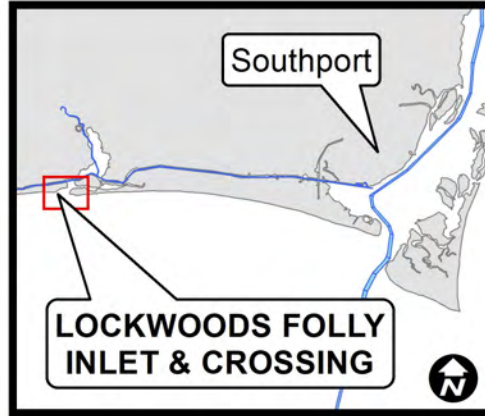
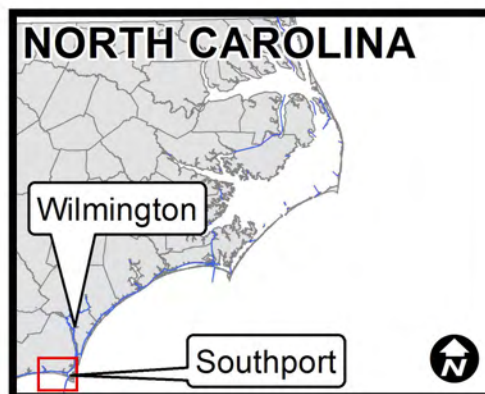


| WAYPOINTS | | | | | |
|-------------------------------------|-------------|---------|-------|-------------------|-------------------|
| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
| AMWW CFRLR Tangent 11 - Waypoint 01 | 2015-10-06 | 2233958 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AMWW CFRLR Tangent 11 - Waypoint 02 | 2015-10-06 | 2232845 | 63193 | 78° 13' 59.709" W | 33° 55' 16.149" N |
| AMWW CFRLR Tangent 11 - Waypoint 03 | 2015-10-06 | 2232246 | 63327 | 78° 14' 4.433" W | 33° 55' 17.502" N |
| AMWW CFRLR Tangent 11 - Waypoint 04 | 2015-10-06 | 2231732 | 63327 | 78° 14' 10.536" W | 33° 55' 17.541" N |
| AMWW CFRLR Tangent 11 - Waypoint 05 | 2015-10-06 | 2231390 | 62995 | 78° 14' 14.619" W | 33° 55' 14.280" N |
| AMWW CFRLR Tangent 11 - Waypoint 06 | 2015-10-06 | 2226636 | 62196 | 78° 15' 11.089" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-10-06 | 2229188 | 58352 | 78° 14' 41.173" W | 33° 54' 27.342" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-10-06 | 2231231 | 60665 | 78° 14' 16.715" W | 33° 54' 51.252" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-10-06 | 2231390 | 62995 | 78° 14' 14.619" W | 33° 55' 14.280" N |

| WRECKS | | | | |
|--------------------------|---------|-------|-------------------|-------------------|
| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232179 | 58878 | 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 | 58602 | 78° 15' 2.002" W | 33° 54' 42.998" N |

NOTES:

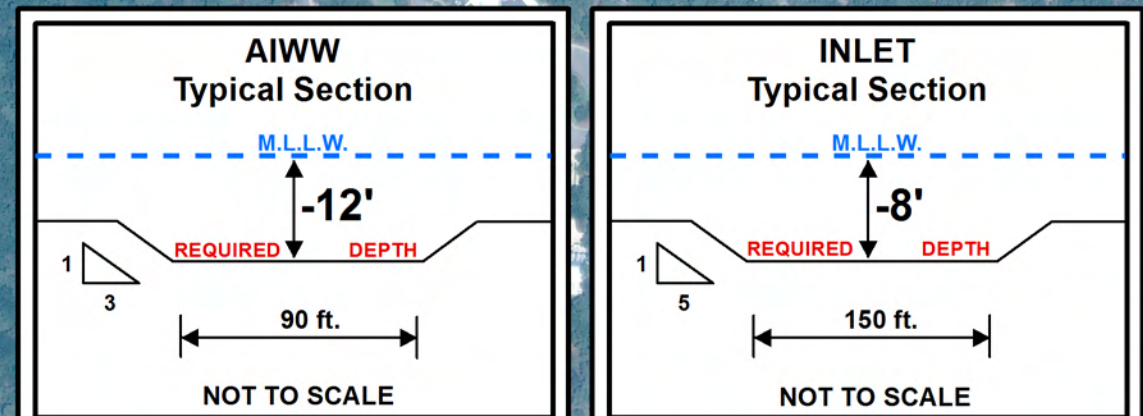
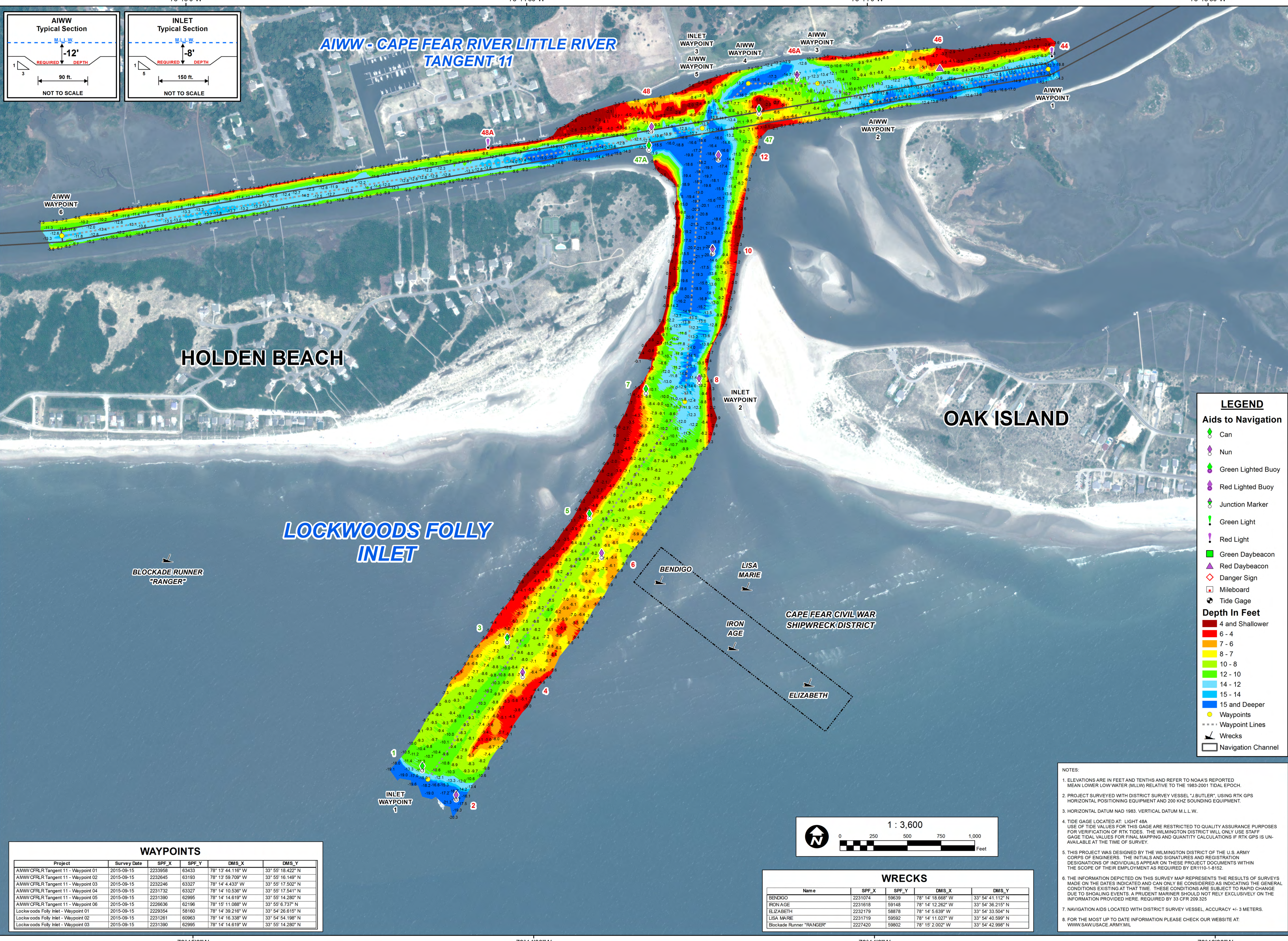
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
- PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER". USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
- HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
- TIDE GAGE LOCATED AT 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



| | |
|--------------------------------------|---|
| SURVEY DATE: OCTOBER 6 & 7, 2015 | SURVEYED BY: WWWW, JBD, LMT |
| MAP DATE: OCTOBER 9, 2015 | MAPPED BY: SMG |
| MAP SCALE: 1 : 3,600 | |
| IMAGERY DATE: AUGUST 10, 2015 | |
| © 2015 DIGITALGLOBE NEXTVIEW LICENSE | MAP FILE NAME: LFI-X_2015-10-06-07_CS.MXD |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
 OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

LOCKWOODS FOLLY INLET

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 and Deeper

- Waypoints
- Waypoint Lines
- Wrecks
- Navigation Channel

BLOCKADE RUNNER "RANGER"

BENDIGO

LISA MARIE

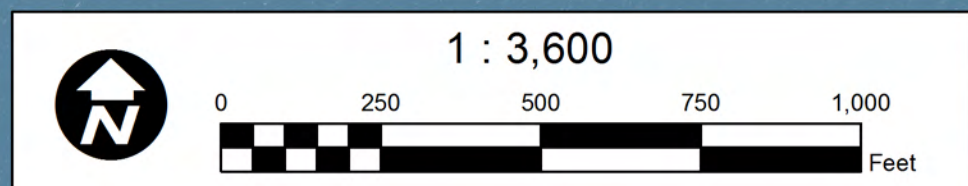
IRON AGE

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

ELIZABETH

WAYPOINTS

| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|-------------|---------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-09-15 | 2233858 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-09-15 | 2232645 | 63193 | 78° 13' 59.709" W | 33° 55' 16.149" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-09-15 | 2232246 | 63327 | 78° 14' 4.433" W | 33° 55' 17.502" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-09-15 | 2231732 | 63327 | 78° 14' 10.536" W | 33° 55' 17.541" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-09-15 | 2231390 | 62995 | 78° 14' 14.619" W | 33° 55' 14.280" N |
| AIWW CFRLR Tangent 11 - Waypoint 06 | 2015-09-15 | 2226636 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-09-15 | 2229354 | 58160 | 78° 14' 39.216" W | 33° 54' 26.615" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-09-15 | 2231261 | 60963 | 78° 14' 16.338" W | 33° 54' 54.198" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-09-15 | 2231390 | 62995 | 78° 14' 14.619" W | 33° 55' 14.280" N |

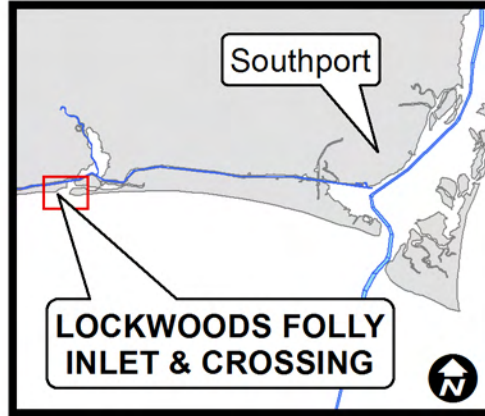
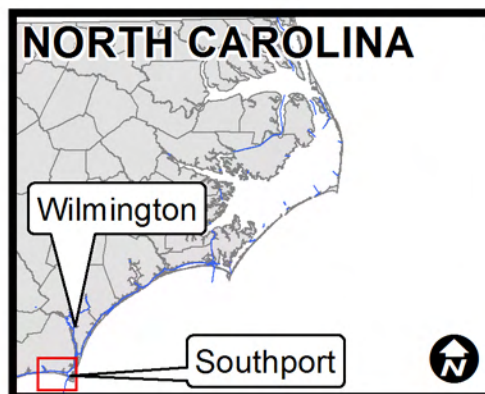


WRECKS

| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232179 | 58878 | 78° 14' 5.639" W | 33° 54' 33.504" N |
| LISA MARIE | 2231719 | 59592 | 78° 14' 11.027" W | 33° 54' 40.999" N |
| Blockade Runner "RANGER" | 2227420 | 58602 | 78° 15' 2.002" W | 33° 54' 42.998" N |

NOTES:

