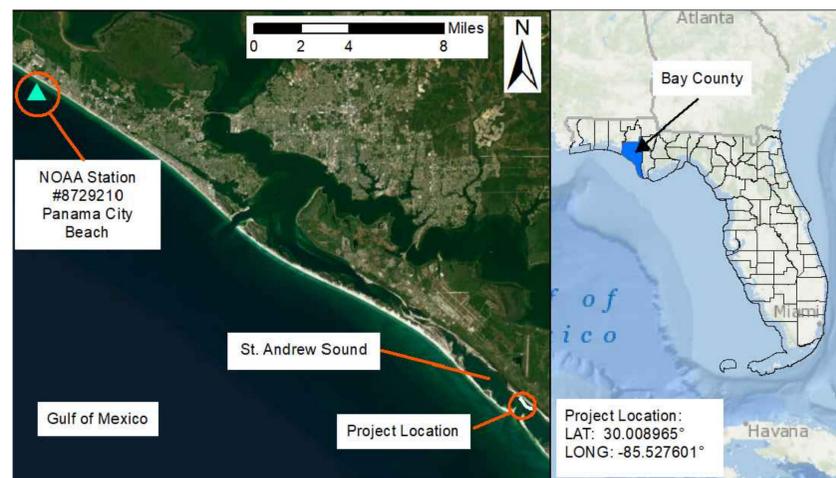


# TYNDALL PILOT PROJECT SUBMERGED SHORELINE STABILIZATION BAY COUNTY, FLORIDA

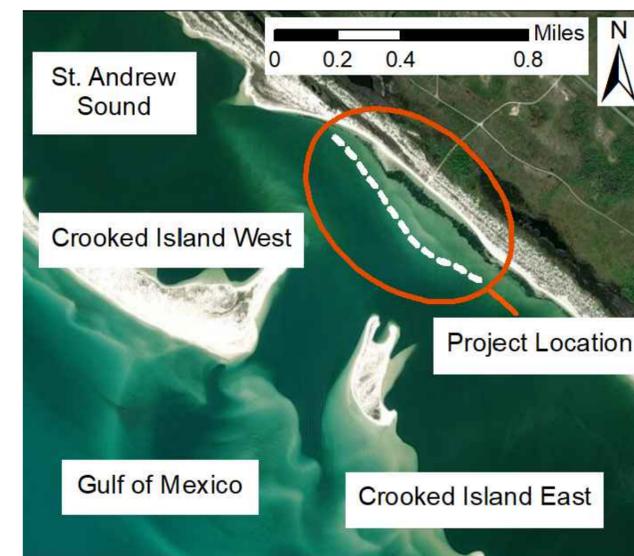
PREPARED FOR  
**THE NATURE CONSERVANCY**



PROJECT VICINITY MAP  
NTS



DRAWINGS



PROJECT LOCATION MAP  
NTS

PRELIMINARY FOR  
REVIEW ONLY

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PREPARED BY OR UNDER SUPERVISION OF:

JOEL A. TILLERY  
NAME

98382  
REGISTRATION # DATE

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Jacobs Project No. D3586500

DECEMBER 2024

# Jacobs

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CONSTRUCTION

# INDEX OF DRAWINGS

SHEET NO.	GENERAL
1	G-101 TITLE SHEET, VICINITY MAP, AND LOCATION MAP
2	G-102 SHEET INDEX, SECTION/ DETAIL DESIGNATION, LEGEND, AND ABBREVIATION
3	G-103 GENERAL NOTES
4	G-104 SITE ACCESS AND WORKING AREA PLAN
5	G-105 PROJECT LAYOUT PLAN
<b>SITE PLAN</b>	
6	C-201 SITE PLAN (1 OF 3)
7	C-202 SITE PLAN (2 OF 3)
8	C-203 SITE PLAN (3 OF 3)
9	C-301 BREAKWATER STRUCTURE - TYPICAL PLAN VIEW
10	C-302 BREAKWATER STRUCTURE - TYPICAL CROSS SECTION
11	C-303 BREAKWATER STRUCTURE - INSTALLATION SEQUENCE
<b>CIVIL DETAILS</b>	
12	CD-401 TYPICAL DETAILS - NAVIGATION MARKER AND TURBIDITY BARRIER

