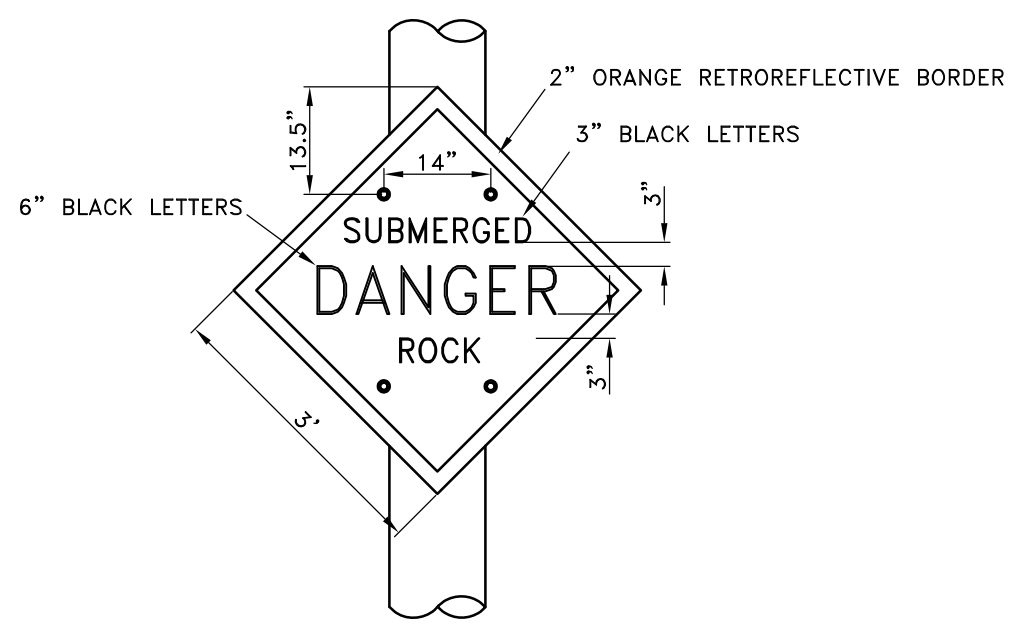
PLASTIC PILE CAP ATTACHED WITH (4) 316SS #10 X 1.5" SCREWS MINIMUM



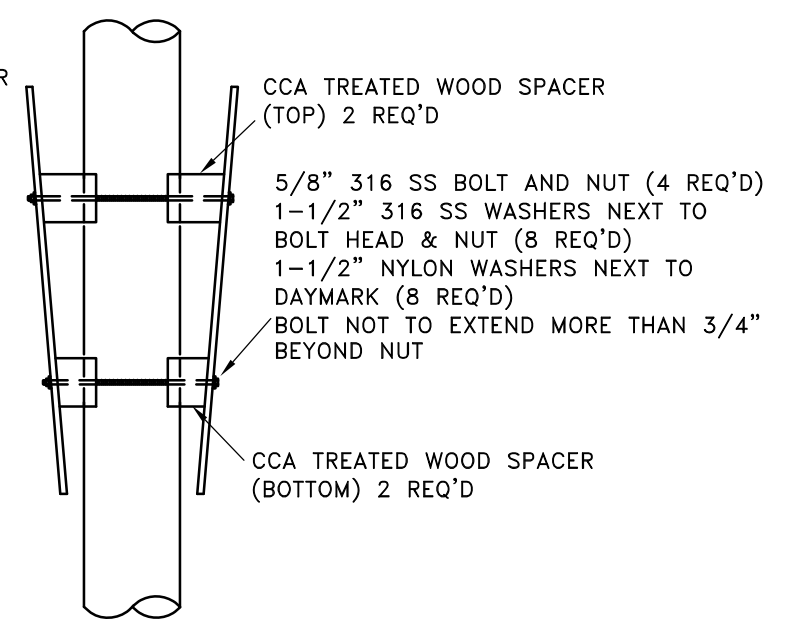
12"Ø NON-SPLICED PRESSURE TREATED 2.50 CCA TIMBER PILE  
DAYMARKER TWO REQ'D



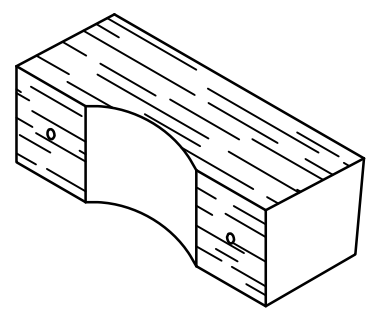
6" WIDE WHITE REFLECTIVE TAPE SECURED WITH (4) STAINLESS STEEL STAPLES MINIMUM. 1" LAP MINIMUM.



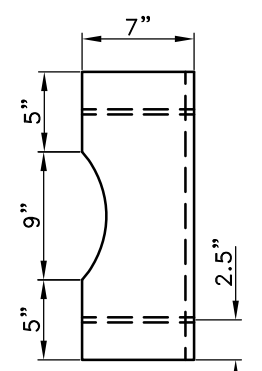
TYPICAL WARNING DAYMARK FRONT VIEW



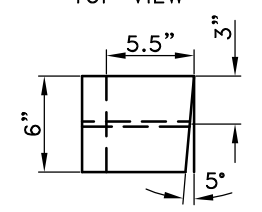
TYPICAL WARNING DAYMARK SIDE VIEW



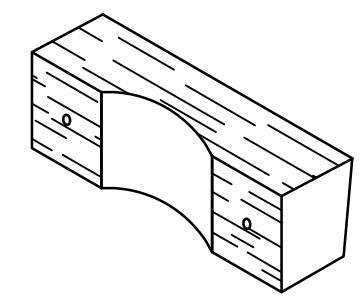
TOP SPACER



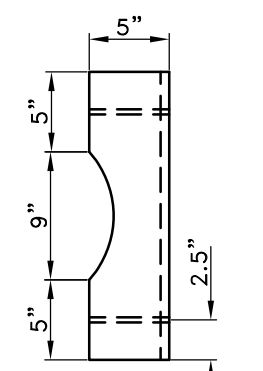
TOP VIEW



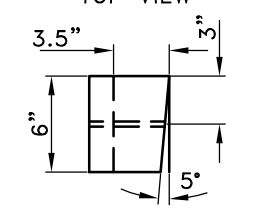
SIDE VIEW



BOTTOM SPACER



TOP VIEW



SIDE VIEW

NOTES:

1. MOUNTING CONFIGURATION CONSISTS OF STAINLESS STEEL THROUGH BOLT, STAINLESS STEEL WASHER, NYLON WASHER, DAYMARK, SPACER, PILING, SPACER, DAYMARK, NYLON WASHER, STAINLESS STEEL WASHER, AND STAINLESS STEEL NUT.
2. GRAIN OF WOOD TO RUN PARALLEL TO THE LONG AXIS OF SPACER.
3. PILING TO BE PRESSURE TREATED 0.60 CCA, 0.60 ACQ, OR 0.60 ACZA.
4. DAYMARK AND SPACER HOLE PATTERN DIMENSIONS ARE APPROXIMATE. THROUGH BOLTS TO BE A MAXIMUM OF 3/4" FROM PILE.
5. FASTENERS FOR SIGN TO BE VANDAL PROOFED AND SIGN SHOULD BE CENTERED ON PILING.
6. CONTRACTOR SHALL NOT IMPACT THE MESSAGE AREA OR REFLECTIVE SURFACES, OR SPLIT THE ENDS OF CROSSING TIMBERS.
7. PLASTIC PILE CAP TO FIT PILING NATURALLY WITHOUT MODIFICATION.
8. HIGH DENSITY POLYETHYLENE PILE WRAP .060 MINIMUM THICKNESS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
9. POSITIONS AND LOCATIONS OF SIGNS TO BE VERIFIED BY ENGINEER OR OWNER PRIOR TO COMPLETION.