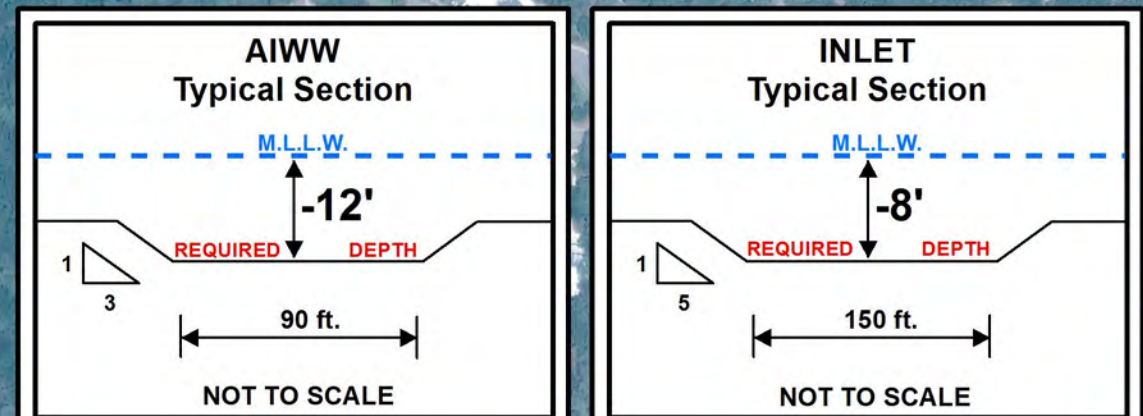
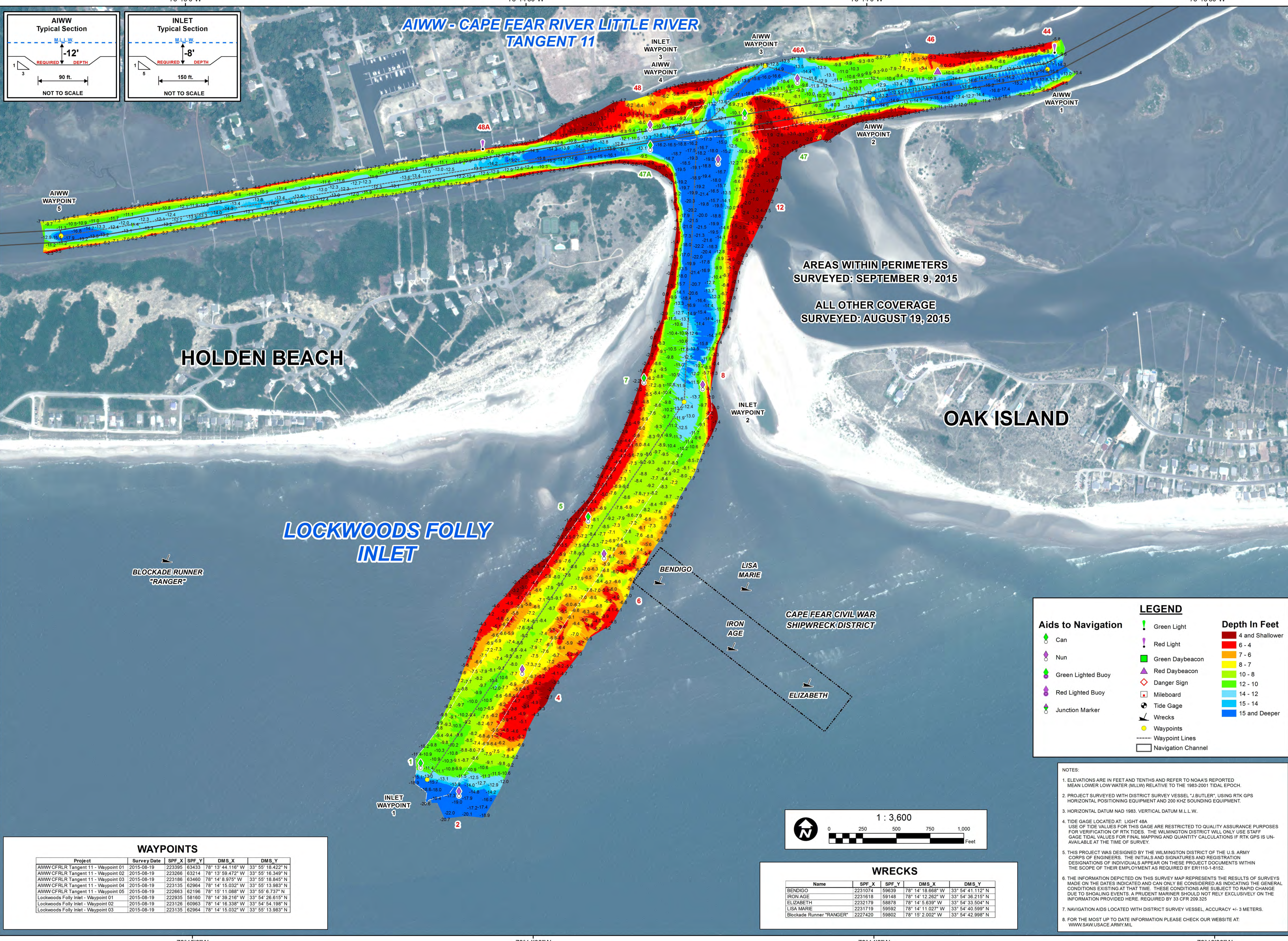
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
- PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER". USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
- HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
- TIDE GAGE LOCATED AT 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



| | |
|---|-----------------------|
| SURVEY DATE: SEPTEMBER 15, 2015 | SURVEYED BY: WJC, MAS |
| MAP DATE: SEPTEMBER 18, 2015 | MAPPED BY: SGD |
| MAP SCALE: 1 : 3,600 | |
| IMAGERY DATE: AUGUST 10, 2015 | |
| © 2015 DIGITALGLOBE NEXTVIEW LICENSE | |
| MAP FILE NAME: LFI-X_2015-09-15_AD_FILL.MXD | |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
 OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

AREAS WITHIN PERIMETERS SURVEYED: SEPTEMBER 9, 2015
 ALL OTHER COVERAGE SURVEYED: AUGUST 19, 2015

HOLDEN BEACH

OAK ISLAND

LOCKWOODS FOLLY INLET

BLOCKADE RUNNER "RANGER"

BENDIGO

LISA MARIE

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

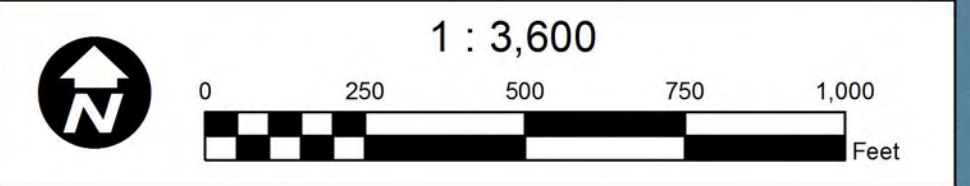
IRON AGE

ELIZABETH

LEGEND

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

- 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 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

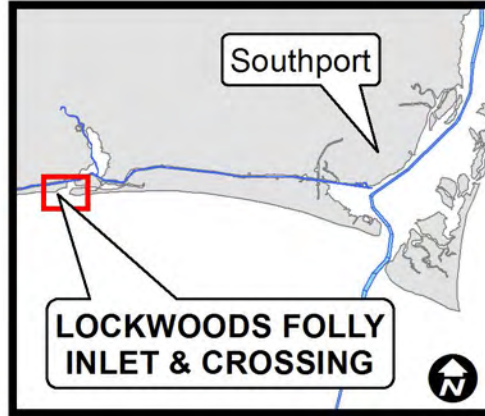
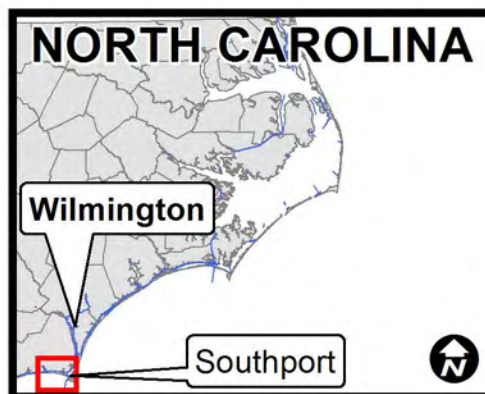


WRECKS

| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232179 | 58676 | 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 |

WAYPOINTS

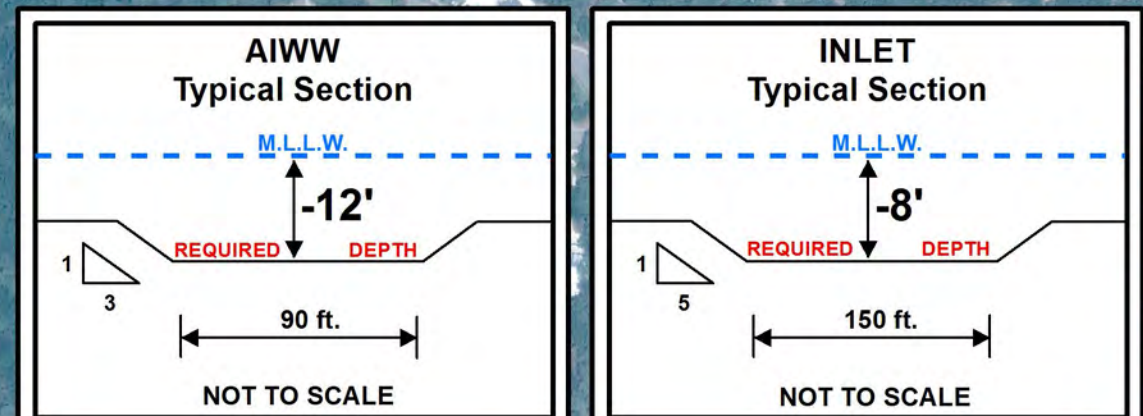
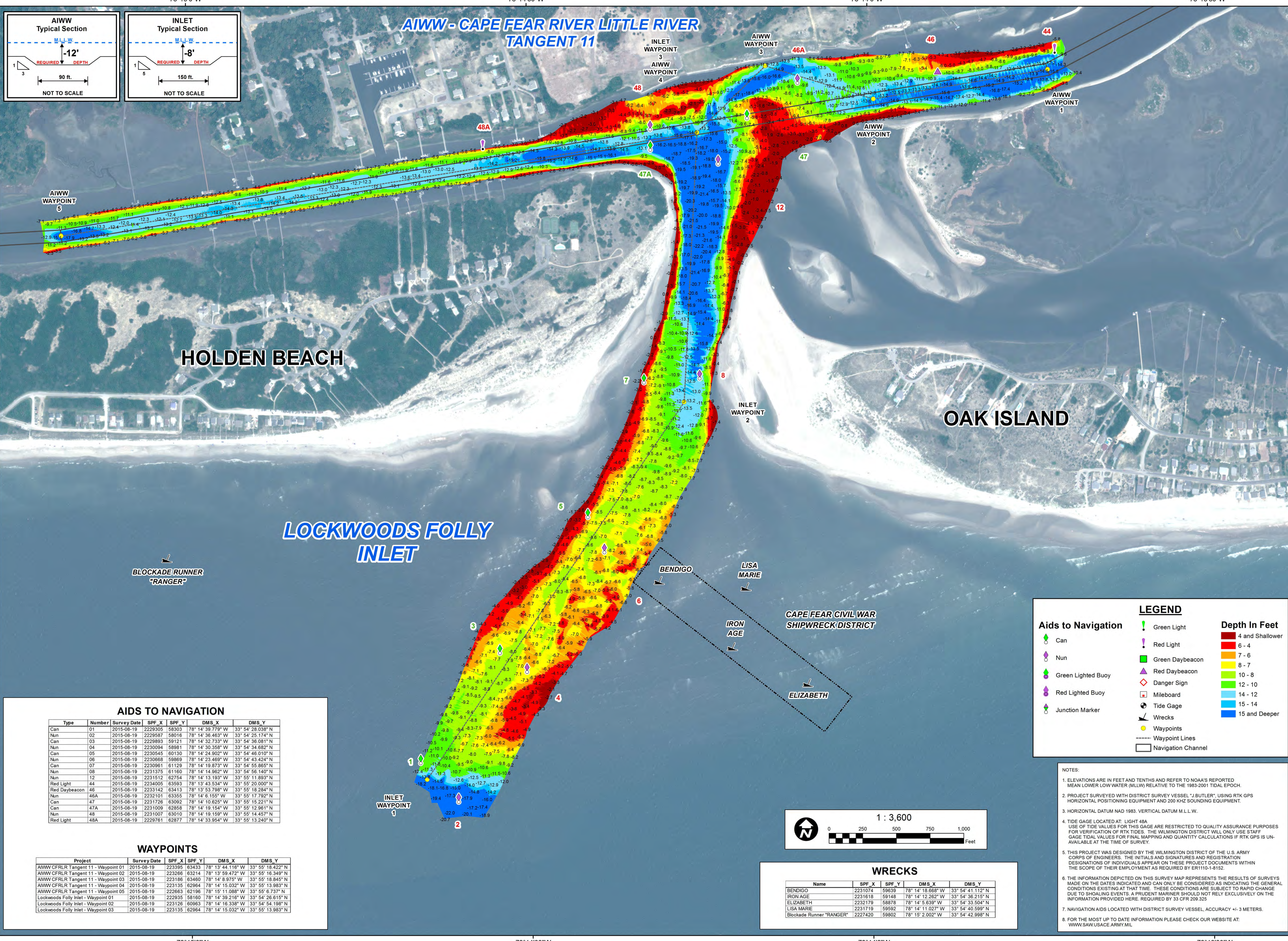
| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|-------------|--------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-08-19 | 223395 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-08-19 | 223266 | 63214 | 78° 13' 59.472" W | 33° 55' 16.349" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-08-19 | 223186 | 63460 | 78° 14' 8.976" W | 33° 55' 18.845" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-08-19 | 223135 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-08-19 | 222663 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-08-19 | 222935 | 58160 | 78° 14' 39.216" W | 33° 54' 26.615" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-08-19 | 223126 | 60963 | 78° 14' 16.338" W | 33° 54' 54.198" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-08-19 | 223135 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |



| | |
|--|--|
| SURVEY DATE(S): AUGUST 19-20 & SEPTEMBER 9, 2015 | SURVEYED BY: WJUC, MAS, LMT |
| MAP DATE: SEPTEMBER 10, 2015 | MAPPED BY: DJM |
| MAP SCALE: 1 : 3,600 | |
| IMAGERY DATE: AUGUST 10, 2015 | |
| © 2015 DIGITALGLOBE NEXTVIEW LICENSE | MAP FILE NAME: LFI-X_2015-09-09_DO.MXD |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
 OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

