

NOTES:

- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
- PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER", USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
- HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
- TIDE GAGE LOCATED AT: USACE DOCK. USE OF TIDE VALUES FOR THIS GAGE ARE RESTRICTED TO QUALITY ASSURANCE PURPOSES FOR VERIFICATION OF RTK TIDES. THE WILMINGTON DISTRICT WILL ONLY USE STAFF GAGE TIDAL VALUES FOR FINAL MAPPING AND QUANTITY CALCULATIONS IF RTK GPS IS UNAVAILABLE AT THE TIME OF SURVEY.
- THIS PROJECT WAS DESIGNED BY THE WILMINGTON DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS AND SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ERT110-1-8152.
- THE INFORMATION DEPICTED ON THIS SURVEY MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REQUIRED BY 33 CFR 209.325
- NAVIGATION AIDS LOCATED WITH DISTRICT SURVEY VESSEL, ACCURACY +/- 3 METERS.
- FOR THE MOST UP TO DATE INFORMATION PLEASE CHECK OUR WEBSITE AT: WWW.SAW.USACE.ARMY.MIL

AIDS TO NAVIGATION

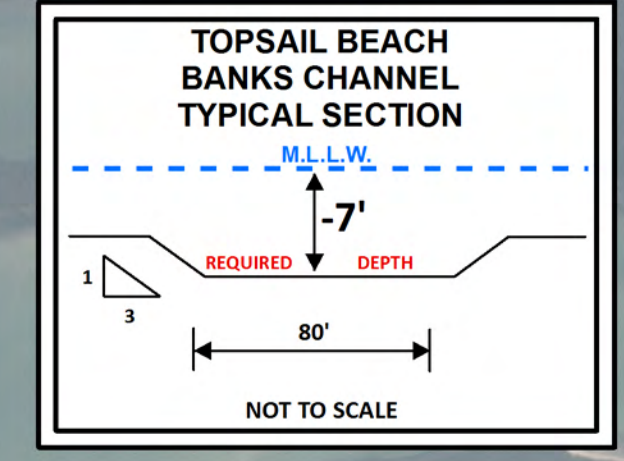
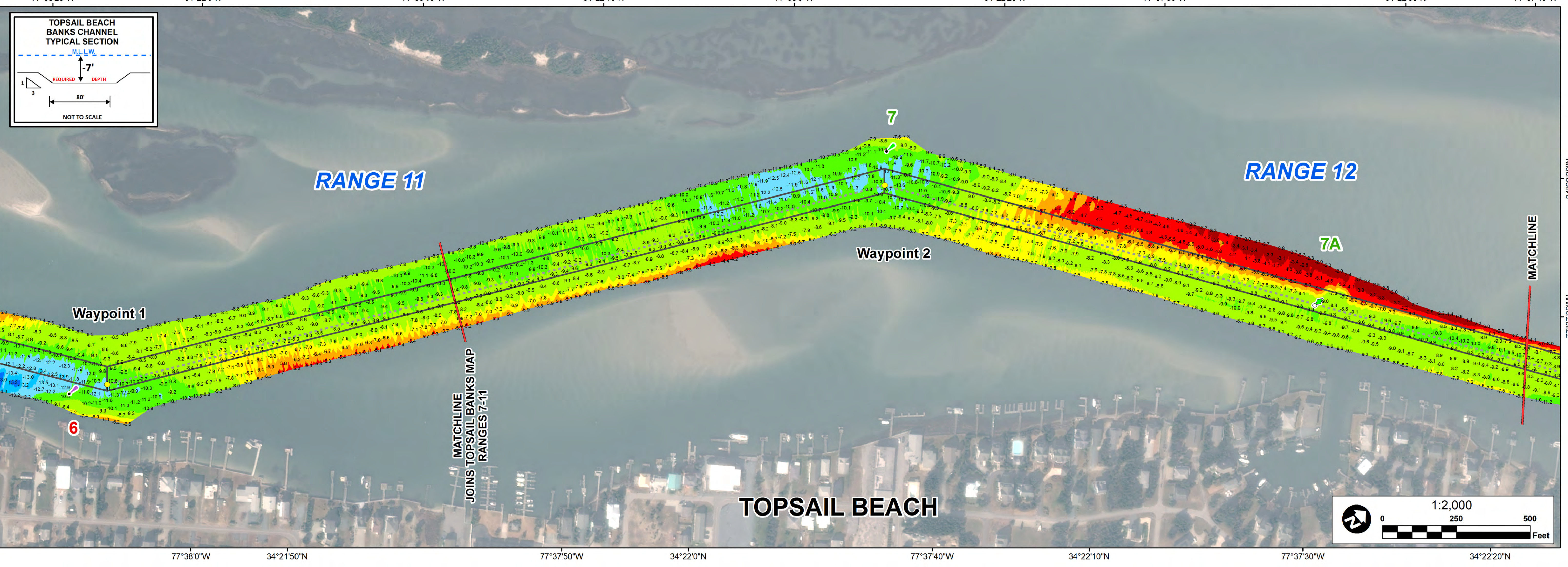
Type	Number	Survey Date	SPF_X	SPF_Y	DMS_X	DMS_Y
Green Light	7	2015-04-27	2412982	228701	77° 37' 53.181" W	34° 22' 14.005" N
Can	7A	2015-04-27	2414331	229444	77° 37' 36.968" W	34° 22' 21.168" N
Green Daybeacon	9	2015-04-27	2415532	230268	77° 37' 22.509" W	34° 22' 29.155" N
Can	9A	2015-04-27	2416816	231145	77° 37' 7.044" W	34° 22' 37.646" N
Red Light	6	2015-04-27	2411782	228076	77° 36' 7.935" W	34° 21' 48.202" N
Green Light	11	2015-04-27	2418105	233057	77° 36' 51.351" W	34° 22' 56.385" N

