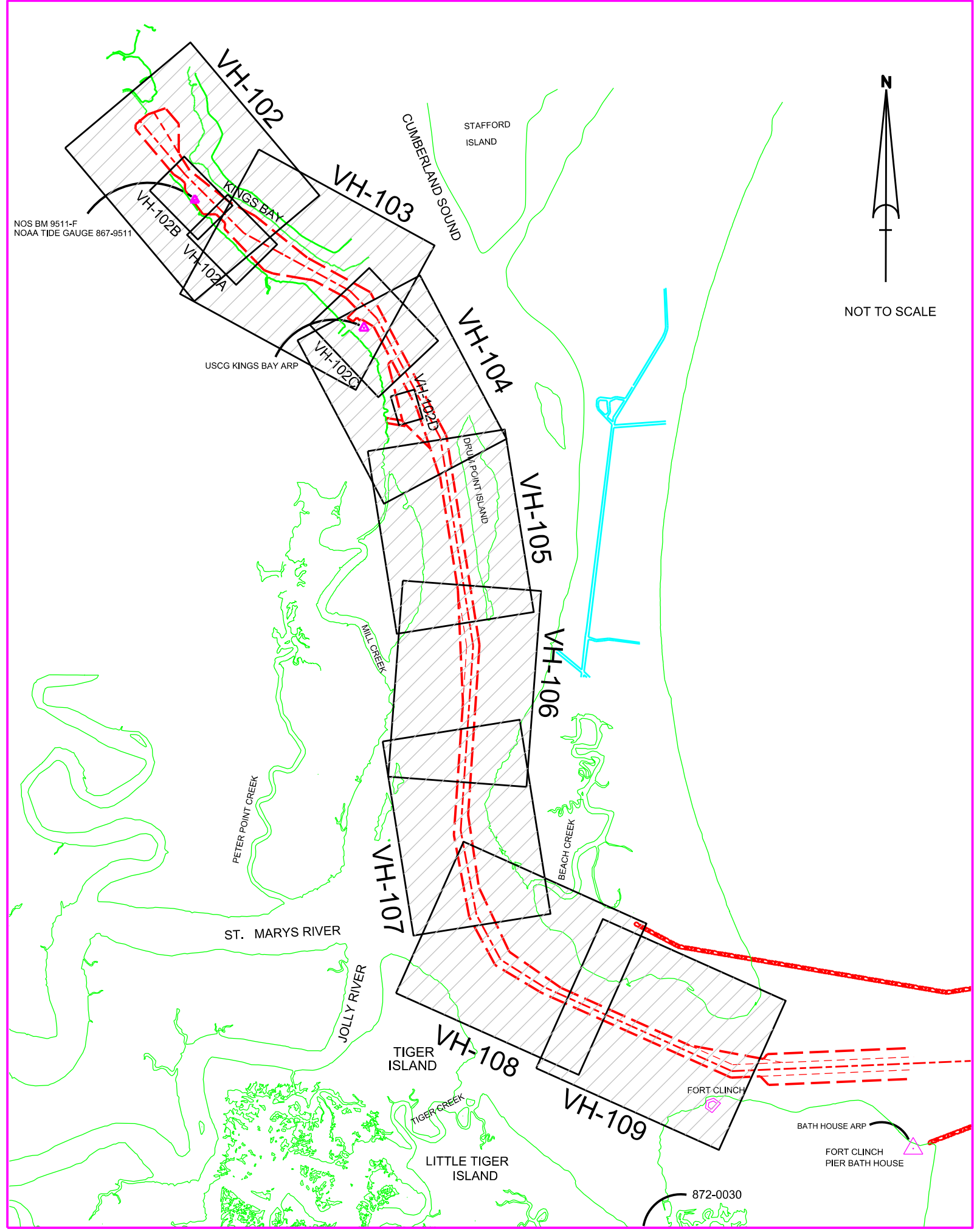


U.S. NAVY SUBMARINE BASE KINGS BAY, GEORGIA KINGS BAY INNER CHANNEL BIMONTHLY EXAMINATION SURVEY - DEC 2015



LEGEND	
	MONUMENT
	LIGHTED BEACON
	GREEN DAY BEACON
	RED DAY BEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
	CAN BUOY
	NUN BUOY
	TIDE STAFF
	MAJOR CONTOUR
	MINOR CONTOUR
	MAJOR DEPRESSION
	MINOR DEPRESSION