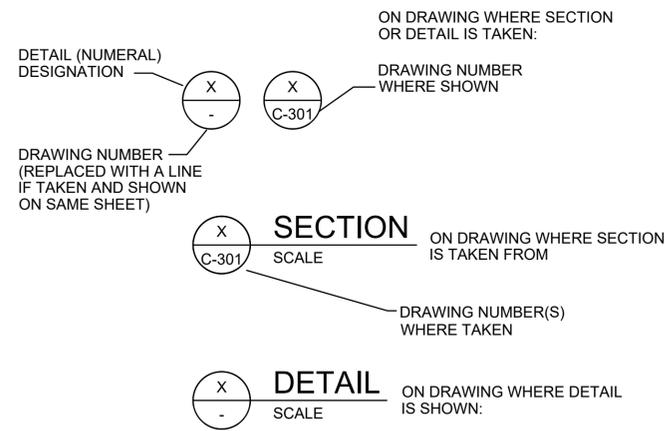
# ABBREVIATIONS

AFCEC	AIR FORCE CIVIL ENGINEERING CENTER
APPROX	APPROXIMATELY
AFB	AIR FORCE BASE
CES	CIVIL ENGINEERING SQUADRON
DIA	DIAMETER
EQUIV	EQUIVALENT
FT	FOOT
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NDR	NATURAL DISASTER RECOVERY
RCA	RECYCLED CONCRETE AGGREGATE
SAV	SUBMERGED AQUATIC VEGETATION
SG	SPECIFIC GRAVITY

# CIVIL LEGEND

	CENTERLINE OF LIMESTONE		EXISTING GROUND		SUBMERGED AQUATIC VEGETATION (SAV) EXCLUSION ZONE
	DIRECTION OF SLOPE		RIPRAP		
	EXISTING BATHYMETRY LINE		NAVIGATION SIGN		
	EXISTING SHORELINE		WORKING AREA		

# SECTION / DETAIL DESIGNATIONS



- GRID LINE INDICATOR
- KEYNOTE NUMBER
- REVISION / ADDENDA NUMBER
- NORTH ARROW (TRUE NORTH)

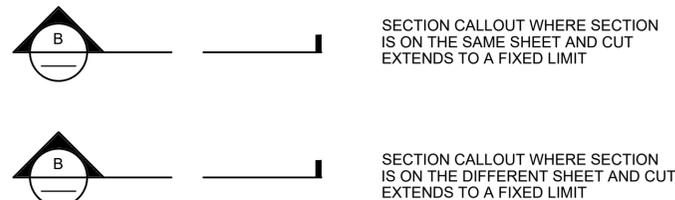
# DESIGN DETAIL DESIGNATION

DESIGN DETAIL DESIGNATION (NUMERAL) SHOWN ON DESIGN DETAIL DRAWING(S)  $\frac{1234-567}{-}$

### NOTES:

- ALL DESIGN DETAILS ARE TYPICAL AND MUST BE USED IF DESIGN DETAIL DESIGNATION IS NOT SHOWN.
- THE TERM STANDARD DETAIL, OR A FORM OF IT, IS SYNONOMOUS WITH DESIGN DETAIL. THE DESIGN DETAILS REPRESENT THE CHARACTER AND NATURE OF THE WORK REQUIRED THROUGHOUT THE PROJECT. ALL ASSOCIATED WORK SHALL BE IN ACCORDANCE WITH THE DESIGN DETAILS SHOWN WHETHER THE DETAILS ARE SPECIFICALLY REFERENCED OR NOT.

### TITLE SCALE



NO.	DATE	DR	REVISION	BY	APVD
D5GN			CHK	H. SAYADFAR	
				L. BASSETTI	
				J. TILLERY	

25 WEST CEDAR STREET, SUITE 350  
PENSACOLA, FL 32502

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SUBMERGED SHORELINE STABILIZATION  
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GENERAL  
SHEET INDEX, SECTION/ DETAIL DESIGNATION, LEGEND, AND ABBREVIATION

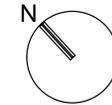
NTS	
VERIFY SCALE	
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DATE	DECEMBER 2024
PROJ	D3586500
DWG	G-102
SHEET	2 of 12

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- NOTES:
- BATHYMETRIC SURVEY IS REFERENCED TO NORTH AMERICAN VERTICAL DATUM 1988 (FEET, NAVD88).
  - CONTRACTOR TO ACCESS SITE VIA BARGES WITHIN THE LIMITS SHOWN IN SHEET G-104.

