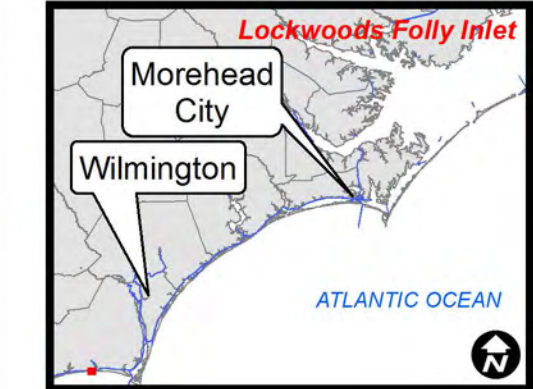


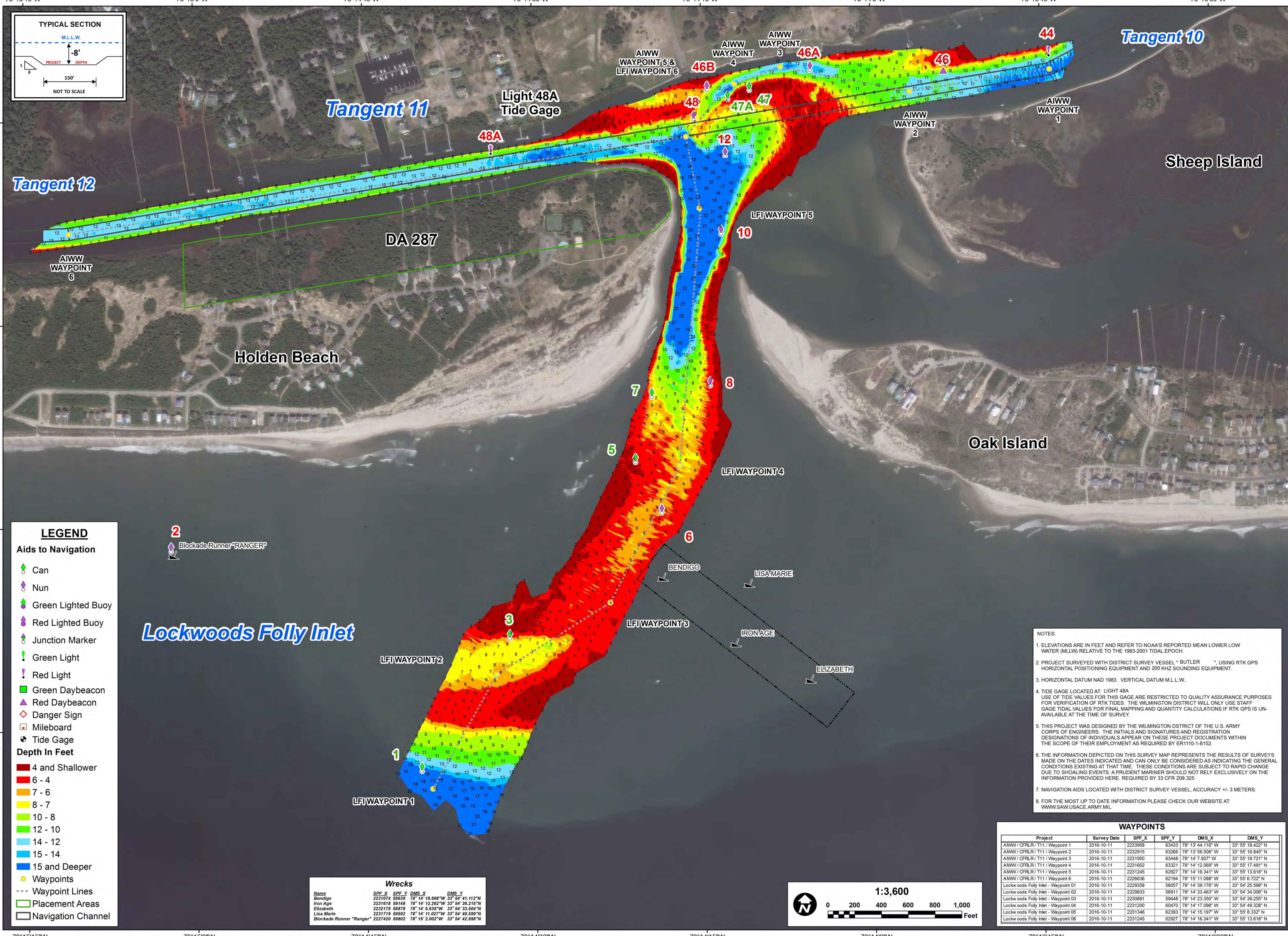
**US Army Corps
of Engineers
Wilmington District**



SURVEY DATE: 11 OCTOBER 2016	SURVEYED BY: LMT, SRV
MAP DATE: 12 OCTOBER 2016	MAPPED: K7DPFSGD
MAP SCALE: 1:3,600	PROCESSED BY: DJM
IMAGERY DATE: 3 OCTOBER 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	
MAP FILE NAME: IN_10_LFI_201610101.MXD	

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

**Lockwoods Folly Inlet
& AIWW Crossing**
OAK ISLAND, NORTH CAROLINA



LEGEND

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Marker
- Green Light
- Red Light
- Green Daybeacon
- Red Daybeacon
- Danger Sign
- Mileboard
- Tide Gage

Depth In Feet

- 4 and Shallower
- 6 - 4
- 7 - 6
- 8 - 7
- 10 - 8
- 12 - 10
- 14 - 12
- 15 - 14
- 15 and Deeper

- Waypoints
- Waypoint Lines
- Placement Areas
- Navigation Channel

Lockwoods Folly Inlet

Wrecks

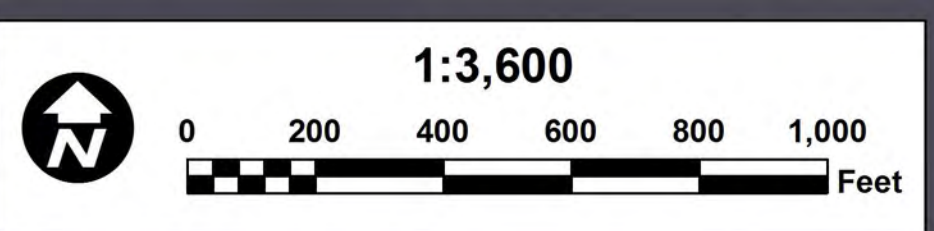
Name	SPE_X	SPE_Y	DMS_X	DMS_Y
Bendigo	2231074	59633	78° 14' 18.088" W	33° 54' 41.112" N
Iron Age	2231618	59148	78° 14' 12.282" W	33° 54' 38.215" N
Elizabeth	2231719	58878	78° 14' 5.633" W	33° 54' 33.504" N
Lisa Marie	2231719	59592	78° 14' 11.027" W	33° 54' 40.599" N
Blockade Runner "Ranger"	2231420	59892	78° 16' 2.002" W	33° 54' 42.899" N