DEPTH COLOR CODE	
≤ 39.9	
40.0 - 41.9	
42.0 - 45.9	
46.0 - 48.9	
≥ 49.0	



SURVEY NOTES:

- REFER TO SURVEY NO. 16-018.
 - SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO MEAN LOWER LOW WATER (MLLW) TIDAL DATUM.
 - ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
 - TIDAL REDUCTIONS WERE OBTAINED UTILIZING REAL-TIME KINEMATIC (RTK) GPS USING A HYPACK KINEMATIC TIDAL DATUM MODEL (KINGSBAY-2013 06 26.KTD).
 - PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF GEORGIA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83).
 - ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
 - THIS SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC (RTK) GPS POSITIONING WITH THE FOLLOWING REFERENCE BASE LOCATIONS:
 REFERENCE BASE LOCATED AT "BATH HOUSE ARP" (OPUS PID # BBCB08), FOR RANGE-A THRU RANGE-C.
 REFERENCE BASE LOCATED AT "USCG KINGS BAY ARP" (OPUS PID # BBDK29), FOR RANGE-D THRU RANGE-I.
 - DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW, AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). NOAA'S VDATUM MODEL WAS USED AND CALIBRATED TO THE PUBLISHED MLLW HEIGHTS OF THE BENCH MARKS ASSOCIATED WITH THE TIDE GAUGE SITES SPECIFIED BELOW:
 NOAA TIDAL STATION 872-0030, FERNANDINA, FL, FOR RANGE-A THRU RANGE-G (OUTSIDE WRA)
 NOAA TIDAL STATION 867-9511, KINGS BAY, GA, FOR RGE-G THRU RGE-I (INSIDE WRA)
 - VERTICAL MEASUREMENTS WERE MADE USING A RESON MODEL T20P MULTIBEAM SYSTEM AND A ROSS MODEL 835C SMARTSOUNDER WITH A DUAL-FREQUENCY (28/200KHZ) TRANSDUCER. SOUNDINGS SHOWN ARE IN HIGH FREQUENCY FROM RANGE-A THRU RANGE-E, STA 32+700, SITE-6, AND MSF AND LOW FREQUENCY FROM RANGE-E STA 32+800 THRU RANGE-I, INCLUDING EHW-1 & 2, WARPING WHARF & REFIT WHARF.
- | VESSEL | DATE OF SURVEY | AREA SURVEYED |
|--------|----------------|--|
| SB-36 | 1 DEC 2015 | MSF, RGE-E, STA 30+748 TO 33+800 AND RGE-D, STA 22+547 TO 30+748 |
| SB-36 | 2 DEC 2015 | RGE-E, STA 33+700 TO 35+999, RGE-F AND RGE-G, STA 37+504 TO 39+100 |
| SB-36 | 3 DEC 2015 | RGE-G, STA 39+200 TO 42+217, RGE-H AND RGE-I |
| SB-36 | 4 DEC 2015 | EHW-2, WARPING WHARF AND REFIT WHARFS |
| SB-36 | 5 DEC 2015 | RGE-A, RGE-A1 AND RGE-A2 |
| SB-36 | 6 DEC 2015 | RGE-B AND RGE-C |
| SB-36 | 7 DEC 2015 | SITE-6 (SOUTH) |
| SB-36 | 15 DEC 2015 | EHW-1 |
- AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.
 - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED ABOVE AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME. THIS CHART IS SOLELY FOR THE DISTRIBUTION OF AVAILABLE DEPTHS AT THE TIME OF THE SURVEY AND IS NOT TO BE USED FOR NAVIGATION.
 - SURVEY ACCURACY PERFORMANCE STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 30 NOV 2013 AND EM 1110-2-6056, STANDARDS AND PROCEDURES FOR REFERENCING PROJECT ELEVATION GRADES TO NATIONWIDE VERTICAL DATUMS, 31 DEC 2010.