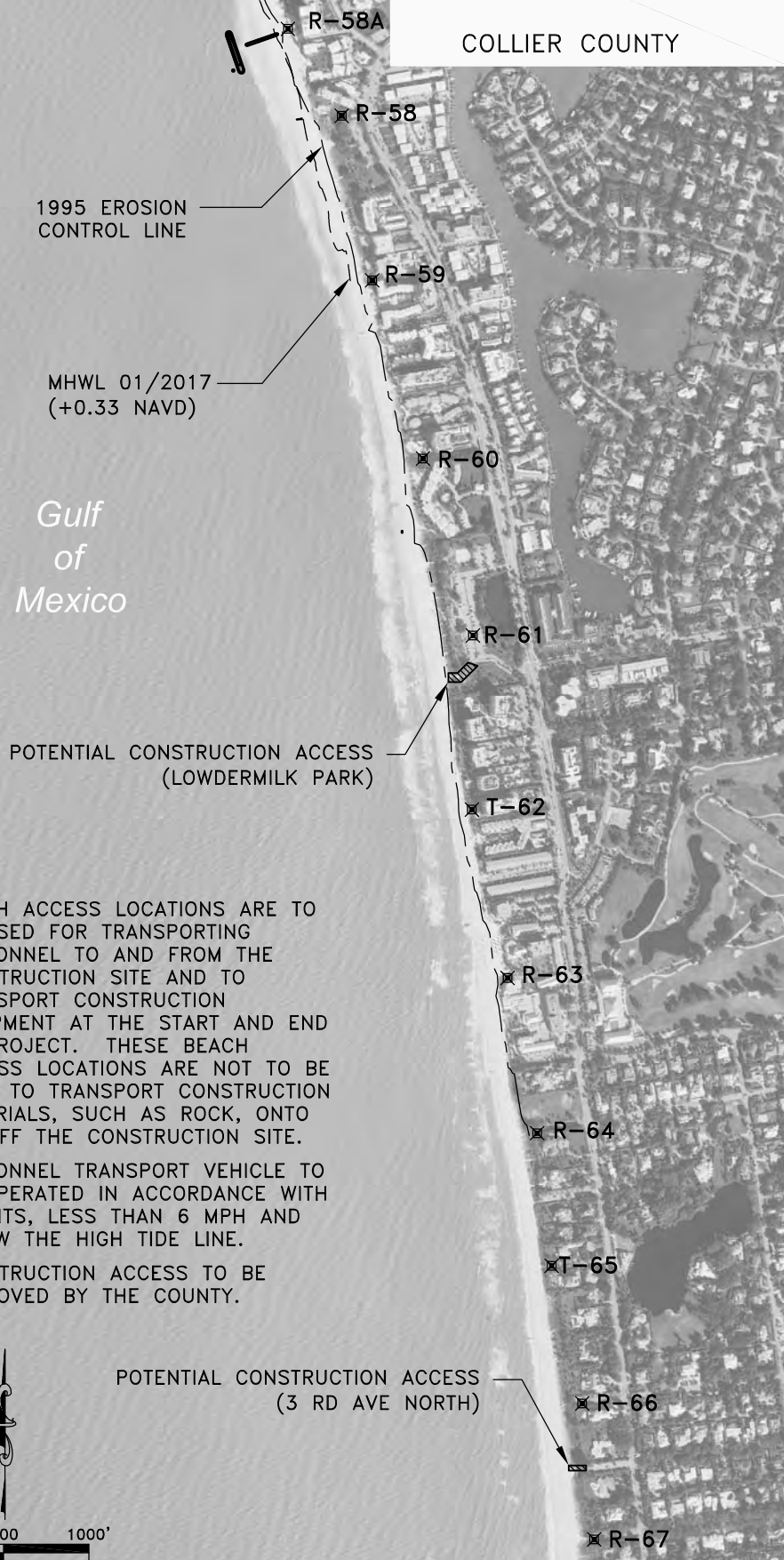
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COASTAL ENGINEERING DESIGN AND PERMITTING

SOUTH JETTY & EROSION CONTROL STRUCTURES DAYMARKER DETAILS		
FOR: COLLIER COUNTY		
DATE: 7/13/17	FILE: PLANS	SCALE: SHOWN
JOB: 24-018	DATUM: NAVD88	FIGURE: 11 OF 12