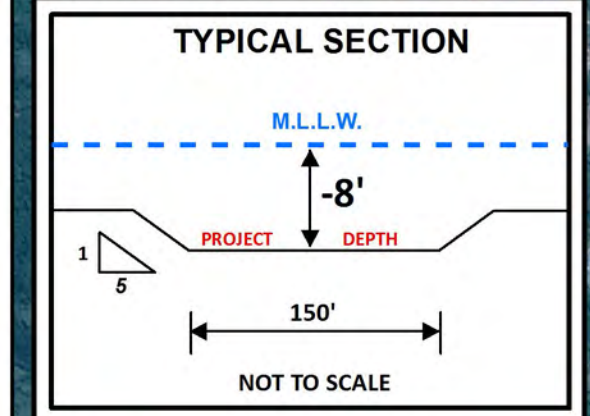
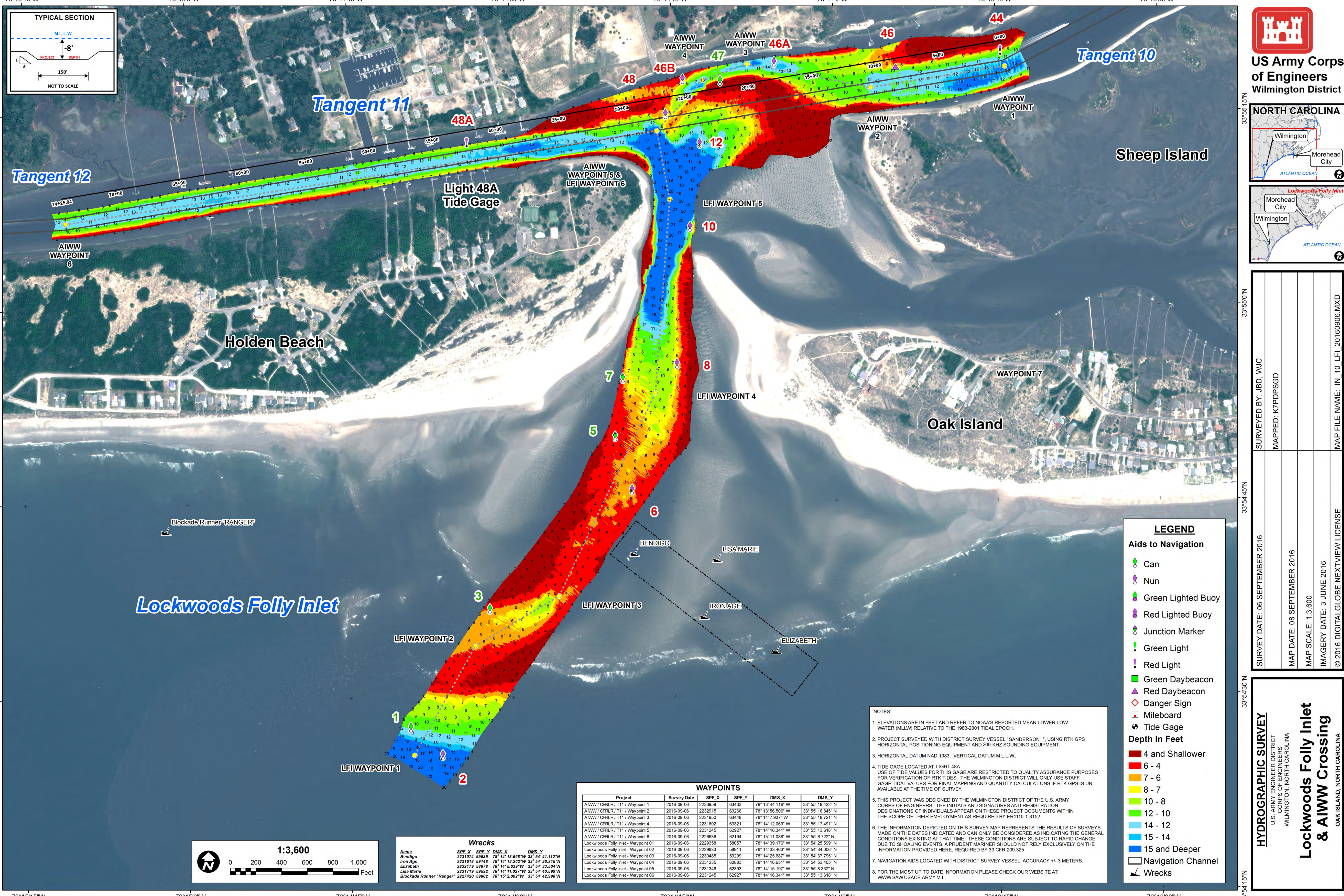
NOTES:

- ELEVATIONS ARE IN FEET AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
- PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL " 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: LIGHT 48A
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 ER1110-1-8152.
- 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

WAYPOINTS

Project	Survey Date	SPE_X	SPE_Y	DMS_X	DMS_Y
AIWW / CFRLR / T11 / Waypoint 1	2016-10-11	2233958	63433	78° 13' 44.116" W	33° 55' 18.422" N
AIWW / CFRLR / T11 / Waypoint 2	2016-10-11	2232915	63266	78° 13' 56.506" W	33° 55' 16.845" N
AIWW / CFRLR / T11 / Waypoint 3	2016-10-11	2231950	63448	78° 14' 7.937" W	33° 55' 18.721" N
AIWW / CFRLR / T11 / Waypoint 4	2016-10-11	2231602	63321	78° 14' 12.069" W	33° 55' 17.491" N
AIWW / CFRLR / T11 / Waypoint 5	2016-10-11	2231245	62927	78° 14' 16.341" W	33° 55' 13.618" N
AIWW / CFRLR / T11 / Waypoint 6	2016-10-11	2226636	62194	78° 15' 11.088" W	33° 55' 6.722" N
Lockwoods Folly Inlet - Waypoint 01	2016-10-11	2229358	58057	78° 14' 39.176" W	33° 54' 25.599" N
Lockwoods Folly Inlet - Waypoint 02	2016-10-11	2229833	58911	78° 14' 33.463" W	33° 54' 34.006" N
Lockwoods Folly Inlet - Waypoint 03	2016-10-11	2230581	59448	78° 14' 23.350" W	33° 54' 39.255" N
Lockwoods Folly Inlet - Waypoint 04	2016-10-11	2231200	60470	78° 14' 17.088" W	33° 54' 43.328" N
Lockwoods Folly Inlet - Waypoint 05	2016-10-11	2231346	62393	78° 14' 15.197" W	33° 55' 8.332" N
Lockwoods Folly Inlet - Waypoint 06	2016-10-11	2231245	62927	78° 14' 16.341" W	33° 55' 13.618" N





33°55'15"N

33°55'0"N

33°54'45"N

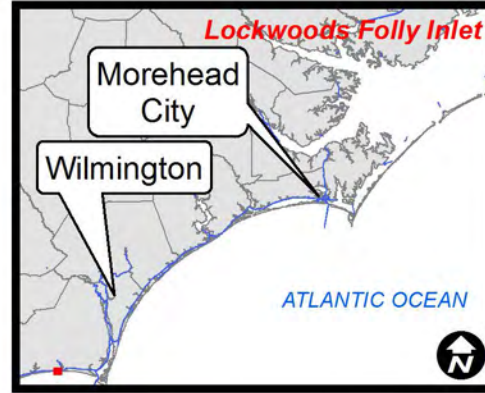
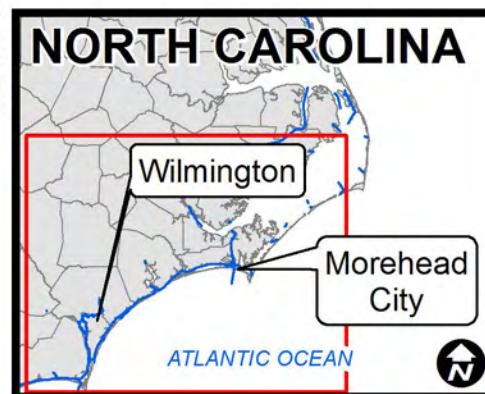
33°54'30"N