US Army Corps of Engineers
Jacksonville District

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JACKSONVILLE, FLORIDA

INDEX LOGBOOK
#041848C-VH-101.DGN

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA

BIMONTHLY EXAMINATION SURVEY - DEC 2015
44, 45 & 46-FOOT PROJECT

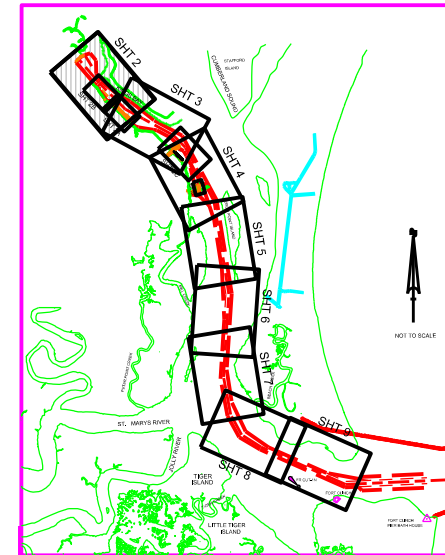
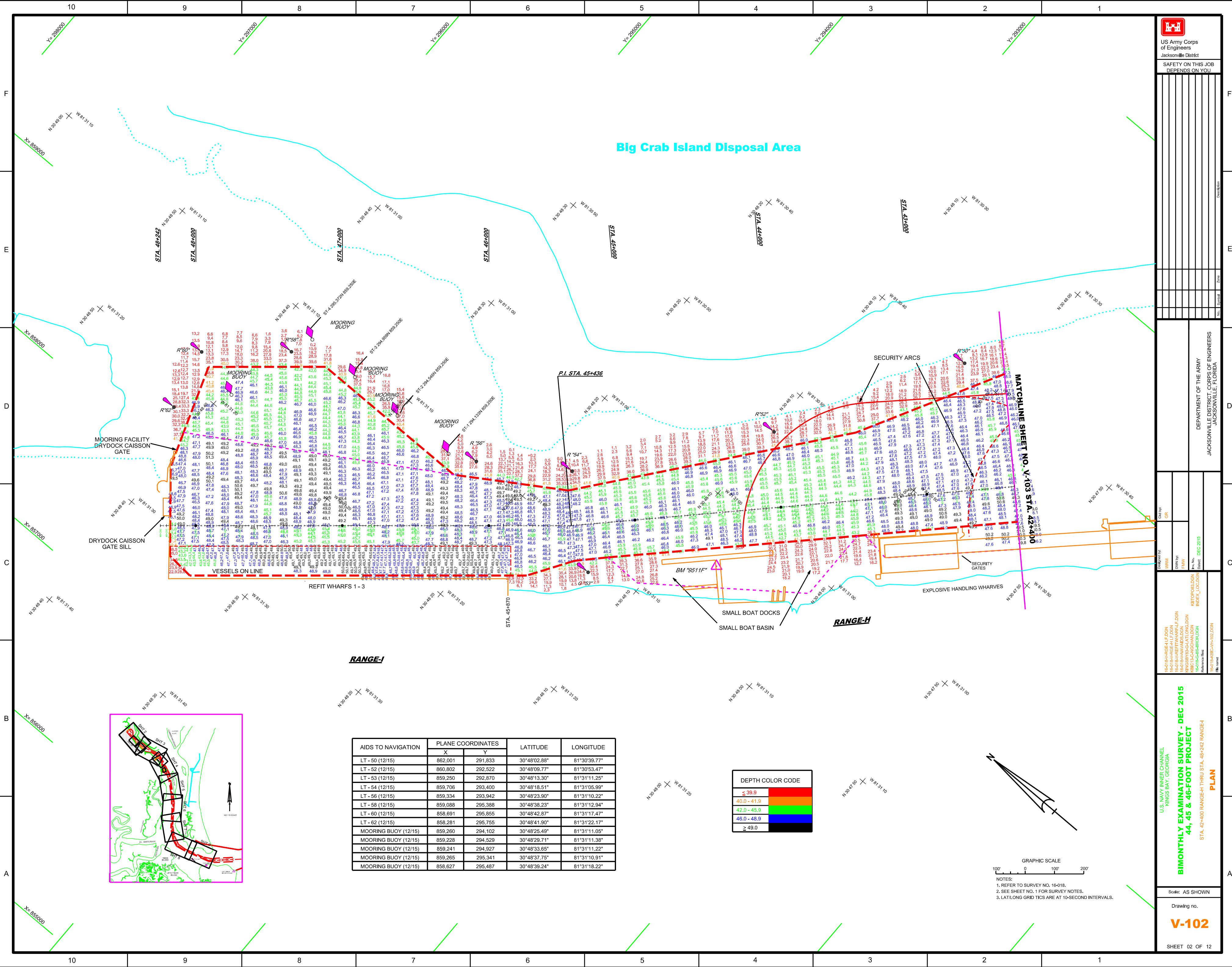
INDEX, LOCATION AND VICINITY
MAP