HOLDEN BEACH

OAK ISLAND

LOCKWOODS FOLLY INLET

BLOCKADE RUNNER "RANGER"

BENDIGO

LISA MARIE

IRON AGE

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

ELIZABETH

INLET WAYPOINT 1

INLET WAYPOINT 2

AIWW WAYPOINT 1

AIWW WAYPOINT 2

AIWW WAYPOINT 3

AIWW WAYPOINT 4

AIWW WAYPOINT 5

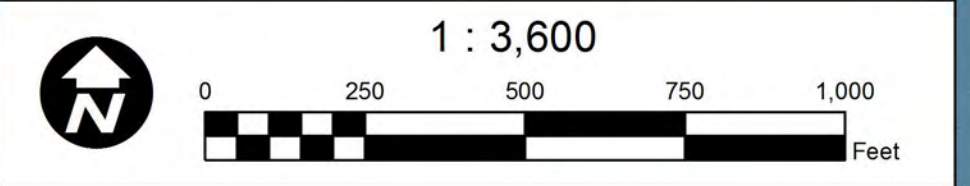
LEGEND

| | | | |
|--|--------------------|--|--------------------|
| | Green Light | | Red Light |
| | Nun | | Green Daybeacon |
| | Green Lighted Buoy | | Red Daybeacon |
| | Red Lighted Buoy | | Mileboard |
| | Junction Marker | | Danger Sign |
| | Wrecks | | Tide Gage |
| | Waypoints | | Navigation Channel |

Depth In Feet

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

- 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 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.SAV.USACE.ARMY.MIL



WRECKS

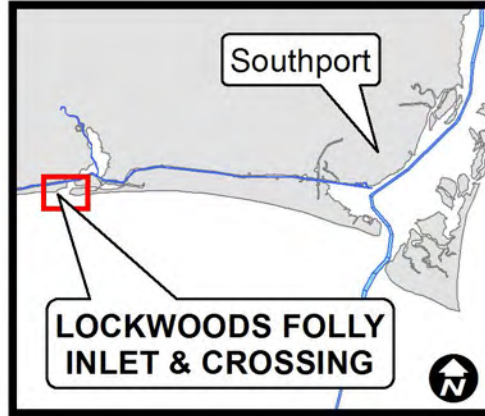
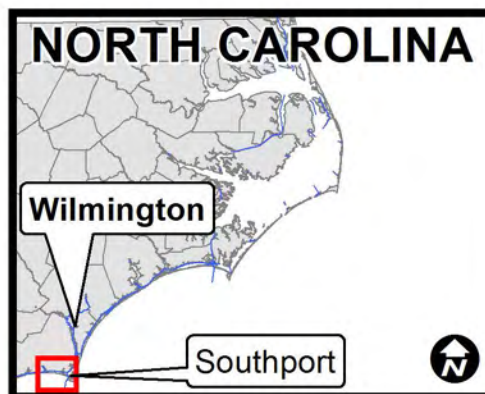
| Name | SPF_X | SPF_Y | DMS_X | DMS_Y |
|--------------------------|---------|-------|-------------------|-------------------|
| BENDIGO | 2231074 | 59639 | 78° 14' 18.668" W | 33° 54' 41.112" N |
| IRON AGE | 2231618 | 59148 | 78° 14' 12.262" W | 33° 54' 36.215" N |
| ELIZABETH | 2232179 | 58876 | 78° 14' 5.639" W | 33° 54' 33.504" N |
| LISA MARIE | 2231719 | 59582 | 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 |

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|---------------|--------|-------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-08-19 | 2229305 | 58303 | 78° 14' 39.779" W | 33° 54' 28.038" N |
| Nun | 02 | 2015-08-19 | 2229587 | 58016 | 78° 14' 38.483" W | 33° 54' 25.174" N |
| Can | 03 | 2015-08-19 | 2229893 | 59121 | 78° 14' 32.733" W | 33° 54' 36.081" N |
| Nun | 04 | 2015-08-19 | 2230094 | 58981 | 78° 14' 30.358" W | 33° 54' 34.682" N |
| Can | 05 | 2015-08-19 | 2230545 | 60130 | 78° 14' 24.902" W | 33° 54' 46.010" N |
| Nun | 06 | 2015-08-19 | 2230688 | 59869 | 78° 14' 23.469" W | 33° 54' 43.424" N |
| Can | 07 | 2015-08-19 | 2230961 | 61129 | 78° 14' 19.873" W | 33° 54' 55.865" N |
| Nun | 08 | 2015-08-19 | 2231375 | 61160 | 78° 14' 14.962" W | 33° 54' 56.140" N |
| Nun | 12 | 2015-08-19 | 2231512 | 62754 | 78° 14' 13.193" W | 33° 55' 11.893" N |
| Red Light | 44 | 2015-08-19 | 2234005 | 63593 | 78° 13' 43.534" W | 33° 55' 20.000" N |
| Red Daybeacon | 46 | 2015-08-19 | 2233142 | 63413 | 78° 13' 53.798" W | 33° 55' 18.284" N |
| Nun | 46A | 2015-08-19 | 2232101 | 63355 | 78° 14' 6.165" W | 33° 55' 17.792" N |
| Can | 47 | 2015-08-19 | 2231728 | 63092 | 78° 14' 10.625" W | 33° 55' 15.221" N |
| Can | 47A | 2015-08-19 | 2231009 | 62858 | 78° 14' 19.154" W | 33° 55' 12.961" N |
| Nun | 48 | 2015-08-19 | 2231007 | 63010 | 78° 14' 19.159" W | 33° 55' 14.457" N |
| Red Light | 48A | 2015-08-19 | 2229761 | 62877 | 78° 14' 33.954" W | 33° 55' 13.240" N |

WAYPOINTS

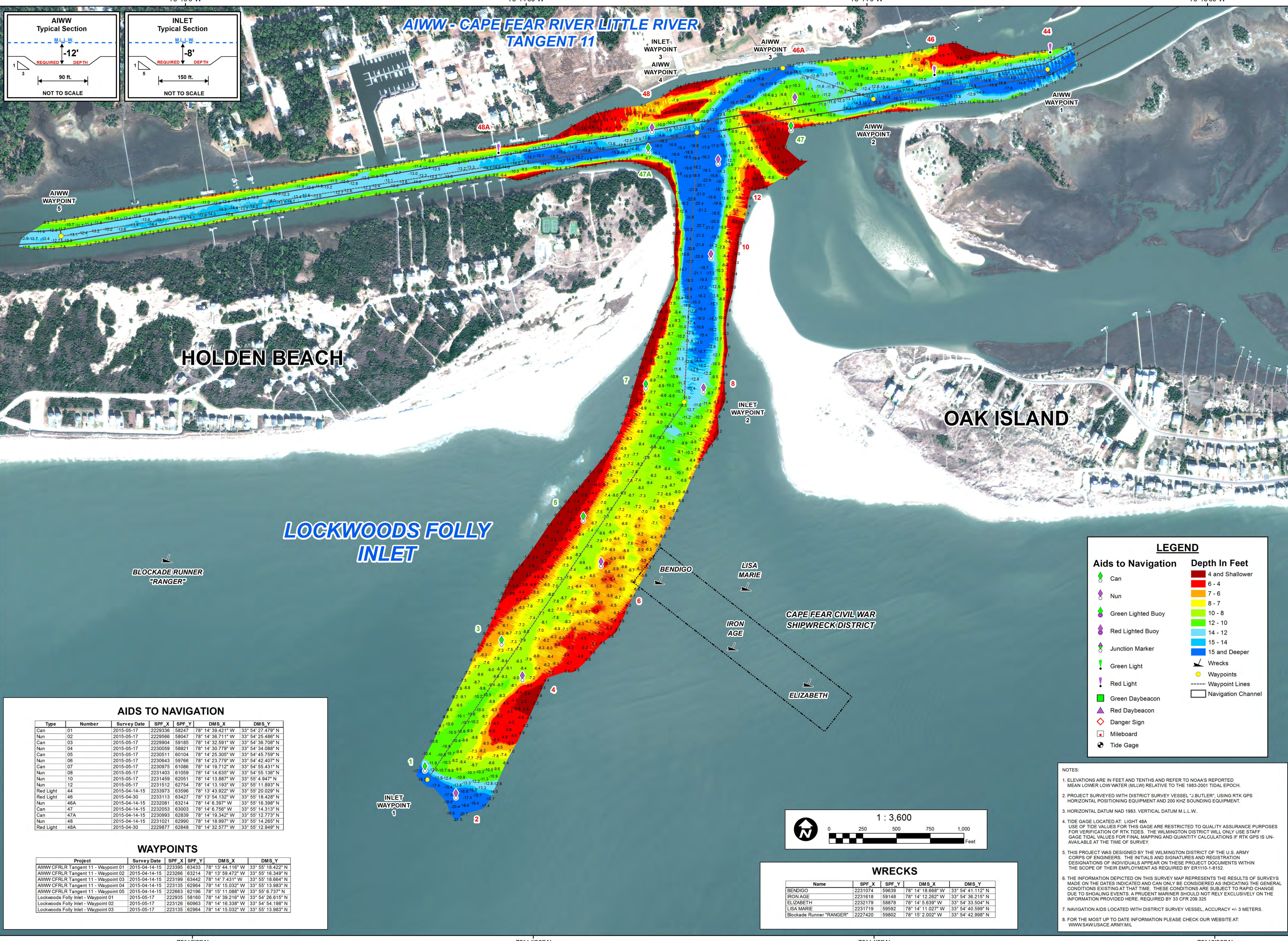
| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|-------------|--------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-08-19 | 223395 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-08-19 | 223266 | 63214 | 78° 13' 59.472" W | 33° 55' 16.349" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-08-19 | 223186 | 63460 | 78° 14' 8.975" W | 33° 55' 18.845" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-08-19 | 223135 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-08-19 | 222683 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-08-19 | 222935 | 58160 | 78° 14' 39.216" W | 33° 54' 26.615" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-08-19 | 223126 | 60693 | 78° 14' 16.338" W | 33° 54' 54.198" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-08-19 | 223135 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |



| | |
|---|--|
| SURVEY DATE(S): AUGUST 19-20, 2015 | SURVEYED BY: WJC, MAS |
| MAP DATE: AUGUST 21, 2015 | MAPPED BY: DJM |
| MAP SCALE: 1 : 3,600 | MAP FILE NAME: LFI-X_2015-08-19_BD.MXD |
| © AUGUST 10, 2015 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(S): MAY 11 & 17, 2015 | SURVEYED BY: WJC, JBD |
| MAP DATE: MAY 11 & 17, 2015 | MAPPED BY: SMG, DJM |
| MAP SCALE: 1 : 3,600 | MAP FILE NAME: LFI-X_2015-05-17_CS.MXD |
| IMAGERY DATE: JANUARY 10, 2015 © DIGITALGLOBE, INC. | |