33°54'15"N

78°15'15"W 78°15'0"W 78°14'45"W 78°14'30"W 78°14'15"W 78°14'0"W 78°13'45"W 78°13'30"W



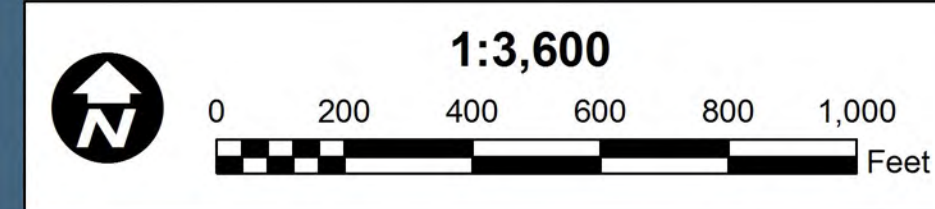
US Army Corps of Engineers
Wilmington District



SURVEY DATE: 06 SEPTEMBER 2016	SURVEYED BY: JBD, WJC
MAP DATE: 08 SEPTEMBER 2016	MAPPED: K7PDFSGD
MAP SCALE: 1:3,600	
IMAGERY DATE: 3 JUNE 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	
MAP FILE NAME: IN_10_LFI_20160906.MXD	

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

Lockwoods Folly Inlet & AIWW Crossing
OAK ISLAND, NORTH CAROLINA



Wrecks

Name	SPF_X	SPE_Y	DMS_X	DMS_Y
Bendigo	2231074	59639	78° 14' 18.668" W	33° 54' 41.112" N
Iron Age	2231618	59148	78° 14' 12.262" W	33° 54' 36.216" N
Elizabeth	2232179	58818	78° 14' 5.839" W	33° 54' 33.504" N
Lisa Marie	2231719	59592	78° 14' 11.027" W	33° 54' 40.599" N
Blockade Runner "RANGER"	2227420	58802	78° 15' 2.002" W	33° 54' 42.998" N

WAYPOINTS

Project	Survey Date	SPF_X	SPF_Y	DMS_X	DMS_Y
AIWW / CFRLR / T11 / Waypoint 1	2016-09-06	2233958	63433	78° 13' 44.116" W	33° 55' 18.422" N
AIWW / CFRLR / T11 / Waypoint 2	2016-09-06	2232915	63266	78° 13' 56.506" W	33° 55' 16.845" N
AIWW / CFRLR / T11 / Waypoint 3	2016-09-06	2231950	63448	78° 14' 7.937" W	33° 55' 18.721" N
AIWW / CFRLR / T11 / Waypoint 4	2016-09-06	2231602	63321	78° 14' 12.969" W	33° 55' 17.491" N
AIWW / CFRLR / T11 / Waypoint 5	2016-09-06	2231245	62927	78° 14' 16.341" W	33° 55' 13.618" N
AIWW / CFRLR / T11 / Waypoint 6	2016-09-06	2226636	62194	78° 15' 11.088" W	33° 55' 6.722" N
Lockwoods Folly Inlet - Waypoint 01	2016-09-06	2229358	58057	78° 14' 39.176" W	33° 54' 25.599" N
Lockwoods Folly Inlet - Waypoint 02	2016-09-06	2229833	58911	78° 14' 33.463" W	33° 54' 34.006" N
Lockwoods Folly Inlet - Waypoint 03	2016-09-06	2230485	59299	78° 14' 25.687" W	33° 54' 37.795" N
Lockwoods Folly Inlet - Waypoint 04	2016-09-06	2231235	60883	78° 14' 16.651" W	33° 54' 53.405" N
Lockwoods Folly Inlet - Waypoint 05	2016-09-06	2231346	62393	78° 14' 15.197" W	33° 55' 8.332" N
Lockwoods Folly Inlet - Waypoint 06	2016-09-06	2231245	62927	78° 14' 16.341" W	33° 55' 13.618" N

NOTES:

- ELEVATIONS ARE IN FEET AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
- PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "SANDERSON", 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 LIGHT 48A. 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 ER1110-1-8152.
- 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

LEGEND

Aids to Navigation

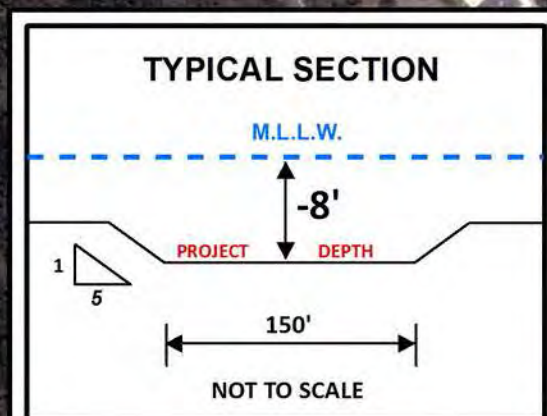
- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Marker
- Green Light
- Red Light
- Green Daybeacon
- Red Daybeacon
- Danger Sign
- Mileboard
- Tide Gage

Depth In Feet

- 4 and Shallower
- 6 - 4
- 7 - 6
- 8 - 7
- 10 - 8
- 12 - 10
- 14 - 12
- 15 - 14
- 15 and Deeper

Navigation Channel

Wrecks



Tangent 11

Surveyed: 9-10 August 2016

Tangent 10

Tangent 12

Light 48A
Tide Gage
48A

Lockwoods Folly Inlet

Surveyed: 24 & 29 August 2016

Sheep Island

Holden Beach

Oak Island

Blockade Runner "RANGER"

BENDIGO

LISA MARIE

IRON AGE

ELIZABETH

LEGEND

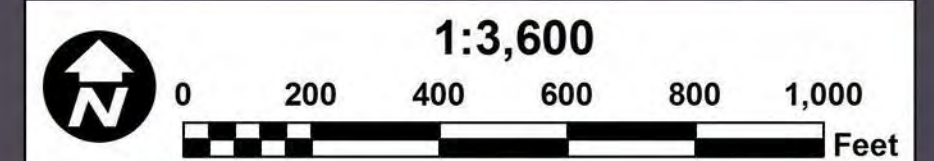
Aids to Navigation	Depth In Feet
Can	4 and Shallower
Nun	6 - 4
Green Lighted Buoy	7 - 6
Red Lighted Buoy	8 - 7
Junction Marker	10 - 8
Green Light	12 - 10
Red Light	14 - 12
Green Daybeacon	15 - 14
Red Daybeacon	15 and Deeper
Danger Sign	Waypoints
Mileboard	Waypoint Lines
Tide Gage	Navigation Channel

Wrecks

Name	SPE_X	SPE_Y	DMS_X	DMS_Y
Bendigo	2231074	63639	78° 14' 18.668" W	33° 54' 41.112" N
Iron Age	2231618	59148	78° 14' 12.262" W	33° 54' 36.215" N
Elizabeth	2232179	58878	78° 14' 6.839" W	33° 54' 33.504" N
Lisa Marie	2231719	63992	78° 14' 11.027" W	33° 54' 40.599" N
Blockade Runner "Ranger"	2227420	59802	78° 15' 2.002" W	33° 54' 42.998" N