WAYPOINTS

Survey Date	Project	SPF_X	SPF_Y	DMS_X	DMS_Y
2015-04-27	Topsail Banks - Ranges 11-13 - Waypoint 1	2411845	226174	77° 38' 7.166" W	34° 21' 49.161" N
2015-04-27	Topsail Banks - Ranges 11-13 - Waypoint 2	2413068	228602	77° 37' 52.180" W	34° 22' 13.010" N
2015-04-27	Topsail Banks - Ranges 11-13 - Waypoint 3	2416734	231024	77° 37' 8.049" W	34° 22' 36.462" N
2015-04-27	Topsail Banks - Ranges 11-13 - Waypoint 4	2418147	233010	77° 36' 50.863" W	34° 22' 55.910" N

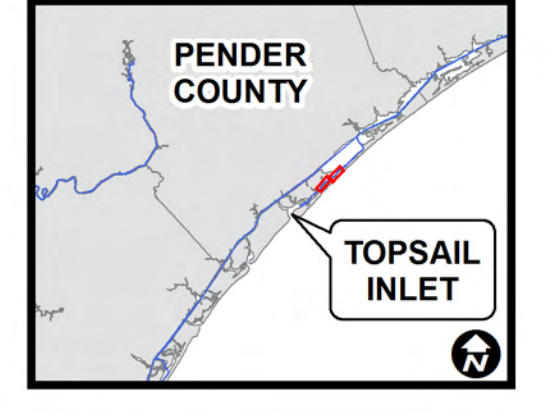
LEGEND

Aids to Navigation	Depth In Feet
Can	4 and Shallower
Nun	6 - 4
Green Lighted Buoy	7 - 6
Red Lighted Buoy	8 - 7
Junction Marker	10 - 8
Green Light	12 - 10
Red Light	14 - 12
Red Light	15 - 14
Green Daybeacon	15 and Deeper
Red Daybeacon	Waypoint Lines
Danger Sign	Waypoints
Mileboard	Navigation Channel
Tide Gage	



US Army Corps of Engineers
Wilmington District

NORTH CAROLINA



Surveyed By: MAS, JBD, WJC	Map Date: May 5, 2015	Scale: 1 : 2,000
Mapped By: SGD	Imagery Date: January 15, 2015 © Digital Globe, Inc.	

HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WILMINGTON, NORTH CAROLINA

TOPSAIL - BANKS CHANNEL
RANGES 11 - 13

Topsail Beach, North Carolina