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 |

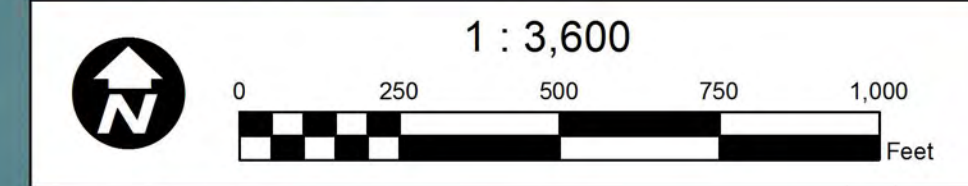
- NOTES:**
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER". USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
 - HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
 - TIDE GAGE LOCATED AT 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.SAV.USACE.ARMY.MIL

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-----------|--------|---------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-05-17 | 2229336 | 58247 | 78° 14' 39.421" W | 33° 54' 27.478" N |
| Nun | 02 | 2015-05-17 | 2229596 | 59047 | 78° 14' 36.711" W | 33° 54' 25.488" N |
| Can | 03 | 2015-05-17 | 2229904 | 59185 | 78° 14' 32.591" W | 33° 54' 38.708" N |
| Nun | 04 | 2015-05-17 | 2230059 | 58921 | 78° 14' 30.779" W | 33° 54' 34.088" N |
| Can | 05 | 2015-05-17 | 2230511 | 60104 | 78° 14' 25.305" W | 33° 54' 45.759" N |
| Nun | 06 | 2015-05-17 | 2230643 | 59766 | 78° 14' 23.779" W | 33° 54' 42.407" N |
| Can | 07 | 2015-05-17 | 2230975 | 61086 | 78° 14' 19.712" W | 33° 54' 55.431" N |
| Nun | 08 | 2015-05-17 | 2231403 | 61059 | 78° 14' 14.635" W | 33° 54' 55.136" N |
| Can | 10 | 2015-05-17 | 2231459 | 62051 | 78° 14' 13.887" W | 33° 54' 4.947" N |
| Nun | 12 | 2015-05-17 | 2231512 | 62754 | 78° 14' 13.193" W | 33° 55' 11.893" N |
| Red Light | 44 | 2015-04-14-15 | 2233973 | 63596 | 78° 13' 43.922" W | 33° 55' 20.029" N |
| Red Light | 46 | 2015-04-30 | 2233113 | 63427 | 78° 13' 54.132" W | 33° 55' 18.428" N |
| Nun | 46A | 2015-04-14-15 | 2232081 | 63214 | 78° 14' 6.397" W | 33° 55' 16.398" N |
| Can | 47 | 2015-04-14-15 | 2232053 | 63003 | 78° 14' 6.756" W | 33° 55' 14.313" N |
| Can | 47A | 2015-04-14-15 | 2230993 | 62839 | 78° 14' 19.342" W | 33° 55' 12.773" N |
| Nun | 48 | 2015-04-14-15 | 2231021 | 62990 | 78° 14' 18.997" W | 33° 55' 14.265" N |
| Red Light | 48A | 2015-04-30 | 2229877 | 62848 | 78° 14' 32.577" W | 33° 55' 12.949" N |

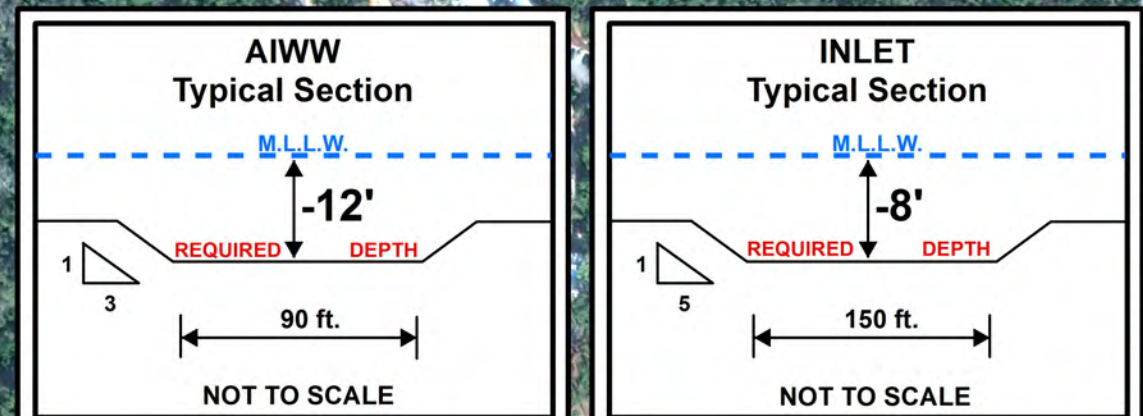
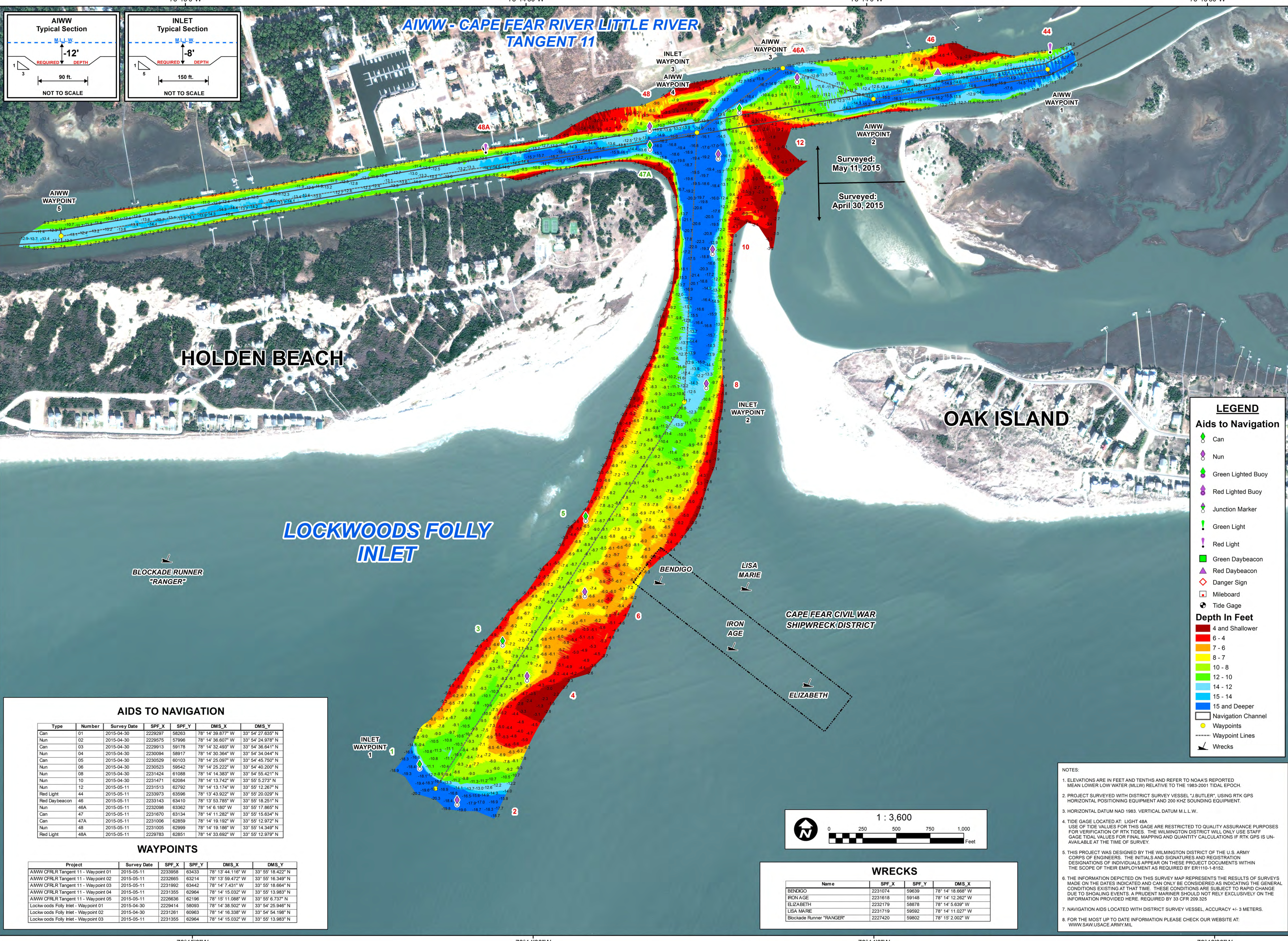
WAYPOINTS

| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|---------------|--------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-04-14-15 | 223395 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-04-14-15 | 223266 | 63214 | 78° 13' 59.472" W | 33° 55' 16.349" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-04-14-15 | 223199 | 63442 | 78° 14' 7.431" W | 33° 55' 16.664" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-04-14-15 | 223135 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-04-14-15 | 222683 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-05-17 | 222935 | 58180 | 78° 14' 39.216" W | 33° 54' 26.615" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-05-17 | 223126 | 60693 | 78° 14' 16.338" W | 33° 54' 54.198" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-05-17 | 223135 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |



WRECKS

| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232179 | 58876 | 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 | 58802 | 78° 15' 2.002" W | 33° 54' 42.998" N |



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

HOLDEN BEACH

OAK ISLAND

LOCKWOODS FOLLY INLET

BLOCKADE RUNNER "RANGER"

BENDIGO

LISA MARIE

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

IRON AGE

ELIZABETH

LEGEND

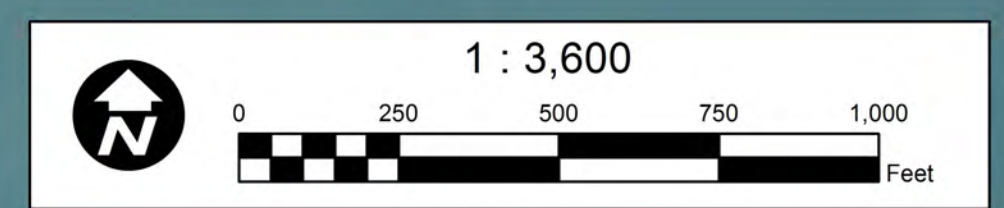
- Aids to Navigation**
- Can
 - Nun
 - Green Lighted Buoy
 - Red Lighted Buoy
 - Junction Marker
 - Green Light
 - Red Light
 - Green Daybeacon
 - Red Daybeacon
 - Danger Sign
 - Mileboard
 - Tide Gage
- Depth In Feet**
- 4 and Shallower
 - 6 - 4
 - 7 - 6
 - 8 - 7
 - 10 - 8
 - 12 - 10
 - 14 - 12
 - 15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

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|---------------|--------|-------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-04-30 | 2229297 | 58283 | 78° 14' 39.877" W | 33° 54' 27.635" N |
| Nun | 02 | 2015-04-30 | 2229575 | 57996 | 78° 14' 36.607" W | 33° 54' 24.978" N |
| Can | 03 | 2015-04-30 | 2229913 | 59178 | 78° 14' 32.493" W | 33° 54' 36.641" N |
| Can | 04 | 2015-04-30 | 2230094 | 58917 | 78° 14' 30.364" W | 33° 54' 34.044" N |
| Can | 05 | 2015-04-30 | 2230529 | 60103 | 78° 14' 25.097" W | 33° 54' 45.750" N |
| Nun | 06 | 2015-04-30 | 2230523 | 59542 | 78° 14' 25.222" W | 33° 54' 40.207" N |
| Nun | 08 | 2015-04-30 | 2231424 | 61088 | 78° 14' 14.383" W | 33° 54' 55.421" N |
| Nun | 10 | 2015-04-30 | 2231471 | 62084 | 78° 14' 13.742" W | 33° 55' 5.273" N |
| Nun | 12 | 2015-05-11 | 2231513 | 62792 | 78° 14' 13.174" W | 33° 55' 12.267" N |
| Red Light | 44 | 2015-05-11 | 2233973 | 63596 | 78° 13' 43.922" W | 33° 55' 20.029" N |
| Red Daybeacon | 46 | 2015-05-11 | 2233143 | 63410 | 78° 13' 53.785" W | 33° 55' 18.251" N |
| Nun | 46A | 2015-05-11 | 2232098 | 63362 | 78° 14' 6.180" W | 33° 55' 17.865" N |
| Can | 47 | 2015-05-11 | 2231670 | 63134 | 78° 14' 11.282" W | 33° 55' 15.634" N |
| Can | 47A | 2015-05-11 | 2231006 | 62859 | 78° 14' 19.192" W | 33° 55' 12.972" N |
| Nun | 48 | 2015-05-11 | 2231005 | 62999 | 78° 14' 19.186" W | 33° 55' 14.346" N |
| Red Light | 48A | 2015-05-11 | 2229783 | 62851 | 78° 14' 33.692" W | 33° 55' 12.978" N |