WAYPOINTS

Project	Survey Date	SPF_X	SPF_Y	DMS_X	DMS_Y
AIWW CFRLR Tangent 11 - Waypoint 01	2016-08-09	2233958	63433	78° 13' 44.116" W	33° 55' 18.422" N
AIWW CFRLR Tangent 11 - Waypoint 02	2016-08-09	2232915	63266	78° 13' 56.506" W	33° 55' 16.845" N
AIWW CFRLR Tangent 11 - Waypoint 03	2016-08-09	2231950	63448	78° 14' 7.937" W	33° 55' 18.721" N
AIWW CFRLR Tangent 11 - Waypoint 04	2016-08-09	2231602	63321	78° 14' 12.069" W	33° 55' 17.491" N
AIWW CFRLR Tangent 11 - Waypoint 05	2016-08-09	2231200	62922	78° 14' 16.885" W	33° 55' 13.575" N
AIWW CFRLR Tangent 11 - Waypoint 06	2016-08-09	2226636	62196	78° 15' 11.088" W	33° 55' 6.737" N
Lockwoods Folly Inlet - Waypoint 01	2016-08-24	2229020	58332	78° 14' 43.156" W	33° 54' 28.338" N
Lockwoods Folly Inlet - Waypoint 02	2016-08-24	2229471	58991	78° 14' 37.750" W	33° 54' 34.824" N
Lockwoods Folly Inlet - Waypoint 03	2016-08-24	2230485	59299	78° 14' 25.687" W	33° 54' 37.795" N
Lockwoods Folly Inlet - Waypoint 04	2016-08-24	2231235	60883	78° 14' 16.651" W	33° 54' 53.405" N
Lockwoods Folly Inlet - Waypoint 05	2016-08-24	2231346	62393	78° 14' 15.197" W	33° 55' 8.332" N
Lockwoods Folly Inlet - Waypoint 06	2016-08-09	2231200	62922	78° 14' 16.885" W	33° 55' 13.575" N



- NOTES:**
- ELEVATIONS ARE IN FEET 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 LIGHT 48A. 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 ER1110-1-8152.
 - 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



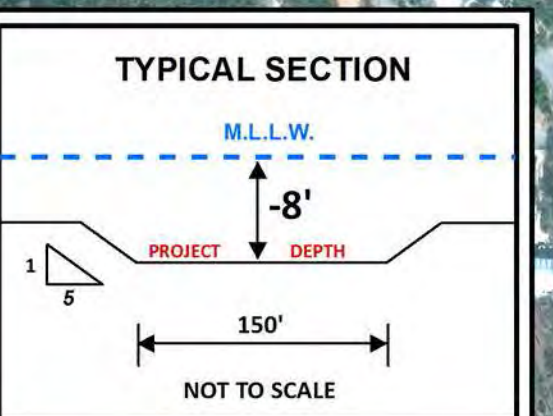
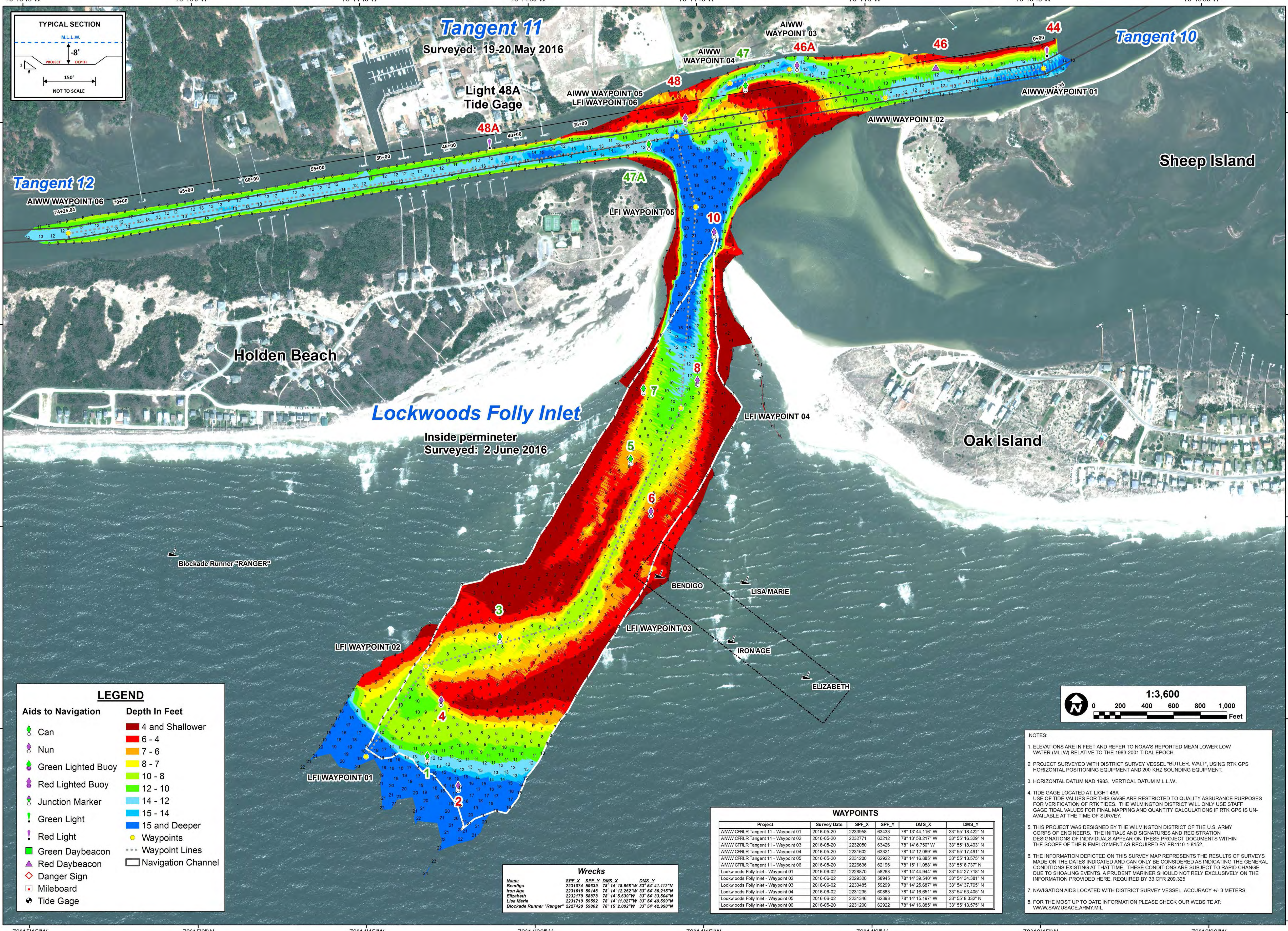
US Army Corps of Engineers
Wilmington District



SURVEY DATE: 9-10, 24 & 29 AUGUST 2016	SURVEYED BY: LMT, SRV
MAP DATE: 30 AUGUST 2016	MAPPED: KTOPNSMG
MAP SCALE: 1:3,600	
IMAGERY DATE: 3 JUNE 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	MAP FILE NAME: IN_10_LFI_20160824.MXD