Scale: AS SHOWN

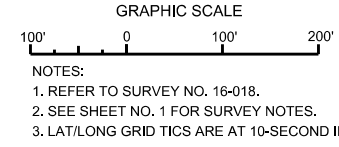
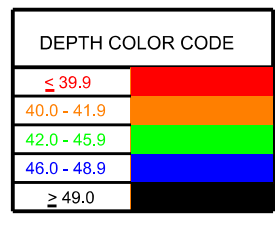
Drawing no.
V-101

SHEET 01 OF 12

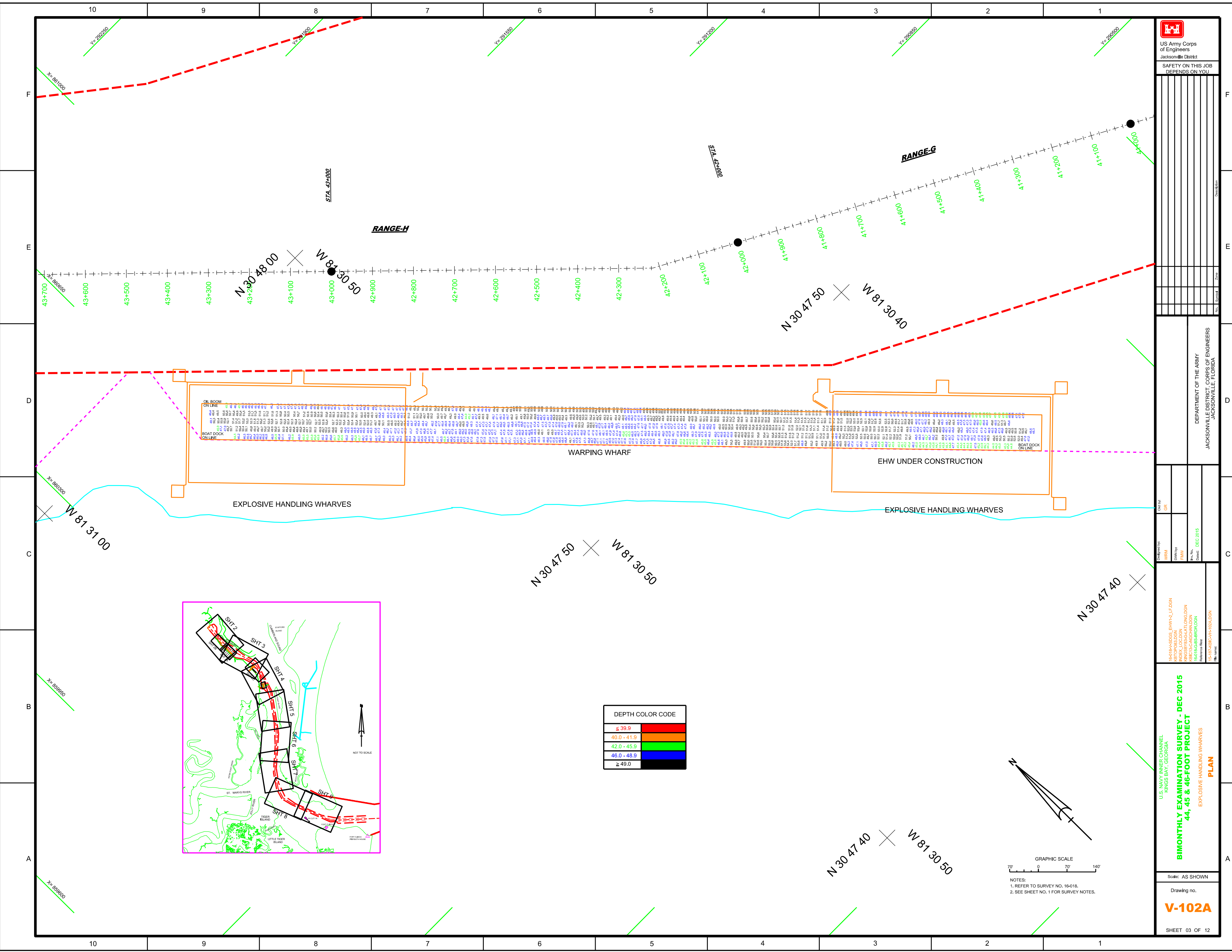
Big Crab Island Disposal Area



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT- 50 (12/15)	862,001	291,833	30°48'02.88"	81°30'39.77"
LT- 52 (12/15)	860,802	292,522	30°48'09.77"	81°30'53.47"
LT- 53 (12/15)	859,250	292,870	30°48'13.30"	81°31'11.25"
LT- 54 (12/15)	859,706	293,400	30°48'18.51"	81°31'05.99"
LT- 56 (12/15)	859,334	293,942	30°48'23.90"	81°31'10.22"
LT- 58 (12/15)	859,088	295,388	30°48'38.23"	81°31'12.94"
LT- 60 (12/15)	858,691	295,855	30°48'42.87"	81°31'17.47"