WAYPOINTS

| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|-------------|---------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-05-11 | 2233958 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-05-11 | 2232965 | 63214 | 78° 13' 59.472" W | 33° 55' 16.349" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-05-11 | 2231992 | 63442 | 78° 14' 7.431" W | 33° 55' 18.664" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-05-11 | 2231355 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-05-11 | 2226636 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-04-30 | 2229414 | 58093 | 78° 14' 38.502" W | 33° 54' 25.946" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-04-30 | 2231261 | 60963 | 78° 14' 16.338" W | 33° 54' 54.198" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-05-11 | 2231355 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |

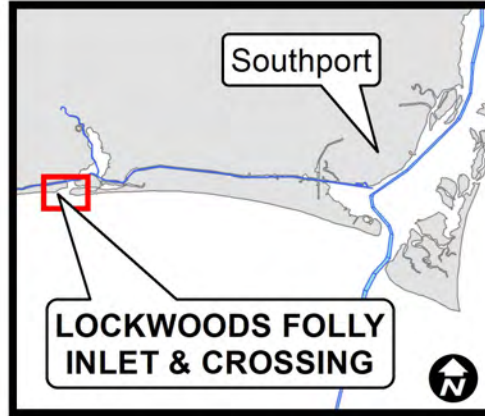
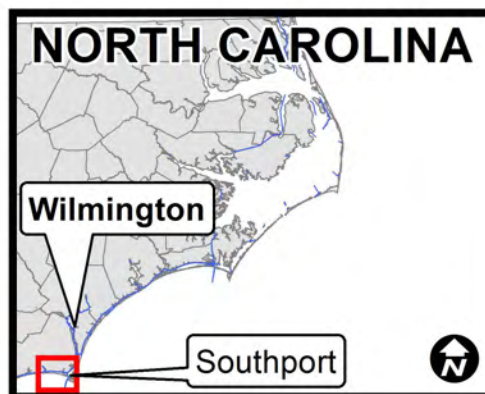


WRECKS

| Name | SPF_X | SPF_Y | DMS_X |
|--------------------------|---------|-------|-------------------|
| BENDIGO | 2231074 | 59639 | 78° 14' 18.668" W |
| IRON AGE | 2231618 | 59148 | 78° 14' 12.262" W |
| ELIZABETH | 2232179 | 58678 | 78° 14' 5.639" W |
| LISA MARIE | 2231719 | 59592 | 78° 14' 11.027" W |
| Blockade Runner "RANGER" | 2227420 | 59802 | 78° 15' 2.002" W |

NOTES:

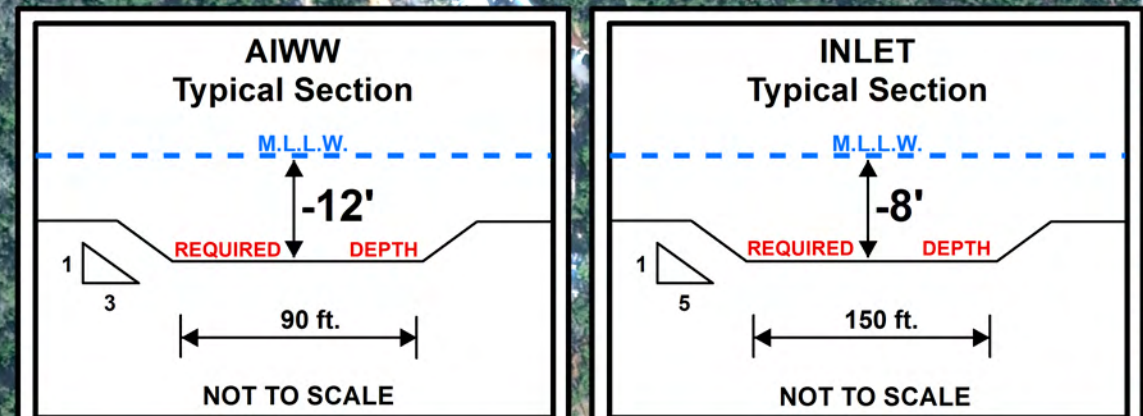
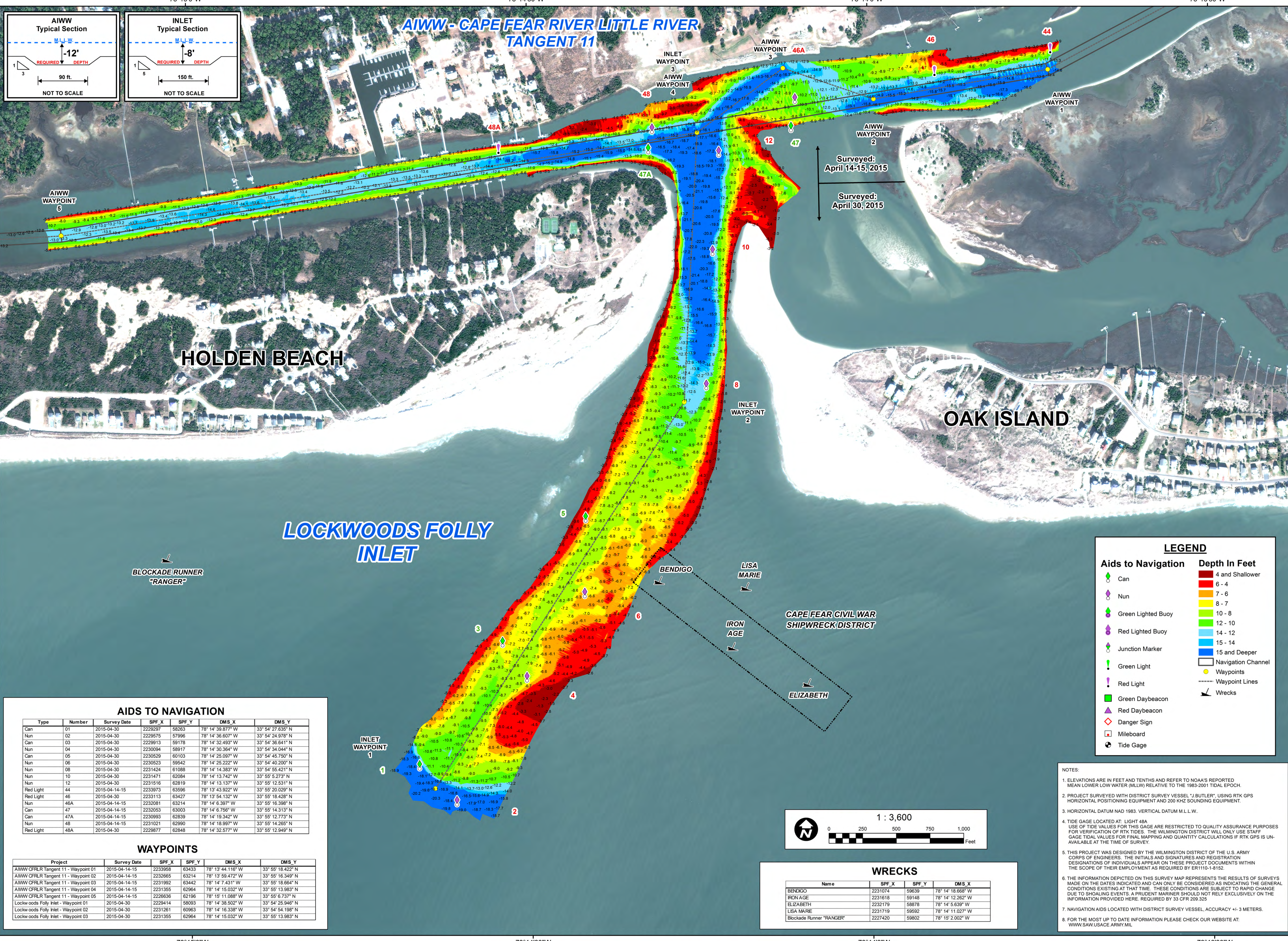
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
- PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J BUTLER", USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
- HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
- TIDE GAGE LOCATED AT 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



| | | |
|---|---|--|
| SURVEYED BY: WJC, LMT, JBD | MAPPED BY: DJM, SMG | MAP FILE NAME: LFI-X_2015-05-11_CS.MXD |
| SURVEY DATE(S): APRIL 30 & MAY 11, 2015 | IMAGERY DATE: JANUARY 10, 2015 © DIGITALGLOBE, INC. | MAP SCALE: 1 : 3,600 |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

LOCKWOODS FOLLY INLET

HOLDEN BEACH

OAK ISLAND

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

BLOCKADE RUNNER "RANGER"

BENDIGO

LISA MARIE

IRON AGE

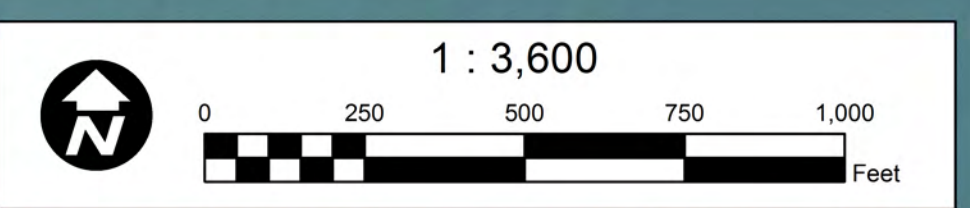
ELIZABETH

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-----------|--------|---------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-04-30 | 2229297 | 58263 | 78° 14' 39.877" W | 33° 54' 27.635" N |
| Nun | 02 | 2015-04-30 | 2229276 | 57996 | 78° 14' 36.807" W | 33° 54' 24.978" N |
| Can | 03 | 2015-04-30 | 2229813 | 59178 | 78° 14' 32.483" W | 33° 54' 36.841" N |
| Nun | 04 | 2015-04-30 | 2230094 | 58917 | 78° 14' 30.364" W | 33° 54' 34.044" N |
| Can | 05 | 2015-04-30 | 2230529 | 60103 | 78° 14' 25.097" W | 33° 54' 45.750" N |
| Nun | 06 | 2015-04-30 | 2230523 | 59642 | 78° 14' 25.222" W | 33° 54' 40.200" N |
| Nun | 08 | 2015-04-30 | 2231424 | 61088 | 78° 14' 14.383" W | 33° 54' 55.421" N |
| Nun | 10 | 2015-04-30 | 2231471 | 62084 | 78° 14' 13.742" W | 33° 55' 5.273" N |
| Nun | 12 | 2015-04-30 | 2231516 | 62819 | 78° 14' 13.137" W | 33° 55' 12.531" N |
| Red Light | 44 | 2015-04-14-15 | 2233973 | 63596 | 78° 13' 43.922" W | 33° 55' 20.029" N |
| Red Light | 46 | 2015-04-30 | 2233113 | 63427 | 78° 13' 54.132" W | 33° 55' 18.428" N |
| Can | 46A | 2015-04-14-15 | 2232081 | 63214 | 78° 14' 6.397" W | 33° 55' 16.398" N |
| Can | 47 | 2015-04-14-15 | 2232053 | 63003 | 78° 14' 6.756" W | 33° 55' 14.313" N |
| Can | 47A | 2015-04-14-15 | 2230993 | 62839 | 78° 14' 19.342" W | 33° 55' 12.773" N |
| Nun | 48 | 2015-04-14-15 | 2231021 | 62990 | 78° 14' 18.997" W | 33° 55' 14.265" N |
| Red Light | 48A | 2015-04-30 | 2229877 | 62848 | 78° 14' 32.577" W | 33° 55' 12.949" N |

WAYPOINTS

| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|---------------|---------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-04-14-15 | 2233958 | 63433 | 78° 13' 44.116" W | 33° 55' 18.422" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-04-14-15 | 2232665 | 63214 | 78° 13' 59.472" W | 33° 55' 16.349" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-04-14-15 | 2231992 | 63442 | 78° 14' 7.431" W | 33° 55' 18.664" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-04-14-15 | 2231355 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-04-14-15 | 2228636 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-04-30 | 2228414 | 58093 | 78° 14' 38.502" W | 33° 54' 25.946" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-04-30 | 2231261 | 60963 | 78° 14' 16.338" W | 33° 54' 54.198" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-04-30 | 2231355 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |