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

**Lockwoods Folly Inlet
& AIWW Crossing**
OAK ISLAND, NORTH CAROLINA



LEGEND

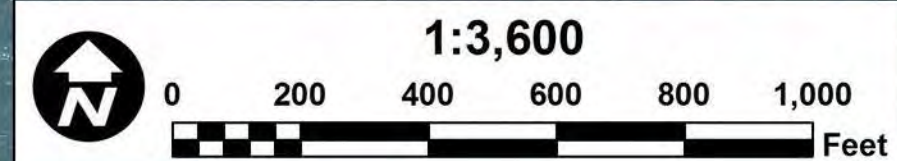
Aids to Navigation	Depth In Feet
Can	4 and Shallower
Nun	6 - 4
Green Lighted Buoy	7 - 6
Red Lighted Buoy	8 - 7
Junction Marker	10 - 8
Green Light	12 - 10
Red Light	14 - 12
Green Daybeacon	15 - 14
Red Daybeacon	15 and Deeper
Danger Sign	Waypoints
Mileboard	Waypoint Lines
Tide Gage	Navigation Channel

Wrecks

Name	SPE_X	SPE_Y	DMS_X	DMS_Y
Bendigo	2231074	69839	78° 14' 18.668" W	33° 54' 41.112" N
Iron Age	2231618	69148	78° 14' 12.262" W	33° 54' 36.215" N
Elizabeth	2232179	68878	78° 14' 5.639" W	33° 54' 33.504" N
Lisa Marie	2231719	69592	78° 14' 11.027" W	33° 54' 40.599" N
Blockade Runner "Ranger"	2237420	69802	78° 16' 2.002" W	33° 54' 42.988" N

WAYPOINTS

Project	Survey Date	SPE_X	SPE_Y	DMS_X	DMS_Y
AIWW CFRLR Tangent 11 - Waypoint 01	2016-05-20	2233958	63433	78° 13' 44.116" W	33° 55' 18.422" N
AIWW CFRLR Tangent 11 - Waypoint 02	2016-05-20	2232771	63212	78° 13' 58.217" W	33° 55' 16.329" N
AIWW CFRLR Tangent 11 - Waypoint 03	2016-05-20	2232050	63426	78° 14' 6.750" W	33° 55' 18.493" N
AIWW CFRLR Tangent 11 - Waypoint 04	2016-05-20	2231602	63321	78° 14' 12.069" W	33° 55' 17.491" N
AIWW CFRLR Tangent 11 - Waypoint 05	2016-05-20	2231200	62922	78° 14' 16.885" W	33° 55' 13.575" N
AIWW CFRLR Tangent 11 - Waypoint 06	2016-05-20	2226636	62196	78° 15' 11.088" W	33° 55' 6.737" N
Lockwoods Folly Inlet - Waypoint 01	2016-06-02	2228870	58268	78° 14' 44.944" W	33° 54' 27.718" N
Lockwoods Folly Inlet - Waypoint 02	2016-06-02	2229320	58945	78° 14' 39.540" W	33° 54' 34.381" N
Lockwoods Folly Inlet - Waypoint 03	2016-06-02	2230485	59259	78° 14' 25.687" W	33° 54' 37.795" N
Lockwoods Folly Inlet - Waypoint 04	2016-06-02	2231235	60883	78° 14' 16.651" W	33° 54' 53.405" N
Lockwoods Folly Inlet - Waypoint 05	2016-06-02	2231346	62393	78° 14' 15.197" W	33° 55' 8.332" N
Lockwoods Folly Inlet - Waypoint 06	2016-05-20	2231200	62922	78° 14' 16.885" W	33° 55' 13.575" N



- NOTES:**
- ELEVATIONS ARE IN FEET AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "BUTLER, WALT", 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 LIGHT 48A. 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 TIDE 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 ER1110-1-8152.
 - 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



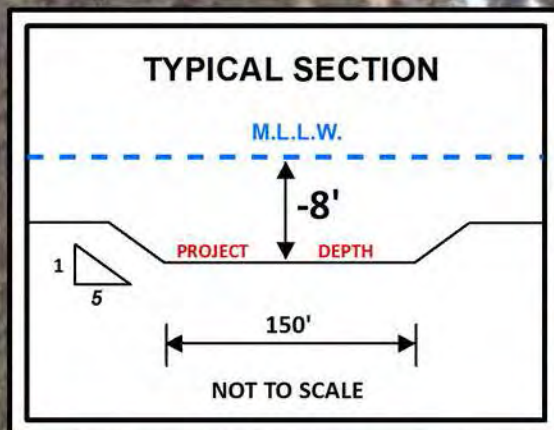
**US Army Corps of Engineers
Wilmington District**



SURVEY DATE: 19-20 MAY & 2 JUNE, 2016	SURVEYED BY: LMT, WWW, JBD, WJC
MAP DATE: 03 JUNE 2016	MAPPED: KTPDPGSD
MAP SCALE: 1:3,600	
IMAGERY DATE: 13 MARCH 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	MAP FILE NAME: IN_10_LFI_20160602.MXD