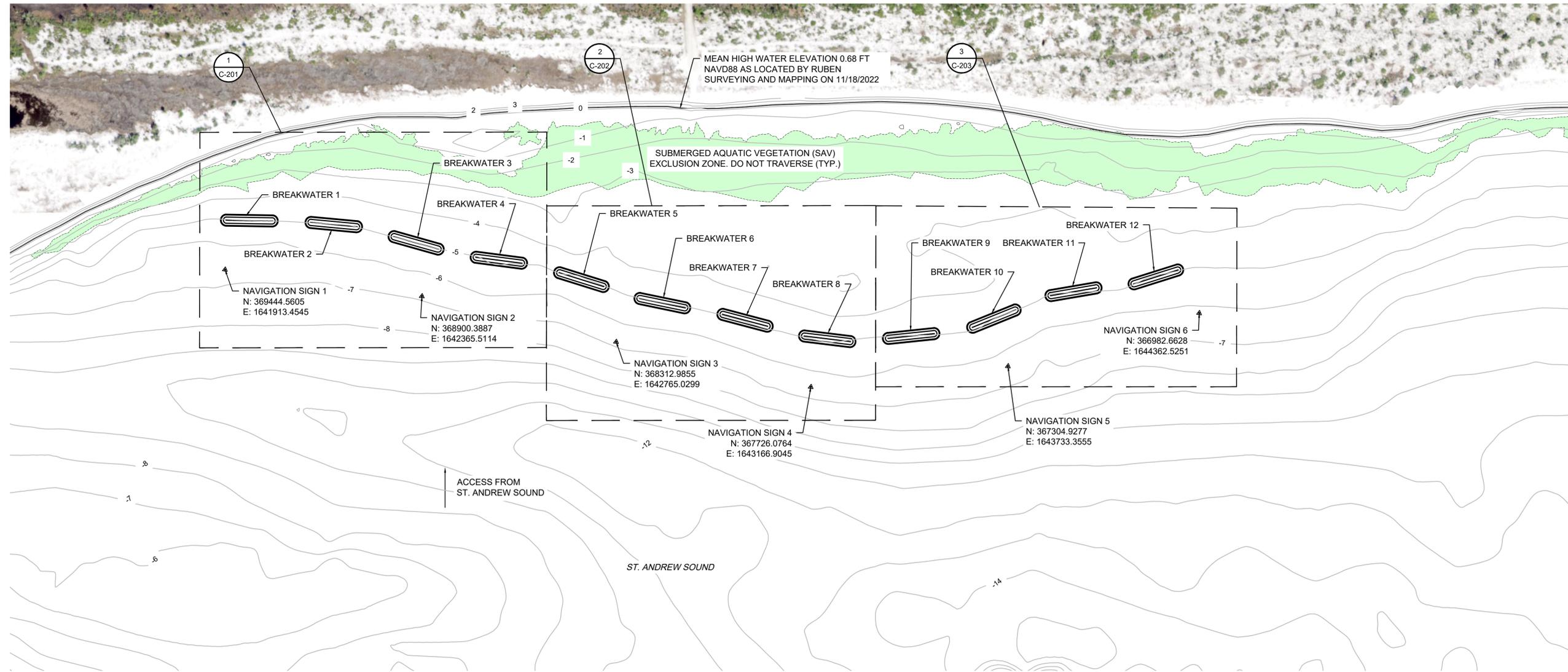


### PROJECT LAYOUT PLAN

SCALE: 1" = 200'

LEGEND:

- 4 CONTOUR
- SUBMERGED AQUATIC VEGETATION (SAV)
- NAVIGATION SIGN



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GENERAL

### PROJECT LAYOUT PLAN

NTS	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DECEMBER 2024
PROJ	D3586500
DWG	G-105
SHEET	5 OF 12

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				L. BASSETTI
				H. SAYADFAR
				D. KINGERY

NOTES:

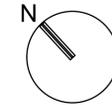
1. ALL UNITS IN FEET UNLESS OTHERWISE NOTED.
2. FINISHED STRUCTURE ELEVATION IS DEFINED ON THE CROSS-SECTION; GEOMETRIES TO VARY AS REQUIRED TO ACHIEVE STATED LEVELS.
3. STATED HORIZONTAL EXTENTS ARE MINIMUM EXTENTS; HORIZONTAL TOLERANCE OF UP TO 2 FEET BEYOND THESE EXTENTS TO BE ACCEPTABLE.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH PROJECT LAYOUT PLAN (G-105).
5. GROUND SURFACE FOR EACH BREAKWATER DETAIL IS DEPICTED AS UNIFORM FOR CLARITY AND MAY NOT REPRESENT ACTUAL CONDITIONS AT EACH BREAKWATER LOCATION. CONTRACTOR SHALL FIELD VERIFY GROUND SURFACE CONDITIONS AT EACH BREAKWATER LOCATION AND RECOMMEND ADJUSTMENTS TO EACH BREAKWATER'S BASE FOR THE ENGINEER'S APPROVAL, PRIOR TO CONSTRUCTION.

LEGEND:

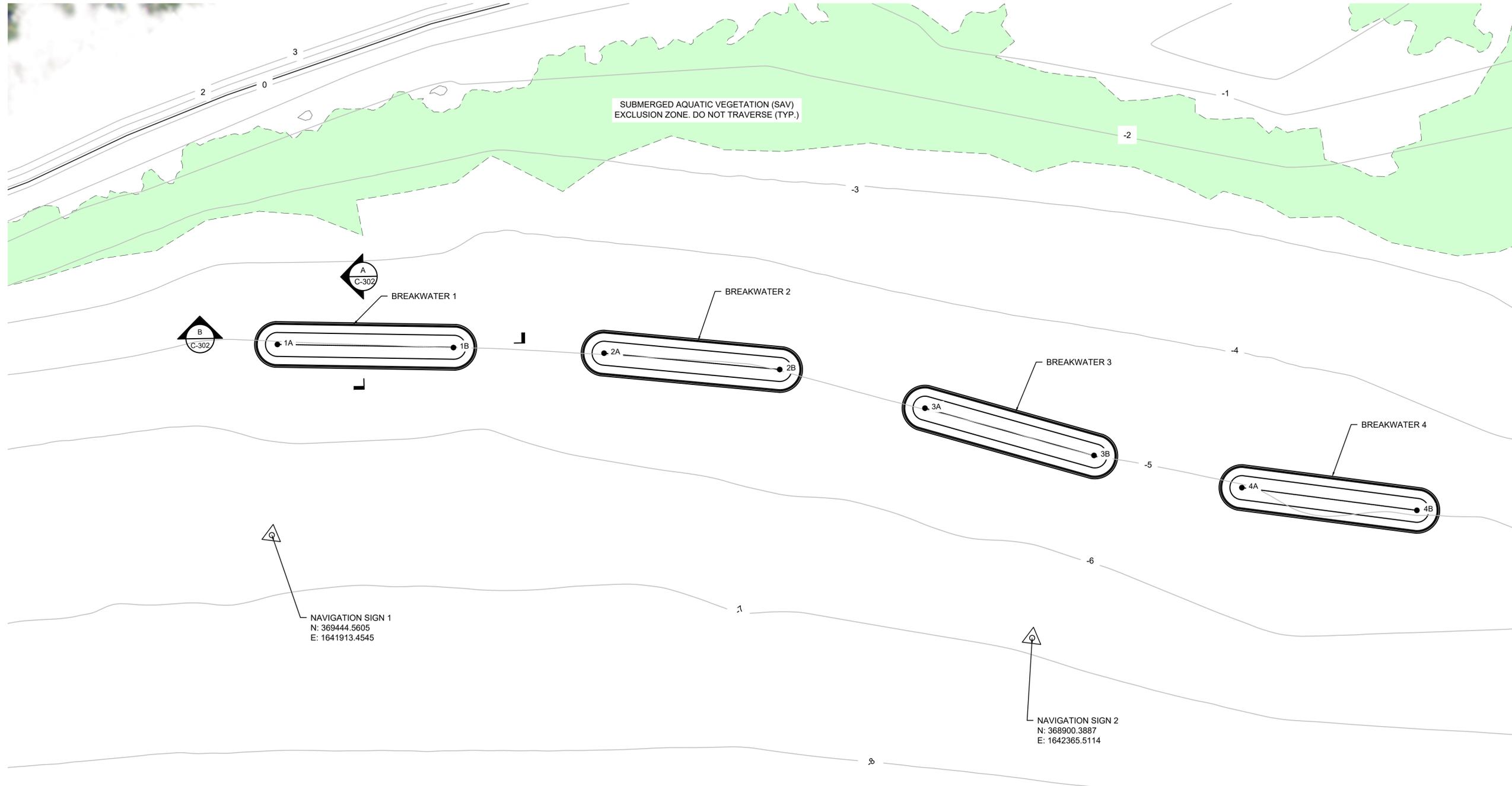
- 4— CONTOUR
- SUBMERGED AQUATIC VEGETATION (SAV)
- △ NAVIGATION SIGN

REFERENCE POINTS

NO.	EASTING	NORTHING
1A	1642035.9334	369570.1936
1B	1642153.9188	369458.1445
2A	1642252.1843	369360.4079
2B	1642361.2893	369239.6948
3A	1642435.8020	369122.8605
3B	1642521.3984	368984.4812
4A	1642601.4369	368871.2609
4B	1642706.0850	368746.6642



**1** SITE PLAN (1 OF 3)  
SCALE: 1" = 50'  
G-105



NO.	DATE	DR	REVISION	BY
			CHK	J. TILLERY
			DR	L. BASSETTI
			APVD	

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SITE PLAN  
SITE PLAN  
(1 OF 3)

NTS	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
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DWG	C-201
SHEET	6 of 12

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NOTES:

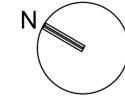
1. ALL UNITS IN FEET UNLESS OTHERWISE NOTED.
2. FINISHED STRUCTURE ELEVATION IS DEFINED ON THE CROSS-SECTION; GEOMETRIES TO VARY AS REQUIRED TO ACHIEVE STATED LEVELS.
3. STATED HORIZONTAL EXTENTS ARE MINIMUM EXTENTS; HORIZONTAL TOLERANCE OF UP TO 2 FEET BEYOND THESE EXTENTS TO BE ACCEPTABLE.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH PROJECT LAYOUT PLAN (G-105).
5. GROUND SURFACE FOR EACH BREAKWATER DETAIL IS DEPICTED AS UNIFORM FOR CLARITY AND MAY NOT REPRESENT ACTUAL CONDITIONS AT EACH BREAKWATER LOCATION. CONTRACTOR SHALL FIELD VERIFY GROUND SURFACE CONDITIONS AT EACH BREAKWATER LOCATION AND RECOMMEND ADJUSTMENTS TO EACH BREAKWATER'S BASE FOR THE ENGINEER'S APPROVAL, PRIOR TO CONSTRUCTION.