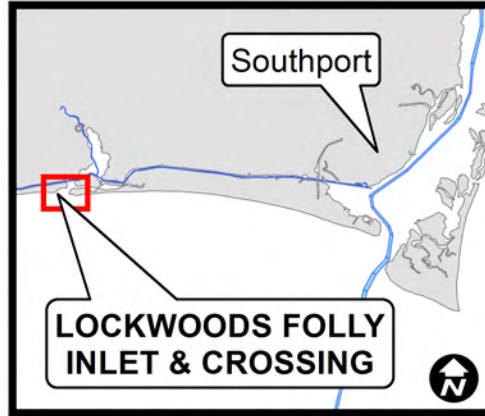
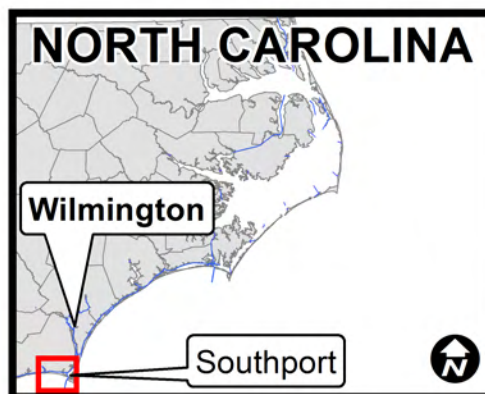
WRECKS

| Name | SPF_X | SPF_Y | DMS_X |
|--------------------------|---------|-------|-------------------|
| BENDIGO | 2231074 | 59639 | 78° 14' 18.668" W |
| IRON AGE | 2231618 | 59148 | 78° 14' 12.262" W |
| ELIZABETH | 2232179 | 58878 | 78° 14' 5.639" W |
| LISA MARIE | 2231719 | 59592 | 78° 14' 11.027" W |
| Blockade Runner "RANGER" | 2227420 | 59802 | 78° 15' 2.002" W |

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 | 15 and Deeper |
| Danger Sign | Navigation Channel |
| Mileboard | Waypoints |
| Tide Gage | Waypoint Lines |
| | Wrecks |

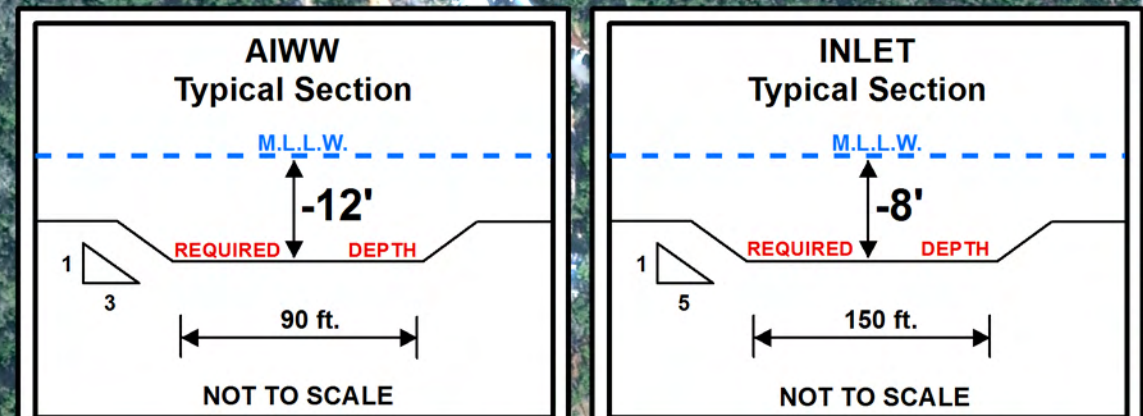
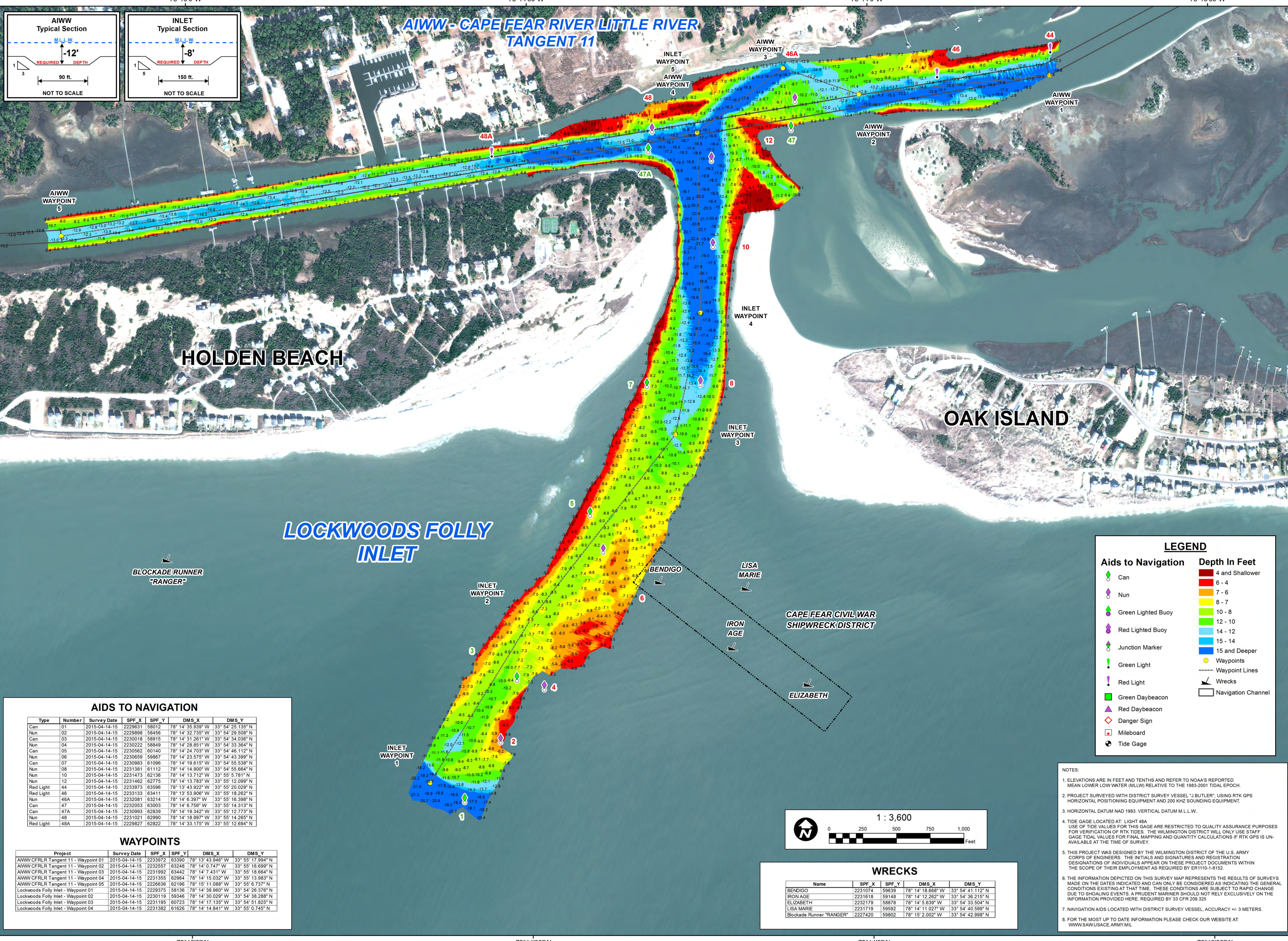
- NOTES:**
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER". USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
 - HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
 - TIDE GAGE LOCATED AT 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.SAV.USACE.ARMY.MIL



| | |
|---|--|
| SURVEY DATE(S): APRIL 14-15 & 30, 2015 | SURVEYED BY: WJC, JBD |
| MAP SCALE: 1 : 3,600 | MAPPED BY: DJM, SMG |
| IMAGERY DATE: JANUARY 10, 2015 © DIGITALGLOBE, INC. | MAP FILE NAME: LFI-X_2015-04-30_AD.MXD |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
 OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

LOCKWOODS FOLLY INLET

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 | Wrecks |
| | Navigation Channel |

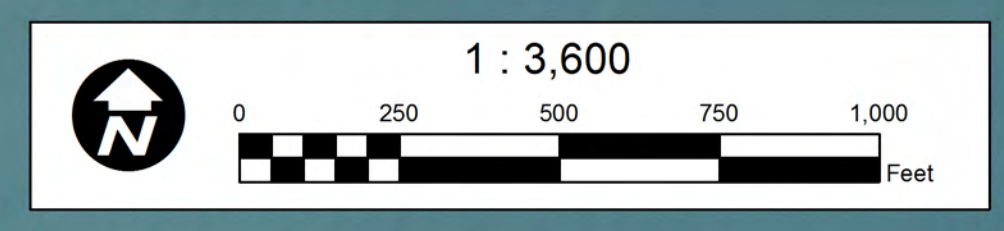
- NOTES:**
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER". USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
 - HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W.
 - TIDE GAGE LOCATED AT 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 SHOULDERING 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.SAV.USACE.ARMY.MIL

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-----------|--------|---------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-04-14-15 | 2229631 | 58012 | 78° 14' 35.939" W | 33° 54' 25.135" N |
| Nun | 02 | 2015-04-14-15 | 2229888 | 58456 | 78° 14' 32.735" W | 33° 54' 29.508" N |
| Can | 03 | 2015-04-14-15 | 2230018 | 58915 | 78° 14' 31.261" W | 33° 54' 34.036" N |
| Nun | 04 | 2015-04-14-15 | 2230222 | 58849 | 78° 14' 28.851" W | 33° 54' 33.364" N |
| Can | 05 | 2015-04-14-15 | 2230562 | 60140 | 78° 14' 24.703" W | 33° 54' 46.112" N |
| Nun | 06 | 2015-04-14-15 | 2230659 | 59867 | 78° 14' 23.575" W | 33° 54' 43.399" N |
| Can | 07 | 2015-04-14-15 | 2230983 | 61096 | 78° 14' 19.615" W | 33° 54' 55.536" N |
| Nun | 08 | 2015-04-14-15 | 2231381 | 61112 | 78° 14' 14.900" W | 33° 54' 55.664" N |
| Nun | 10 | 2015-04-14-15 | 2231473 | 62136 | 78° 14' 13.712" W | 33° 55' 5.761" N |
| Nun | 12 | 2015-04-14-15 | 2231462 | 62775 | 78° 14' 13.783" W | 33° 55' 12.969" N |
| Red Light | 44 | 2015-04-14-15 | 2233973 | 63596 | 78° 13' 43.922" W | 33° 55' 20.029" N |
| Red Light | 46 | 2015-04-14-15 | 2233133 | 63411 | 78° 13' 53.906" W | 33° 55' 16.262" N |
| Nun | 46A | 2015-04-14-15 | 2232081 | 63214 | 78° 14' 6.397" W | 33° 55' 16.398" N |
| Can | 47 | 2015-04-14-15 | 2232053 | 63003 | 78° 14' 6.756" W | 33° 55' 14.313" N |
| Can | 47A | 2015-04-14-15 | 2230993 | 62839 | 78° 14' 19.342" W | 33° 55' 12.773" N |
| Nun | 48 | 2015-04-14-15 | 2231021 | 62890 | 78° 14' 18.997" W | 33° 55' 14.265" N |
| Red Light | 48A | 2015-04-14-15 | 2229827 | 62822 | 78° 14' 33.175" W | 33° 55' 12.694" N |

WAYPOINTS

| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|---------------|---------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-04-14-15 | 2233972 | 63390 | 78° 13' 43.946" W | 33° 55' 17.994" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-04-14-15 | 2232557 | 63248 | 78° 14' 0.747" W | 33° 55' 16.699" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-04-14-15 | 2231992 | 63442 | 78° 14' 7.431" W | 33° 55' 16.664" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-04-14-15 | 2231355 | 62964 | 78° 14' 15.032" W | 33° 55' 13.983" N |
| AIWW CFRLR Tangent 11 - Waypoint 05 | 2015-04-14-15 | 2226636 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-04-14-15 | 2229375 | 58136 | 78° 14' 38.960" W | 33° 54' 26.376" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-04-14-15 | 2230119 | 59346 | 78° 14' 30.029" W | 33° 54' 38.289" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-04-14-15 | 2231195 | 60723 | 78° 14' 17.135" W | 33° 54' 51.825" N |
| Lockwoods Folly Inlet - Waypoint 04 | 2015-04-14-15 | 2231382 | 61626 | 78° 14' 14.841" W | 33° 55' 0.745" N |

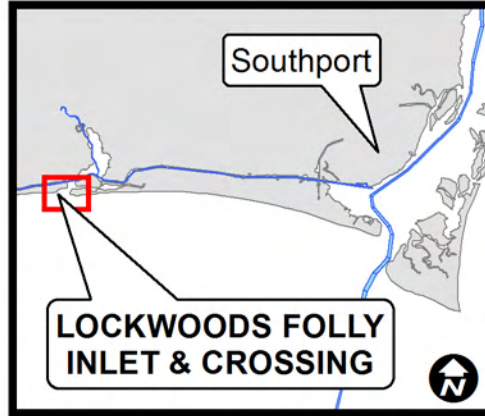
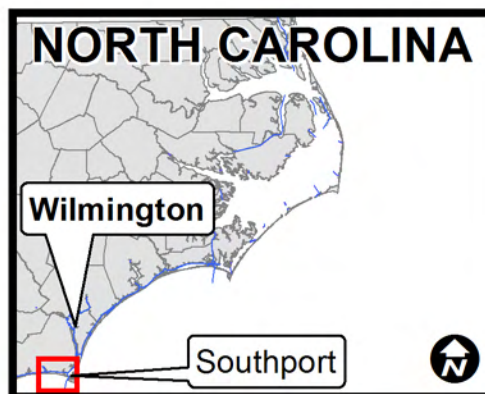