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

**Lockwoods Folly Inlet
& AIWW Crossing**
OAK ISLAND, NORTH CAROLINA

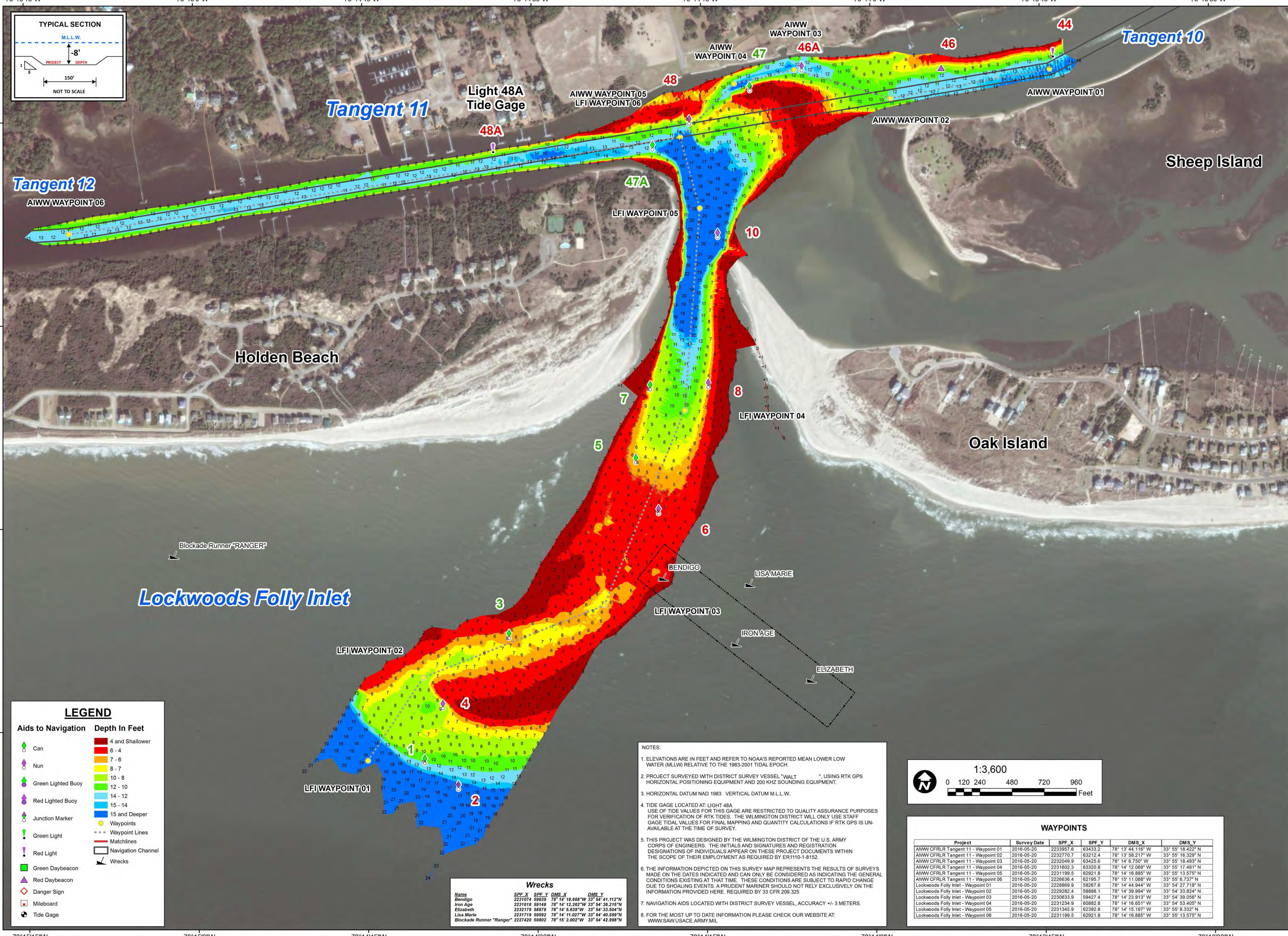


**US Army Corps
of Engineers
Wilmington District**



SURVEY DATE: 19-20 MAY 2016	SURVEYED BY: LMT, WWW
MAP DATE: 23 MAY 2016	MAPPED: K7OPNSMG
MAP SCALE: 1:3,600	
IMAGERY DATE: 21 JANUARY 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	MAP FILE NAME: IN_10_LFI_20160520.MXD

HYDROGRAPHIC SURVEY	
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS WILMINGTON, NORTH CAROLINA	
Lockwoods Folly Inlet & AIWW Crossing	
OAK ISLAND, NORTH CAROLINA	



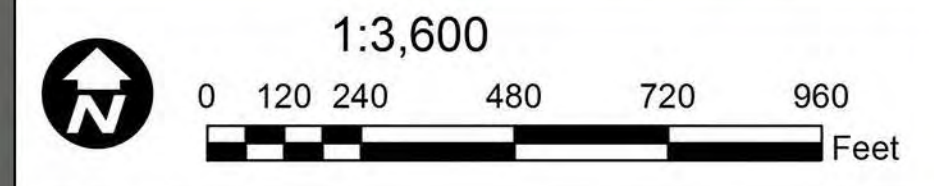
LEGEND

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
Green Daybeacon	15 - 14
Red Daybeacon	15 and Deeper
Danger Sign	Waypoints
Mileboard	Waypoint Lines
Tide Gage	Matchlines
	Navigation Channel
	Wrecks

Wrecks

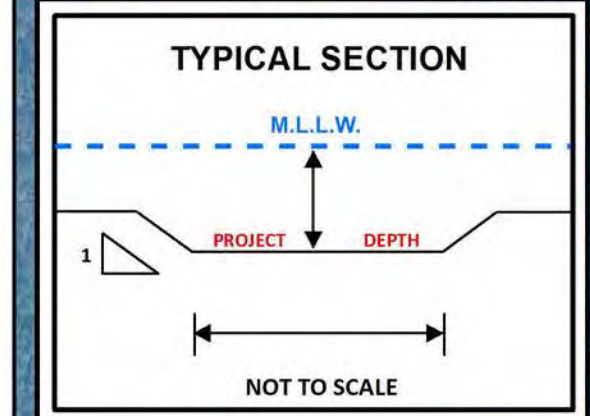
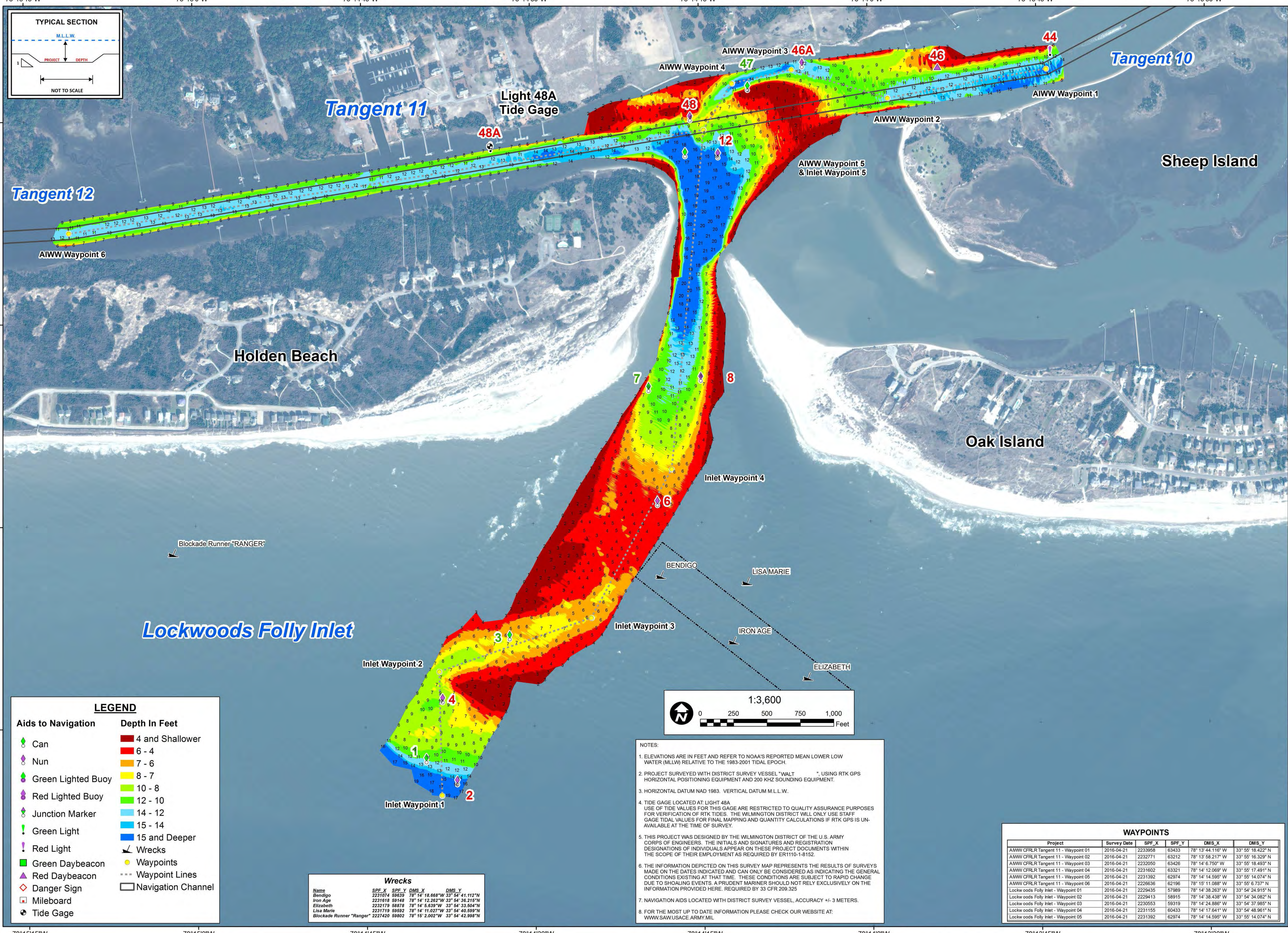
Name	SPF_X	SPF_Y	DMS_X	DMS_Y
Bendigo	2231074	69639	78° 14' 18.868" W	33° 54' 41.112" N
Iron Age	2231618	69148	78° 14' 12.262" W	33° 54' 36.216" N
Elizabeth	2231719	68678	78° 14' 5.639" W	33° 54' 33.604" N
Lisa Marie	2231719	69592	78° 14' 11.027" W	33° 54' 40.699" N
Blockade Runner "Ranger"	2227420	69802	78° 15' 2.002" W	33° 54' 42.998" N