LEGEND:

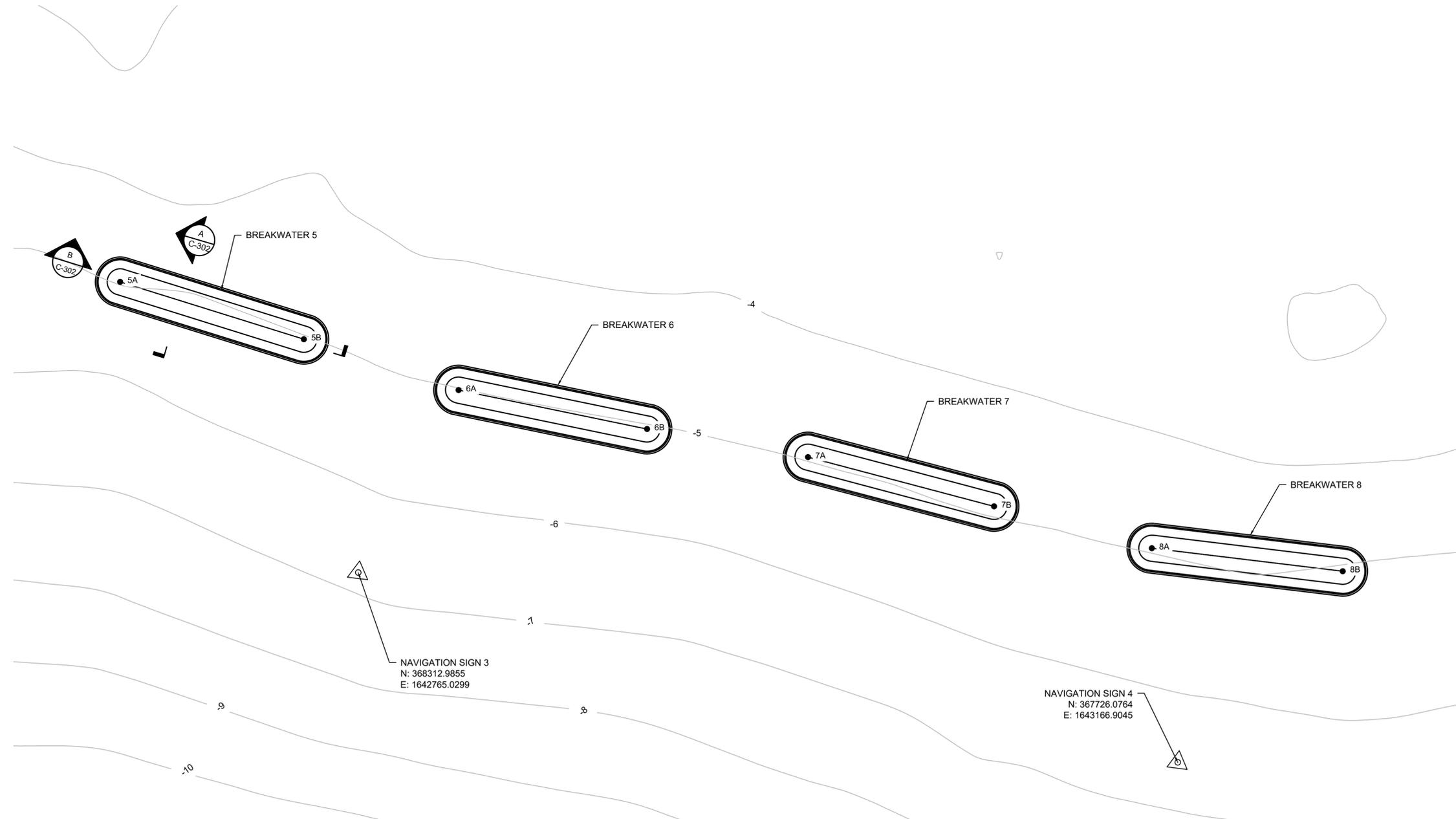
- 4— CONTOUR
- ▲ NAVIGATION SIGN

REFERENCE POINTS

NO.	EASTING	NORTHING
5A	1642782.7940	368629.6850
5B	1642864.4401	368488.9389
6A	1642931.7071	368368.8074
6B	1643026.7867	368236.7641
7A	1643110.9617	368127.1964
7B	1643198.6374	367990.1251
8A	1643272.9589	367873.8765
8B	1643378.7282	367750.2302



**2** SITE PLAN (2 OF 3)  
SCALE: 1" = 50'  
G-105



NO.	DATE	DR	REVISION	BY
			CHK	J. TILLERY
			APVD	L. BASSETTI
			APVD	H. SAYADFAR
			DSGN	D. KINGERY

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GENERAL  
SITE PLAN  
(2 OF 3)

NTS
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BAR IS ONE INCH ON ORIGINAL DRAWING. 1" = 50'
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PROJ: D3586500
DWG: C-202
SHEET: 7 of 12