WRECKS

| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232179 | 58876 | 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 | 58802 | 78° 15' 2.002" W | 33° 54' 42.998" N |



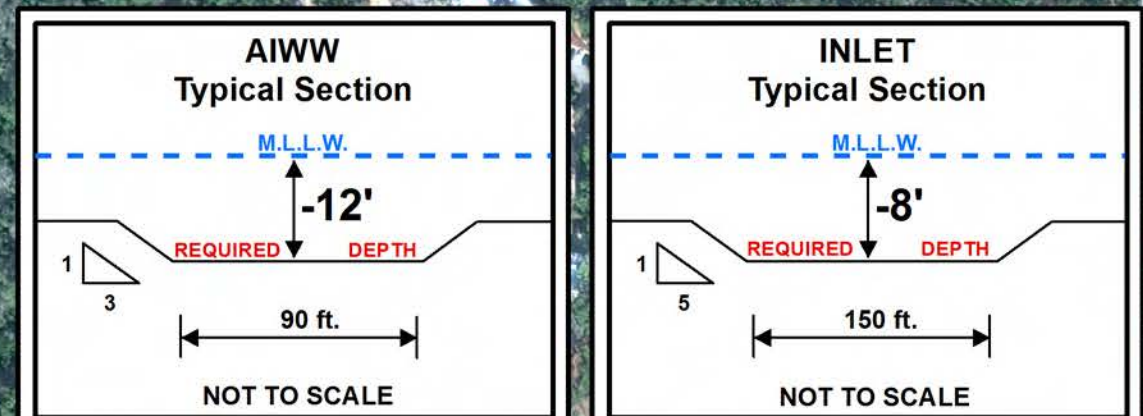
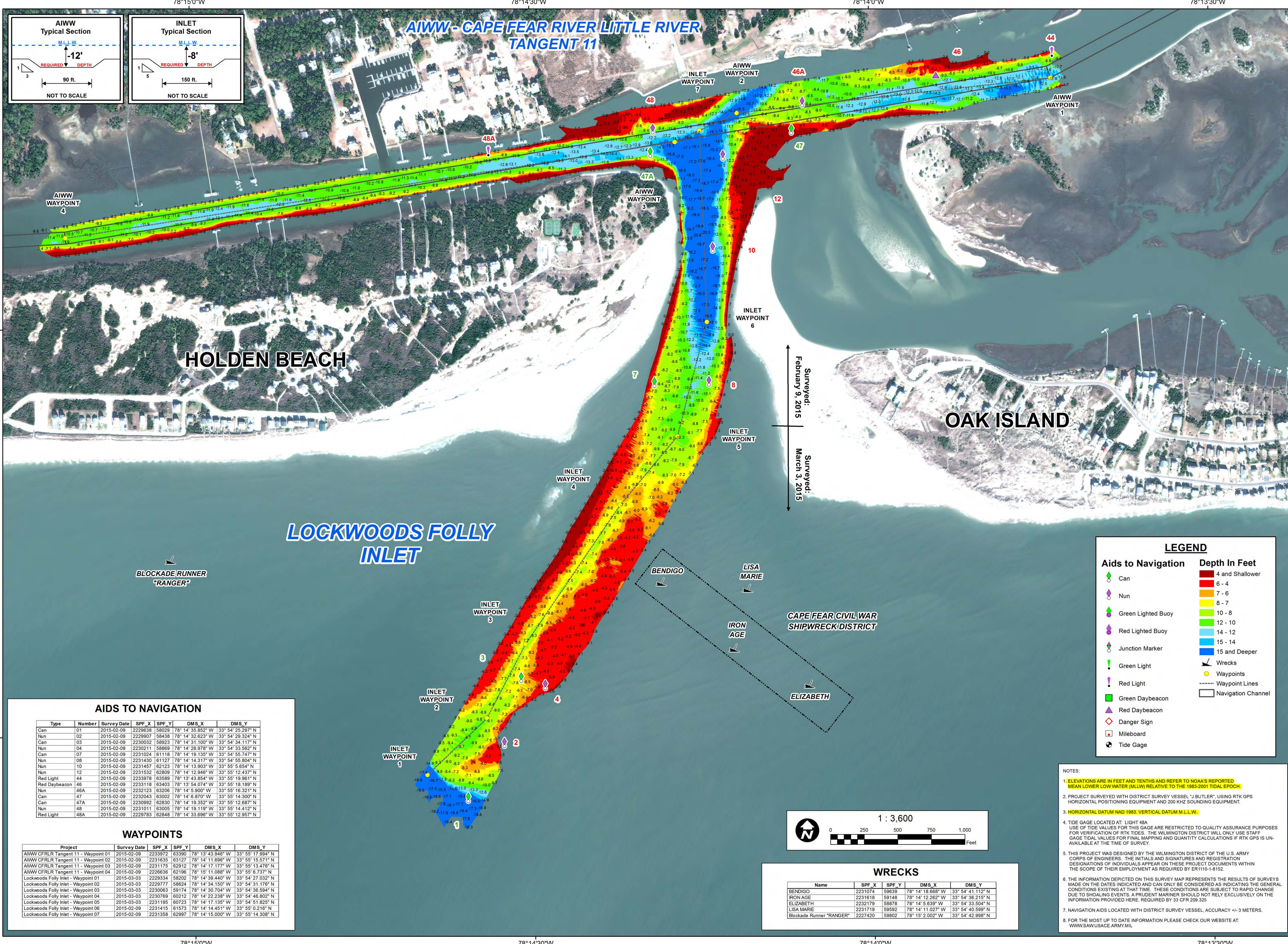
**US Army Corps of Engineers
Wilmington District**



| | |
|-----------------------------------|--|
| SURVEY DATE(S): APRIL 14-15, 2015 | SURVEYED BY: WJC, JBD |
| MAP DATE: APRIL 16, 2015 | MAPPED BY: DJM |
| MAP SCALE: 1 : 3,600 | MAP FILE NAME: LFI-X_2015-04-14-15CS.MXD |
| IMAGERY DATE: JANUARY 10, 2015 | © DIGITALGLOBE, INC. |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

HOLDEN BEACH

OAK ISLAND

LOCKWOODS FOLLY INLET

BLOCKADE RUNNER "RANGER"

BENDIGO

LISA MARIE

IRON AGE

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

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 | Wrecks |
| Mileboard | Waypoints |
| Tide Gage | Waypoint Lines |
| | Navigation Channel |

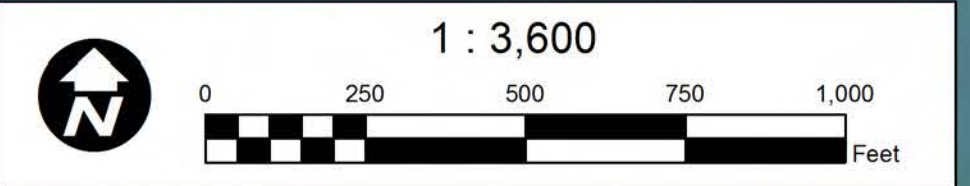
- NOTES:**
- ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER", USING RTK GPS FOR VERIFICATION OF RTK TIDES. THE WILMINGTON DISTRICT WILL ONLY USE STAFF GAGE TIDAL VALUES FOR FINAL MAPPING AND QUANTITY CALCULATIONS IF RTK GPS IS UNAVAILABLE AT THE TIME OF SURVEY.
 - 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

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|---------------|--------|-------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-02-09 | 2229638 | 58029 | 78° 14' 35.852" W | 33° 54' 25.297" N |
| Nun | 02 | 2015-02-09 | 2229607 | 58438 | 78° 14' 32.623" W | 33° 54' 29.324" N |
| Can | 03 | 2015-02-09 | 2230032 | 58923 | 78° 14' 31.100" W | 33° 54' 34.117" N |
| Nun | 04 | 2015-02-09 | 2230211 | 58869 | 78° 14' 28.978" W | 33° 54' 33.562" N |
| Can | 07 | 2015-02-09 | 2231024 | 61118 | 78° 14' 19.135" W | 33° 54' 55.747" N |
| Nun | 08 | 2015-02-09 | 2231430 | 61127 | 78° 14' 14.317" W | 33° 54' 55.804" N |
| Nun | 10 | 2015-02-09 | 2231457 | 62123 | 78° 14' 13.903" W | 33° 55' 0.654" N |
| Nun | 12 | 2015-02-09 | 2231532 | 62809 | 78° 14' 12.946" W | 33° 55' 12.437" N |
| Red Light | 44 | 2015-02-09 | 2233978 | 63589 | 78° 13' 43.854" W | 33° 55' 19.961" N |
| Red Daybeacon | 46 | 2015-02-09 | 2233118 | 63403 | 78° 13' 54.074" W | 33° 55' 18.189" N |
| Nun | 46A | 2015-02-09 | 2232123 | 63206 | 78° 14' 5.900" W | 33° 55' 16.321" N |
| Can | 47 | 2015-02-09 | 2232043 | 63002 | 78° 14' 6.870" W | 33° 55' 14.300" N |
| Can | 47A | 2015-02-09 | 2230992 | 62830 | 78° 14' 19.352" W | 33° 55' 12.687" N |
| Nun | 48 | 2015-02-09 | 2231011 | 63005 | 78° 14' 19.119" W | 33° 55' 14.412" N |
| Red Light | 48A | 2015-02-09 | 2229783 | 62848 | 78° 14' 33.696" W | 33° 55' 12.957" N |

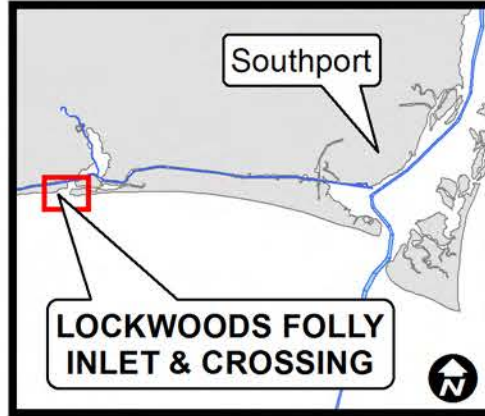
WAYPOINTS

| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|-------------|---------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-02-09 | 2233972 | 63390 | 78° 13' 43.946" W | 33° 55' 17.994" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-02-09 | 2231635 | 63127 | 78° 14' 11.896" W | 33° 55' 15.571" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-02-09 | 2231175 | 62912 | 78° 14' 17.177" W | 33° 55' 13.476" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-02-09 | 2229638 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-03-03 | 2229334 | 58202 | 78° 14' 38.440" W | 33° 54' 27.032" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-03-03 | 2229777 | 58624 | 78° 14' 34.150" W | 33° 54' 31.176" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-03-03 | 2230063 | 59174 | 78° 14' 30.704" W | 33° 54' 36.594" N |
| Lockwoods Folly Inlet - Waypoint 04 | 2015-03-03 | 2230769 | 60212 | 78° 14' 22.238" W | 33° 54' 46.802" N |
| Lockwoods Folly Inlet - Waypoint 05 | 2015-03-03 | 2231195 | 60723 | 78° 14' 17.135" W | 33° 54' 51.825" N |
| Lockwoods Folly Inlet - Waypoint 06 | 2015-02-09 | 2231415 | 61573 | 78° 14' 14.451" W | 33° 55' 0.216" N |
| Lockwoods Folly Inlet - Waypoint 07 | 2015-02-09 | 2231358 | 62997 | 78° 14' 15.000" W | 33° 55' 14.308" N |