LT- 62 (12/15)	858,281	295,755	30°48'41.90"	81°31'22.17"
MOORING BUOY (12/15)	859,260	294,102	30°48'25.49"	81°31'11.05"
MOORING BUOY (12/15)	859,228	294,529	30°48'29.71"	81°31'11.38"
MOORING BUOY (12/15)	859,241	294,927	30°48'33.65"	81°31'11.22"
MOORING BUOY (12/15)	859,265	295,341	30°48'37.75"	81°31'10.91"
MOORING BUOY (12/15)	858,627	295,487	30°48'39.24"	81°31'18.22"



NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



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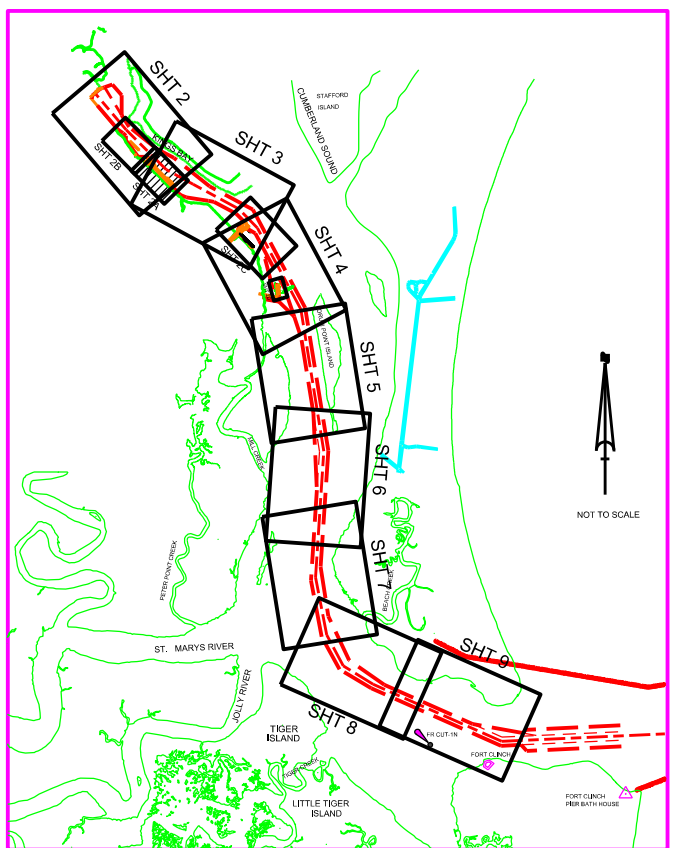
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JACKSONVILLE, FLORIDA