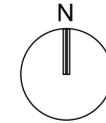
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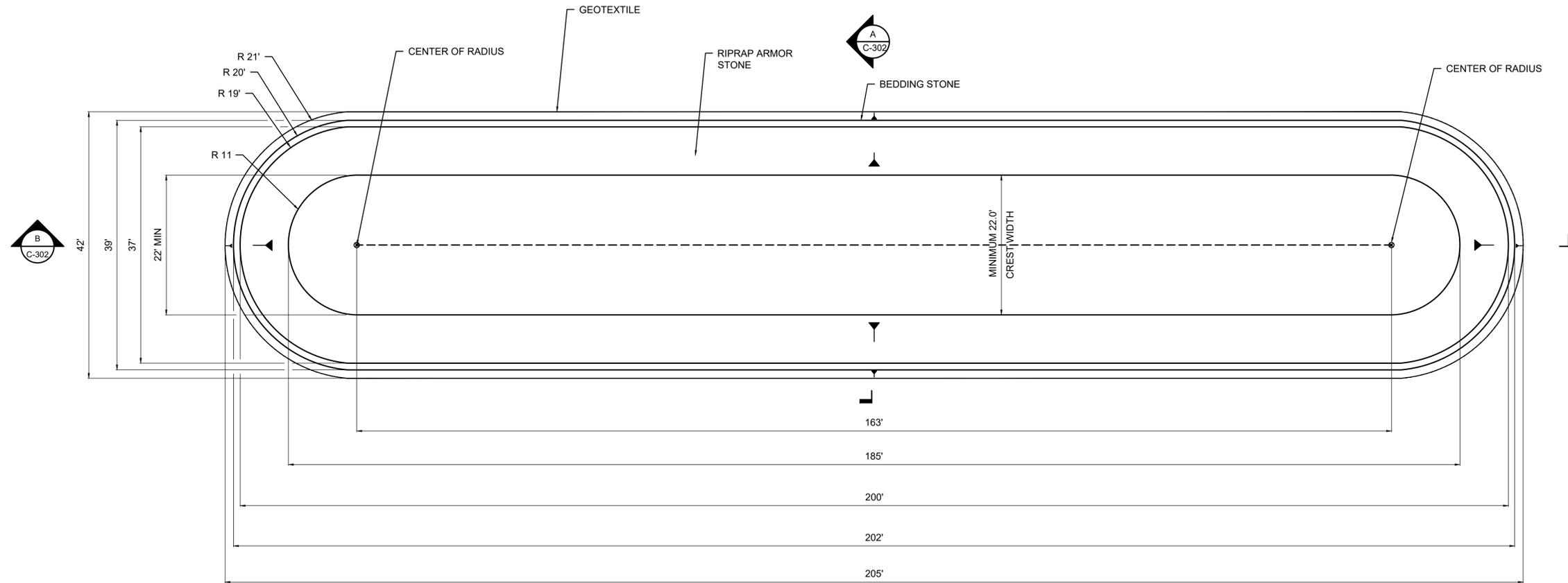
NOTES:

- 1. MINIMUM BREAKWATER CREST WIDTH OF 22 FEET.
- 2. SEE DRAWING C-302 FOR CROSS-SECTIONS.
- 3. BREAKWATER FOOTPRINT DIMENSIONS SHOWN ARE APPROXIMATE AND WILL DEPEND ON BATHYMETRY OF SITE DURING CONSTRUCTION.
- 4. RADIUS INCLUDED TO ASSIST IN SETTING OUT REFERENCE POINTS.
- 5. GEOMETRIES AND MATERIALS TO BE CONFIRMED IN THE FINAL DESIGN.



### BREAKWATER STRUCTURE - TYPICAL PLAN VIEW

SCALE: 1" = 10'



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SITE PLAN  
BREAKWATER STRUCTURE  
TYPICAL PLAN VIEW

NTS	
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A  
B  
C  
D



NOTES:

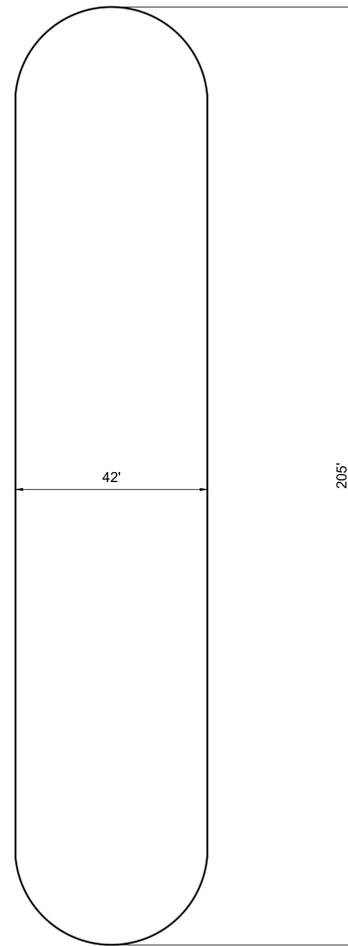
1. ENSURE SUBSTRATE IS DEBRIS-FREE PRIOR TO GEOTEXTILE PLACEMENT.
2. ENSURE GEOTEXTILE IS DEBRIS-FREE PRIOR TO BEDDING STONE PLACEMENT.
3. PLACE RIPRAP ARMOR STONES EVENLY ON TOP OF THE BEDDING STONE IN LAYERS, ENSURING DISTRIBUTION ACROSS THE SURFACE TO PREVENT UNEVEN PRESSURE AND INSTABILITY.
4. STONE SHALL BE DROPPED FROM A HEIGHT OF NO MORE THAN 2 FEET ABOVE THE SEA FLOOR OR THE TOP OF THE BREAKWATER STRUCTURE, UNLESS PRIOR AUTHORIZATION IS GIVEN BY THE ENGINEER.
5. BREAKWATER FOOTPRINT DIMENSIONS SHOWN ARE APPROXIMATE AND WILL DEPEND ON BATHYMETRY OF SITE DURING CONSTRUCTION.