- NOTES:**
- ELEVATIONS ARE IN FEET AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "WALT" HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
 - HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
 - TIDE GAGE LOCATED AT LIGHT 48A. 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 ER1110-1-8152.
 - 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



WAYPOINTS

Project	Survey Date	SPF_X	SPF_Y	DMS_X	DMS_Y
AIWW CFRLR Tangent 11 - Waypoint 01	2016-05-20	2233957.6	63433.2	78° 13' 44.116" W	33° 55' 18.422" N
AIWW CFRLR Tangent 11 - Waypoint 02	2016-05-20	2232770.7	63212.4	78° 13' 58.217" W	33° 55' 16.329" N
AIWW CFRLR Tangent 11 - Waypoint 03	2016-05-20	2232049.9	63425.6	78° 14' 6.750" W	33° 55' 18.493" N
AIWW CFRLR Tangent 11 - Waypoint 04	2016-05-20	2231602.3	63320.8	78° 14' 12.069" W	33° 55' 17.481" N
AIWW CFRLR Tangent 11 - Waypoint 05	2016-05-20	2231199.5	62921.8	78° 14' 16.885" W	33° 55' 13.575" N
AIWW CFRLR Tangent 11 - Waypoint 06	2016-05-20	2228636.4	62195.7	78° 15' 11.088" W	33° 55' 6.737" N
Lockwoods Folly Inlet - Waypoint 01	2016-05-20	2228869.9	58267.6	78° 14' 44.944" W	33° 54' 27.718" N
Lockwoods Folly Inlet - Waypoint 02	2016-05-20	2228282.4	58888.1	78° 14' 39.994" W	33° 54' 33.824" N
Lockwoods Folly Inlet - Waypoint 03	2016-05-20	2230633.9	59427.4	78° 14' 23.913" W	33° 54' 39.056" N
Lockwoods Folly Inlet - Waypoint 04	2016-05-20	2231234.9	60882.8	78° 14' 16.651" W	33° 54' 53.405" N
Lockwoods Folly Inlet - Waypoint 05	2016-05-20	2231345.9	62392.8	78° 14' 15.197" W	33° 55' 8.332" N
Lockwoods Folly Inlet - Waypoint 06	2016-05-20	2231199.5	62921.8	78° 14' 16.885" W	33° 55' 13.575" 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
Green Daybeacon	15 - 14
Red Daybeacon	15 and Deeper
Danger Sign	Wrecks
Mileboard	Waypoints
Tide Gage	Waypoint Lines
	Navigation Channel

Wrecks

Name	SPP_X	SPP_Y	DMS_X	DMS_Y
Bendigo	2231074	59635	78° 14' 18.868\"W	33° 54' 41.112\"N
Iron Age	2231618	59148	78° 14' 12.282\"W	33° 54' 36.215\"N
Elizabeth	2232179	58878	78° 14' 5.639\"W	33° 54' 33.604\"N
Lisa Marie	2231719	59592	78° 14' 11.027\"W	33° 54' 40.999\"N
Blockade Runner "Ranger"	2232420	59802	78° 16' 2.002\"W	33° 54' 42.999\"N

- NOTES:**
- ELEVATIONS ARE IN FEET AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "WALT" 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 LIGHT 48A. 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 ER1110-1-8152.
 - 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

WAYPOINTS

Project	Survey Date	SPP_X	SPP_Y	DMS_X	DMS_Y
AIWW CFRLR Tangent 11 - Waypoint 01	2016-04-21	2233958	63433	78° 13' 44.116\"W	33° 55' 18.422\"N
AIWW CFRLR Tangent 11 - Waypoint 02	2016-04-21	2232771	63212	78° 13' 58.217\"W	33° 55' 16.329\"N
AIWW CFRLR Tangent 11 - Waypoint 03	2016-04-21	2232050	63426	78° 14' 6.750\"W	33° 55' 18.493\"N
AIWW CFRLR Tangent 11 - Waypoint 04	2016-04-21	2231602	63321	78° 14' 12.069\"W	33° 55' 17.491\"N
AIWW CFRLR Tangent 11 - Waypoint 05	2016-04-21	2231392	62974	78° 14' 14.595\"W	33° 55' 14.074\"N
AIWW CFRLR Tangent 11 - Waypoint 06	2016-04-21	2226636	62196	78° 15' 11.088\"W	33° 55' 6.737\"N
Lockwoods Folly Inlet - Waypoint 01	2016-04-21	2229435	57989	78° 14' 38.263\"W	33° 54' 24.915\"N
Lockwoods Folly Inlet - Waypoint 02	2016-04-21	2229413	58915	78° 14' 38.438\"W	33° 54' 34.082\"N
Lockwoods Folly Inlet - Waypoint 03	2016-04-21	2230553	59319	78° 14' 24.886\"W	33° 54' 37.985\"N
Lockwoods Folly Inlet - Waypoint 04	2016-04-21	2231155	60433	78° 14' 17.641\"W	33° 54' 48.961\"N
Lockwoods Folly Inlet - Waypoint 05	2016-04-21	2231392	62974	78° 14' 14.595\"W	33° 55' 14.074\"N