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA

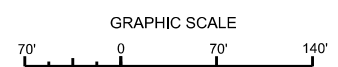
BIMONTHLY EXAMINATION SURVEY - DEC 2015
44, 45 & 46-FOOT PROJECT
EXPLOSIVE HANDLING WHARVES
PLAN

Scale: AS SHOWN
Drawing no. **V-102A**
SHEET 03 OF 12

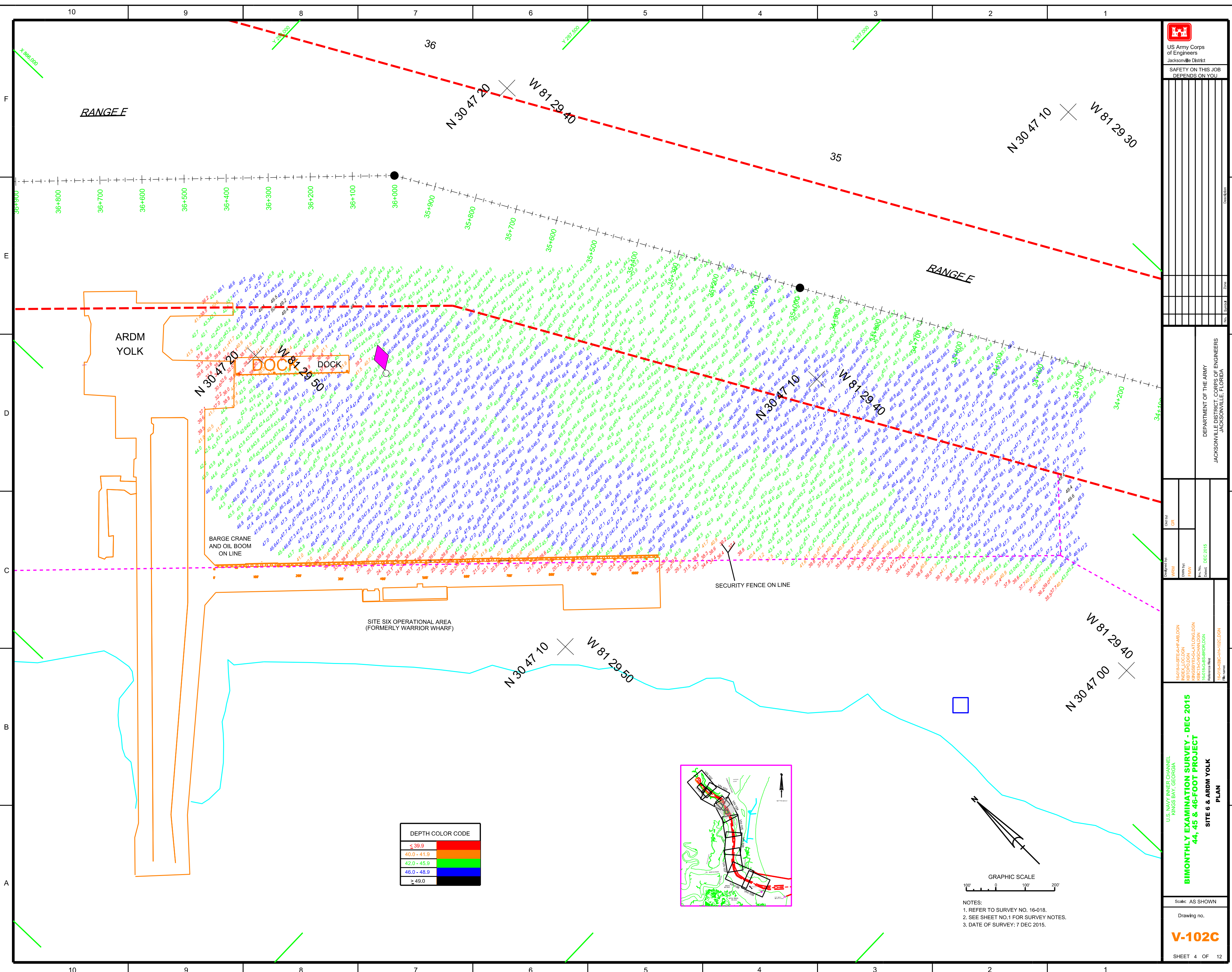