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# CONSTRUCTION ACCESS

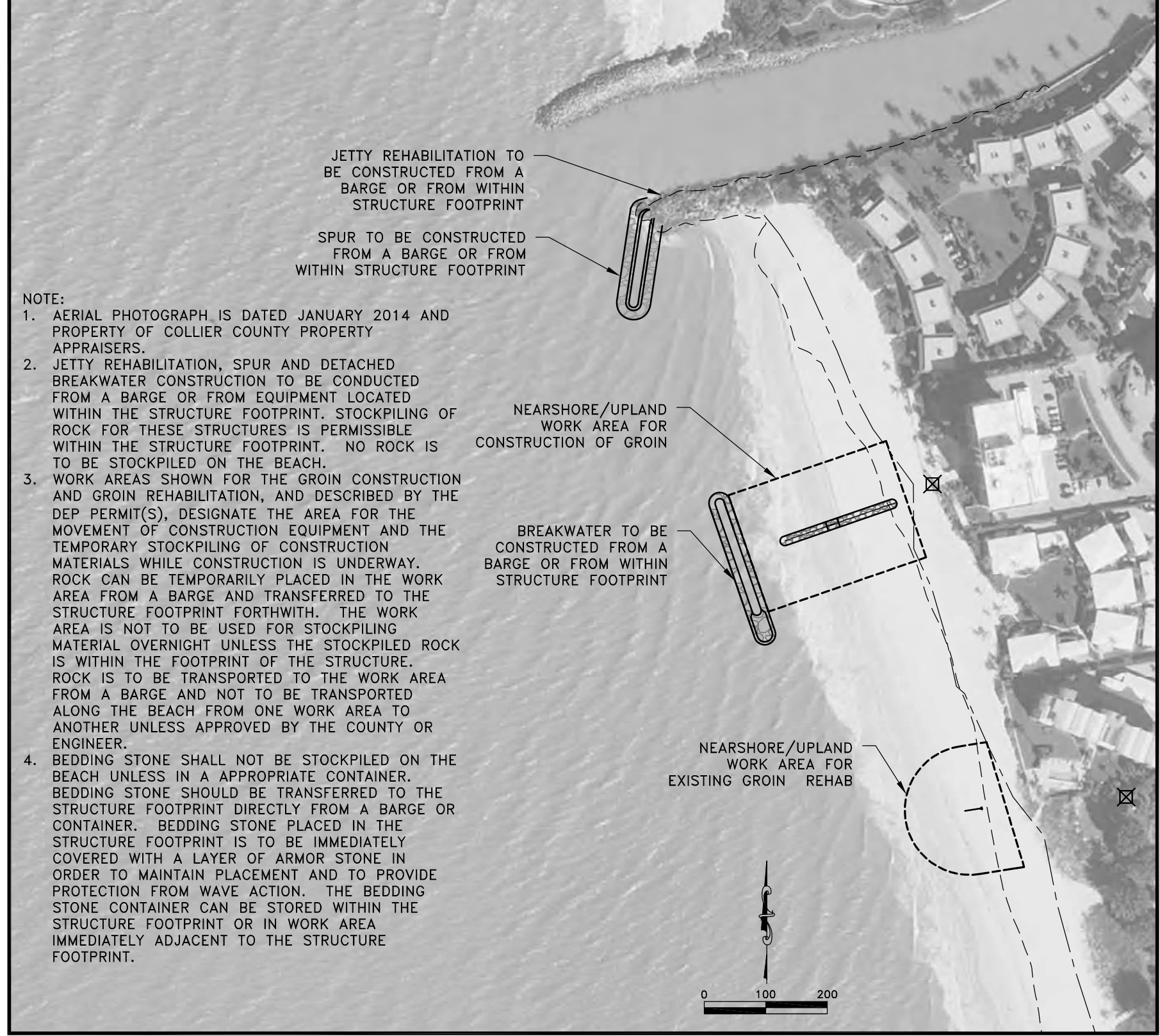
COLLIER COUNTY



**NOTES:**


1. BEACH ACCESS LOCATIONS ARE TO BE USED FOR TRANSPORTING PERSONNEL TO AND FROM THE CONSTRUCTION SITE AND TO TRANSPORT CONSTRUCTION EQUIPMENT AT THE START AND END OF PROJECT. THESE BEACH ACCESS LOCATIONS ARE NOT TO BE USED TO TRANSPORT CONSTRUCTION MATERIALS, SUCH AS ROCK, ONTO OR OFF THE CONSTRUCTION SITE.
2. PERSONNEL TRANSPORT VEHICLE TO BE OPERATED IN ACCORDANCE WITH PERMITS, LESS THAN 6 MPH AND BELOW THE HIGH TIDE LINE.
3. CONSTRUCTION ACCESS TO BE APPROVED BY THE COUNTY.

# DESIGNATED WORK AREAS



**NOTE:**

1. AERIAL PHOTOGRAPH IS DATED JANUARY 2014 AND PROPERTY OF COLLIER COUNTY PROPERTY APPRAISERS.
2. JETTY REHABILITATION, SPUR AND DETACHED BREAKWATER CONSTRUCTION TO BE CONDUCTED FROM A BARGE OR FROM EQUIPMENT LOCATED WITHIN THE STRUCTURE FOOTPRINT. STOCKPILING OF ROCK FOR THESE STRUCTURES IS PERMISSIBLE WITHIN THE STRUCTURE FOOTPRINT. NO ROCK IS TO BE STOCKPILED ON THE BEACH.
3. WORK AREAS SHOWN FOR THE GROIN CONSTRUCTION AND GROIN REHABILITATION, AND DESCRIBED BY THE DEP PERMIT(S), DESIGNATE THE AREA FOR THE MOVEMENT OF CONSTRUCTION EQUIPMENT AND THE TEMPORARY STOCKPILING OF CONSTRUCTION MATERIALS WHILE CONSTRUCTION