### BREAKWATER STRUCTURES - INSTALLATION SEQUENCE

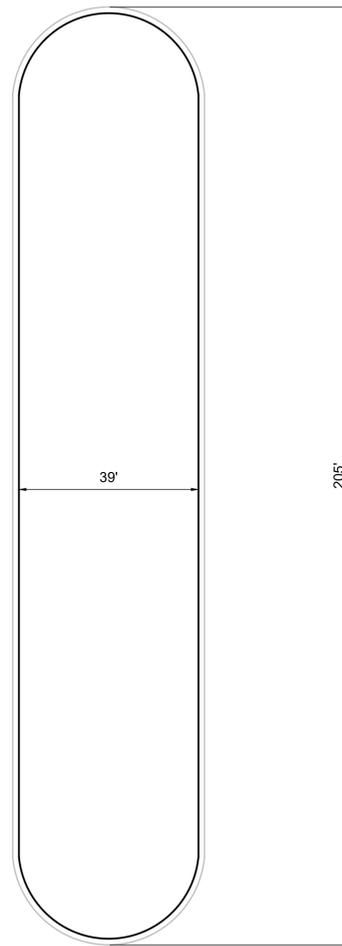
SCALE: 1" = 20'

STEP 1



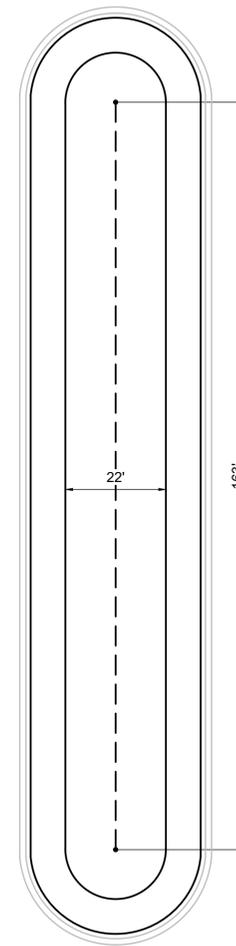
GEOTEXTILE

STEP 2



BEDDING STONE

STEP 3



RIPRAP ARMOR STONE

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			CHK	H. SAYADFAR	L. BASSETTI
				J. TILLERY	

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PENSACOLA, FL 32502

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THE NATURE CONSERVANCY  
TYNDALL AIR FORCE BASE, FL

**JACOBS**

SITE PLAN  
**BREAKWATER STRUCTURE  
INSTALLATION SEQUENCE**

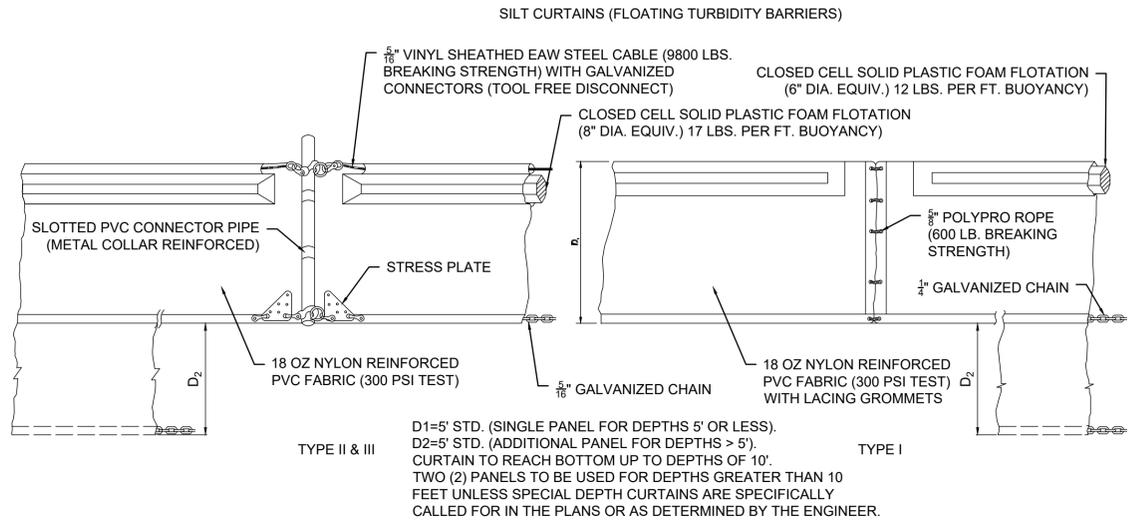
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PROJ D3586500
DWG C-303
SHEET 11 of 12