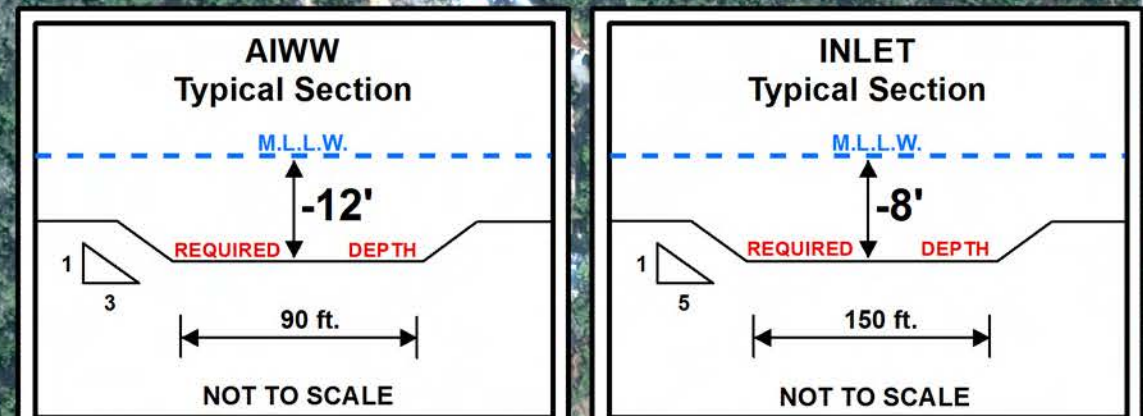
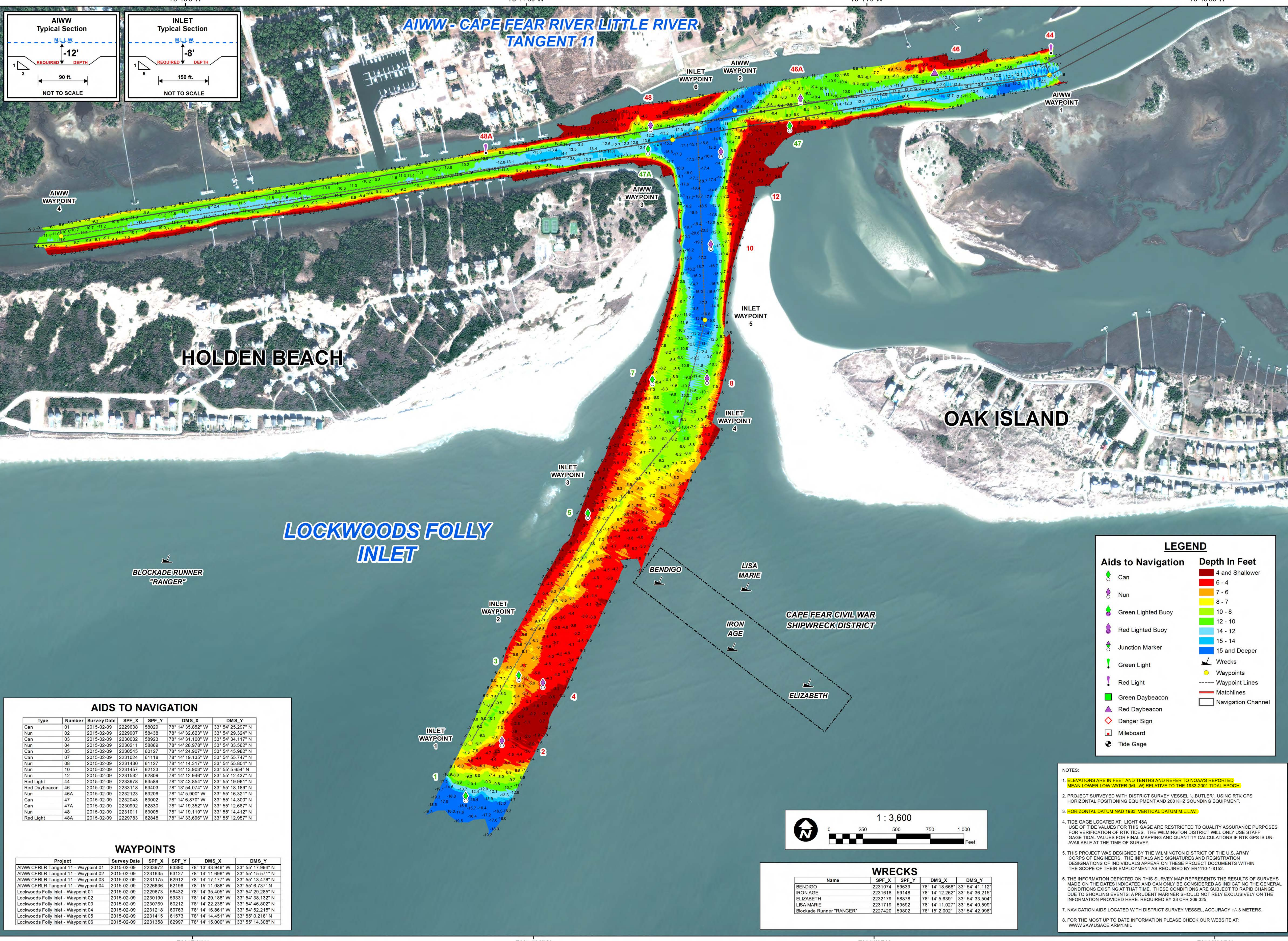
WRECKS

| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232179 | 59878 | 78° 14' 5.839" W | 33° 54' 33.504" N |
| LISA MARIE | 2231119 | 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 |



| | | |
|--|-----------------------|---------------------------------------|
| SURVEY DATE(S): FEBRUARY 9 & MARCH 3, 2015 | SURVEYED BY: LMT, JBD | MAP FILE NAME: LFI-X_2015-03-03AD.MXD |
| MAP DATE: MARCH 4, 2015 | MAPPED BY: DJM | |
| MAP SCALE: 1 : 3,600 | | |
| IMAGERY DATE: JANUARY 10, 2015 | | |

HYDROGRAPHIC SURVEY
 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 WILMINGTON, NORTH CAROLINA
LOCKWOODS FOLLY INLET & AIWW CROSSING
 OAK ISLAND, NORTH CAROLINA



AIWW - CAPE FEAR RIVER LITTLE RIVER TANGENT 11

HOLDEN BEACH

OAK ISLAND

LOCKWOODS FOLLY INLET

LEGEND

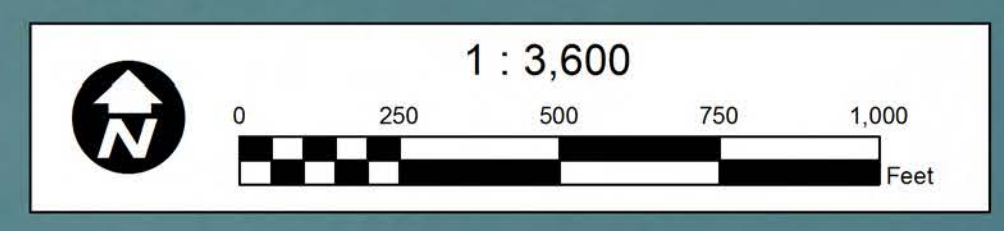
| | |
|---------------------------|----------------------|
| Aids to Navigation | Depth In Feet |
| Can | 4 and Shallower |
| Nun | 6 - 4 |
| Green Lighted Buoy | 7 - 6 |
| Red Lighted Buoy | 8 - 7 |
| Junction Marker | 10 - 8 |
| Green Light | 12 - 10 |
| Red Light | 14 - 12 |
| Green Daybeacon | 15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

AIDS TO NAVIGATION

| Type | Number | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|---------------|--------|-------------|---------|-------|-------------------|-------------------|
| Can | 01 | 2015-02-09 | 2229538 | 58029 | 78° 14' 35.852" W | 33° 54' 25.297" N |
| Nun | 02 | 2015-02-09 | 2229607 | 58438 | 78° 14' 32.623" W | 33° 54' 29.324" N |
| Can | 03 | 2015-02-09 | 2230032 | 58923 | 78° 14' 31.100" W | 33° 54' 34.117" N |
| Nun | 04 | 2015-02-09 | 2230211 | 58869 | 78° 14' 28.978" W | 33° 54' 33.562" N |
| Can | 05 | 2015-02-09 | 2230545 | 60127 | 78° 14' 24.907" W | 33° 54' 45.982" N |
| Can | 07 | 2015-02-09 | 2231024 | 61118 | 78° 14' 19.135" W | 33° 54' 55.747" N |
| Nun | 08 | 2015-02-09 | 2231430 | 61127 | 78° 14' 14.317" W | 33° 54' 55.804" N |
| Nun | 10 | 2015-02-09 | 2231457 | 62123 | 78° 14' 13.903" W | 33° 55' 5.654" N |
| Nun | 12 | 2015-02-09 | 2231532 | 62809 | 78° 14' 12.946" W | 33° 55' 12.437" N |
| Red Light | 44 | 2015-02-09 | 2233978 | 63589 | 78° 13' 43.854" W | 33° 55' 19.961" N |
| Red Daybeacon | 46 | 2015-02-09 | 2233118 | 63403 | 78° 13' 54.074" W | 33° 55' 18.189" N |
| Nun | 46A | 2015-02-09 | 2232123 | 63206 | 78° 14' 5.900" W | 33° 55' 16.321" N |
| Can | 47 | 2015-02-09 | 2232043 | 63002 | 78° 14' 6.870" W | 33° 55' 14.300" N |
| Can | 47A | 2015-02-09 | 2230992 | 62830 | 78° 14' 19.352" W | 33° 55' 12.687" N |
| Nun | 48 | 2015-02-09 | 2231011 | 63005 | 78° 14' 19.119" W | 33° 55' 14.412" N |
| Red Light | 48A | 2015-02-09 | 2229783 | 62848 | 78° 14' 33.696" W | 33° 55' 12.957" N |

WAYPOINTS

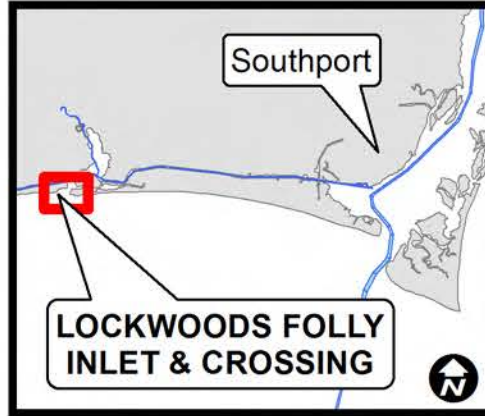
| Project | Survey Date | SPF_X | SPF_Y | DMS_X | DMS_Y |
|-------------------------------------|-------------|---------|-------|-------------------|-------------------|
| AIWW CFRLR Tangent 11 - Waypoint 01 | 2015-02-09 | 2233972 | 63390 | 78° 13' 43.946" W | 33° 55' 17.994" N |
| AIWW CFRLR Tangent 11 - Waypoint 02 | 2015-02-09 | 2231635 | 63127 | 78° 14' 11.696" W | 33° 55' 15.571" N |
| AIWW CFRLR Tangent 11 - Waypoint 03 | 2015-02-09 | 2231175 | 62912 | 78° 14' 17.177" W | 33° 55' 13.476" N |
| AIWW CFRLR Tangent 11 - Waypoint 04 | 2015-02-09 | 2226636 | 62196 | 78° 15' 11.088" W | 33° 55' 6.737" N |
| Lockwoods Folly Inlet - Waypoint 01 | 2015-02-09 | 2229673 | 58432 | 78° 14' 35.405" W | 33° 54' 29.285" N |
| Lockwoods Folly Inlet - Waypoint 02 | 2015-02-09 | 2230190 | 59331 | 78° 14' 29.188" W | 33° 54' 38.132" N |
| Lockwoods Folly Inlet - Waypoint 03 | 2015-02-09 | 2230769 | 60212 | 78° 14' 22.238" W | 33° 54' 46.802" N |
| Lockwoods Folly Inlet - Waypoint 04 | 2015-02-09 | 2231218 | 60763 | 78° 14' 16.861" W | 33° 54' 52.218" N |
| Lockwoods Folly Inlet - Waypoint 05 | 2015-02-09 | 2231415 | 61573 | 78° 14' 14.451" W | 33° 55' 0.216" N |
| Lockwoods Folly Inlet - Waypoint 06 | 2015-02-09 | 2231358 | 62997 | 78° 14' 15.000" W | 33° 55' 14.308" N |



WRECKS

| Name | SPF_X | SPF_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' 36.215" N |
| ELIZABETH | 2232178 | 58878 | 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' 2.022" W | 33° 54' 42.998" N |

- 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 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.
 - 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 208.325.
 - 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



| | |
|----------------------------------|---------------------------------------|
| SURVEY DATE(S): FEBRUARY 9, 2015 | SURVEYED BY: LMT, JBD |
| MAP DATE: FEBRUARY 12, 2015 | MAPPED BY: DJM |
| MAP SCALE: 1 : 3,600 | |
| IMAGERY DATE: JANUARY 10, 2015 | MAP FILE NAME: LFI-X_2015-02-09CS.MXD |

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

LOCKWOODS FOLLY INLET & AIWW CROSSING
 OAK ISLAND, NORTH CAROLINA