IS UNDERWAY. ROCK CAN BE TEMPORARILY PLACED IN THE WORK AREA FROM A BARGE AND TRANSFERRED TO THE STRUCTURE FOOTPRINT FORTHWITH. THE WORK AREA IS NOT TO BE USED FOR STOCKPILING MATERIAL OVERNIGHT UNLESS THE STOCKPILED ROCK IS WITHIN THE FOOTPRINT OF THE STRUCTURE. ROCK IS TO BE TRANSPORTED TO THE WORK AREA FROM A BARGE AND NOT TO BE TRANSPORTED ALONG THE BEACH FROM ONE WORK AREA TO ANOTHER UNLESS APPROVED BY THE COUNTY OR ENGINEER.
4. BEDDING STONE SHALL NOT BE STOCKPILED ON THE BEACH UNLESS IN A APPROPRIATE CONTAINER. BEDDING STONE SHOULD BE TRANSFERRED TO THE STRUCTURE FOOTPRINT DIRECTLY FROM A BARGE OR CONTAINER. BEDDING STONE PLACED IN THE STRUCTURE FOOTPRINT IS TO BE IMMEDIATELY COVERED WITH A LAYER OF ARMOR STONE IN ORDER TO MAINTAIN PLACEMENT AND TO PROVIDE PROTECTION FROM WAVE ACTION. THE BEDDING STONE CONTAINER CAN BE STORED WITHIN THE STRUCTURE FOOTPRINT OR IN WORK AREA IMMEDIATELY ADJACENT TO THE STRUCTURE FOOTPRINT.

 <b>HUMISTON &amp; MOORE ENGINEERS</b> <small>COASTAL ENGINEERING DESIGN AND PERMITTING</small>	SOUTH JETTY & EROSION CONTROL STRUCTURE CONSTRUCTION ACCESS FOR: COLLIER COUNTY		5679 STRAND COURT NAPLES, FL 34110 FAX: (239) 594-2025 PHONE: (239) 594-2021 www.humistonandmoore.com
	DATE: 7/13/17	FILE: PLANS	
JOB: 24-018	DATUM: NAVD88	FIGURE: 12 OF 12	