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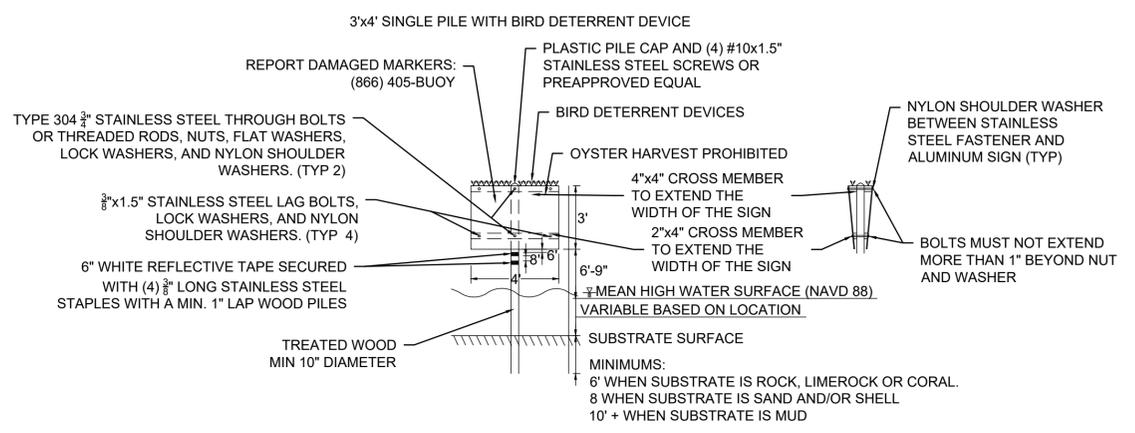
# TYPICAL DETAILS - NAVIGATION MARKER AND TURBIDITY BARRIER

SCALE: NTS

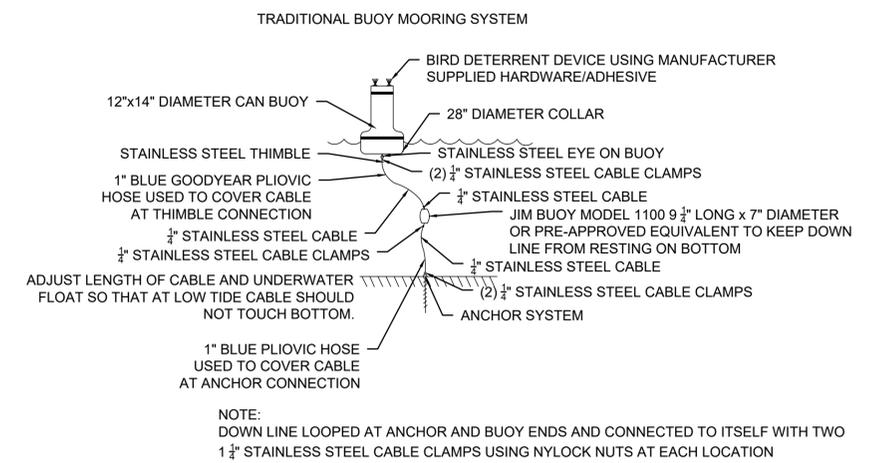


NOTE: COMPONENTS OF TYPES I, II, III MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I, II, III SHALL BE AS APPROVED BY THE ENGINEER.

1 - SILT CURTAINS (FLOATING TURBIDITY BARRIERS) NTS



2 - 3'x4' SINGLE PILE WITH BIRD DETERRENT DEVICE NTS



3 - TRADITIONAL BUOY MOORING SYSTEM NTS

- NOTES**
- TEMPORARY WARNING SIGNS ARE REQUIRED DURING CONSTRUCTION PHASE. TEMPORARY WARNING SIGNS SHALL BE PROMPTLY REMOVED AFTER CONSTRUCTION ENDS.
  - CONTRACTOR SHALL COORDINATE WITH THE U.S. COAST GUARD FOR ACTUAL WARNING LANGUAGE TO BE USED ON TEMPORARY WARNING SIGNS. REFER TO SPECIFICATION FOR ADDITIONAL WARNING SIGN REQUIREMENTS.

APVD	J. TILLERY
BY	
APVD	
CHK	L. BASSETTI
DR	C. MAGUIRE
DATE	
NO.	
DSGN	L. BAKER

25 WEST CEDAR STREET, SUITE 350  
PENSACOLA, FL 32502

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CIVIL DETAILS  
NAVIGATION MARKER AND  
TURBIDITY BARRIER

NTS	
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SHEET	12 of 12

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