**US Army Corps of Engineers
Wilmington District**

NORTH CAROLINA

Wilmington
Morehead City

Lockwoods Folly Inlet

Morehead City
Wilmington

ATLANTIC OCEAN

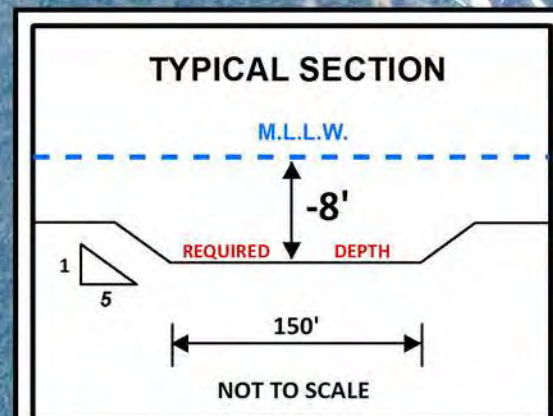
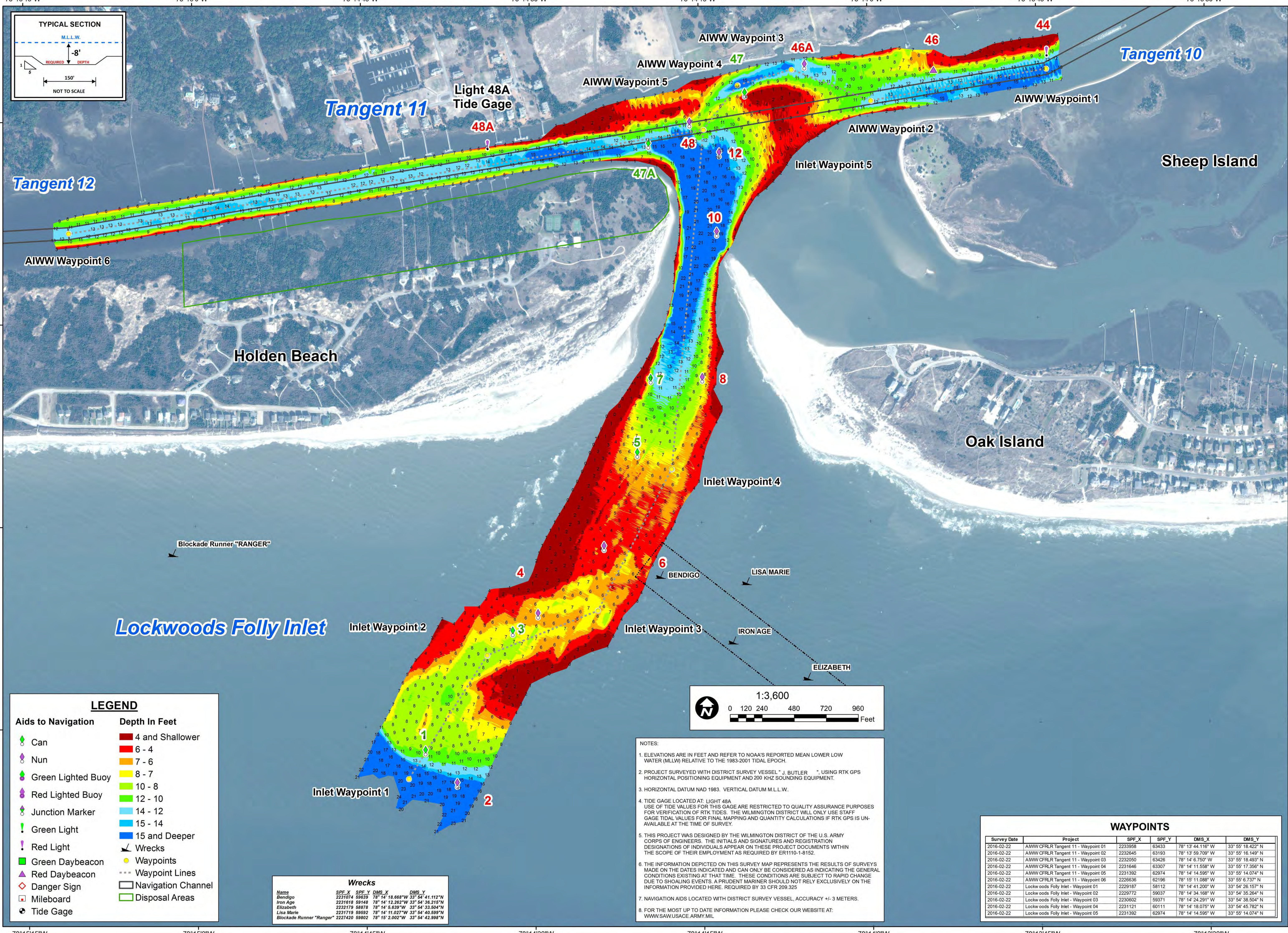
SURVEY DATE: 21 APRIL 2016	SURVEYED BY: LMT, SRV
MAP DATE: 29 APRIL 2016	MAPPED: K7PDPSSGD
MAP SCALE: 1:3,600	MAP FILE NAME: IN_10_LFI_20160421.MXD
IMAGERY DATE: 29 JANUARY 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	

HYDROGRAPHIC SURVEY

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

**Lockwoods Folly Inlet
& AIWW Crossing**

OAK ISLAND, NORTH CAROLINA



SURVEY DATE: 22 FEBRUARY 2016	SURVEYED BY: MAS, WJC, WWW
MAP DATE: 24 FEBRUARY 2016	MAPPED: K7PDPGSD
MAP SCALE: 1:3,600	MAP FILE NAME: IN_10_LFI_20160222.MXD
IMAGERY DATE: 29 JANUARY 2016	
© 2016 DIGITALGLOBE NEXTVIEW LICENSE	

LEGEND	
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
Green Daybeacon	15 - 14
Red Daybeacon	Wrecks
Danger Sign	Waypoints
Mileboard	Waypoint Lines
Tide Gage	Navigation Channel
	Disposal Areas

Wrecks				
Name	SPE_X	SPE_Y	DMS_X	DMS_Y
Bendigo	2231074	59639	78° 14' 18.668" W	33° 54' 41.112" N
Iron Age	2231018	59448	78° 14' 12.862" W	33° 54' 36.215" N
Elizabeth	2232179	59878	78° 14' 5.639" W	33° 54' 33.504" N
Lisa Marie	2231719	59592	78° 14' 11.027" W	33° 54' 40.599" N
Blockade Runner "Ranger"	2227420	59802	78° 15' 2.002" W	33° 54' 42.998" N

NOTES:

- ELEVATIONS ARE IN FEET 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: LIGHT 48A
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 ER1110-1-8152.
- 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

WAYPOINTS					
Survey Date	Project	SPE_X	SPE_Y	DMS_X	DMS_Y
2016-02-22	AIWW CFRLR Tangent 11 - Waypoint 01	2233958	63433	78° 13' 44.116" W	33° 55' 18.422" N
2016-02-22	AIWW CFRLR Tangent 11 - Waypoint 02	2232645	63193	78° 13' 59.709" W	33° 55' 16.149" N
2016-02-22	AIWW CFRLR Tangent 11 - Waypoint 03	2232050	63426	78° 14' 6.750" W	33° 55' 18.493" N
2016-02-22	AIWW CFRLR Tangent 11 - Waypoint 04	2231646	63307	78° 14' 11.558" W	33° 55' 17.356" N
2016-02-22	AIWW CFRLR Tangent 11 - Waypoint 05	2231392	62974	78° 14' 14.595" W	33° 55' 14.074" N
2016-02-22	AIWW CFRLR Tangent 11 - Waypoint 06	2228638	62196	78° 15' 11.988" W	33° 55' 6.737" N
2016-02-22	Lockwoods Folly Inlet - Waypoint 01	2229187	58112	78° 14' 41.200" W	33° 54' 26.157" N
2016-02-22	Lockwoods Folly Inlet - Waypoint 02	2229772	59037	78° 14' 34.168" W	33° 54' 35.284" N
2016-02-22	Lockwoods Folly Inlet - Waypoint 03	2230602	59371	78° 14' 24.291" W	33° 54' 38.504" N
2016-02-22	Lockwoods Folly Inlet - Waypoint 04	2231121	60111	78° 14' 18.075" W	33° 54' 45.782" N
2016-02-22	Lockwoods Folly Inlet - Waypoint 05	2231392	62974	78° 14' 14.595" W	33° 55' 14.074" N

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

**Lockwoods Folly Inlet
 & AIWW Crossing**
 OAK ISLAND, NORTH CAROLINA