DEPTH COLOR CODE

≤ 39.9	Red
40.0 - 41.9	Orange
42.0 - 45.9	Green
46.0 - 48.9	Blue
≥ 49.0	Black



NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



ARDM
YOLK

DOCK 3

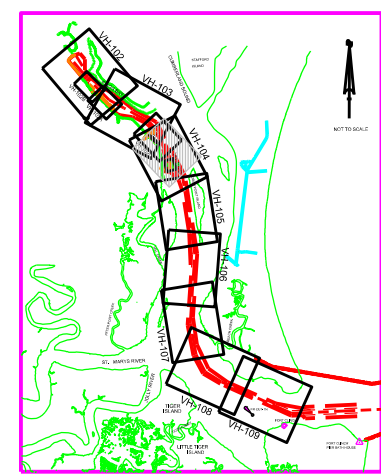
DOCK 5

BARGE CRANE
AND OIL BOOM
ON LINE

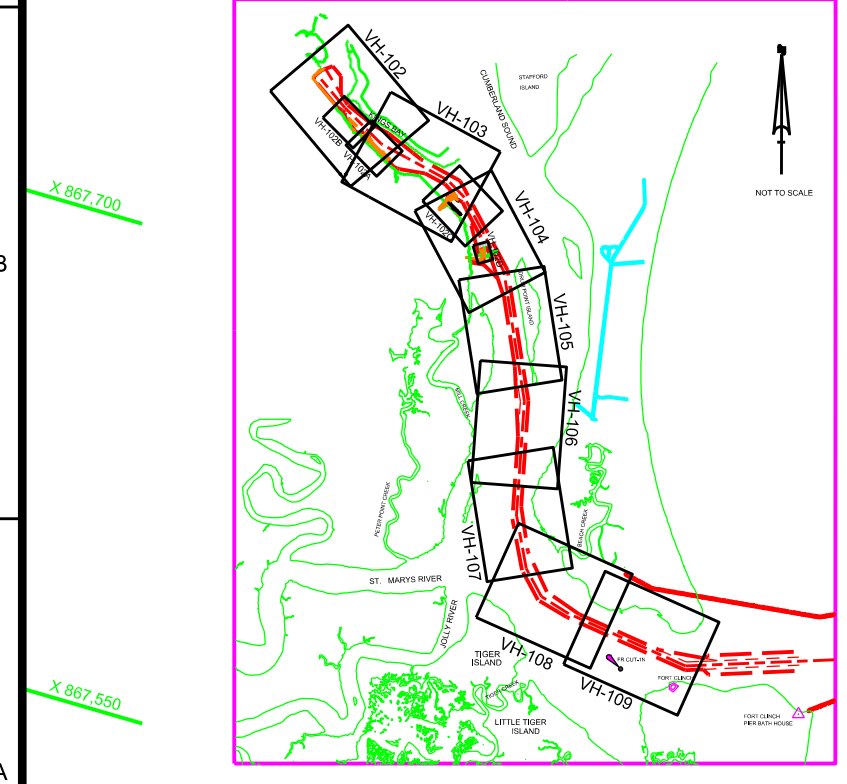
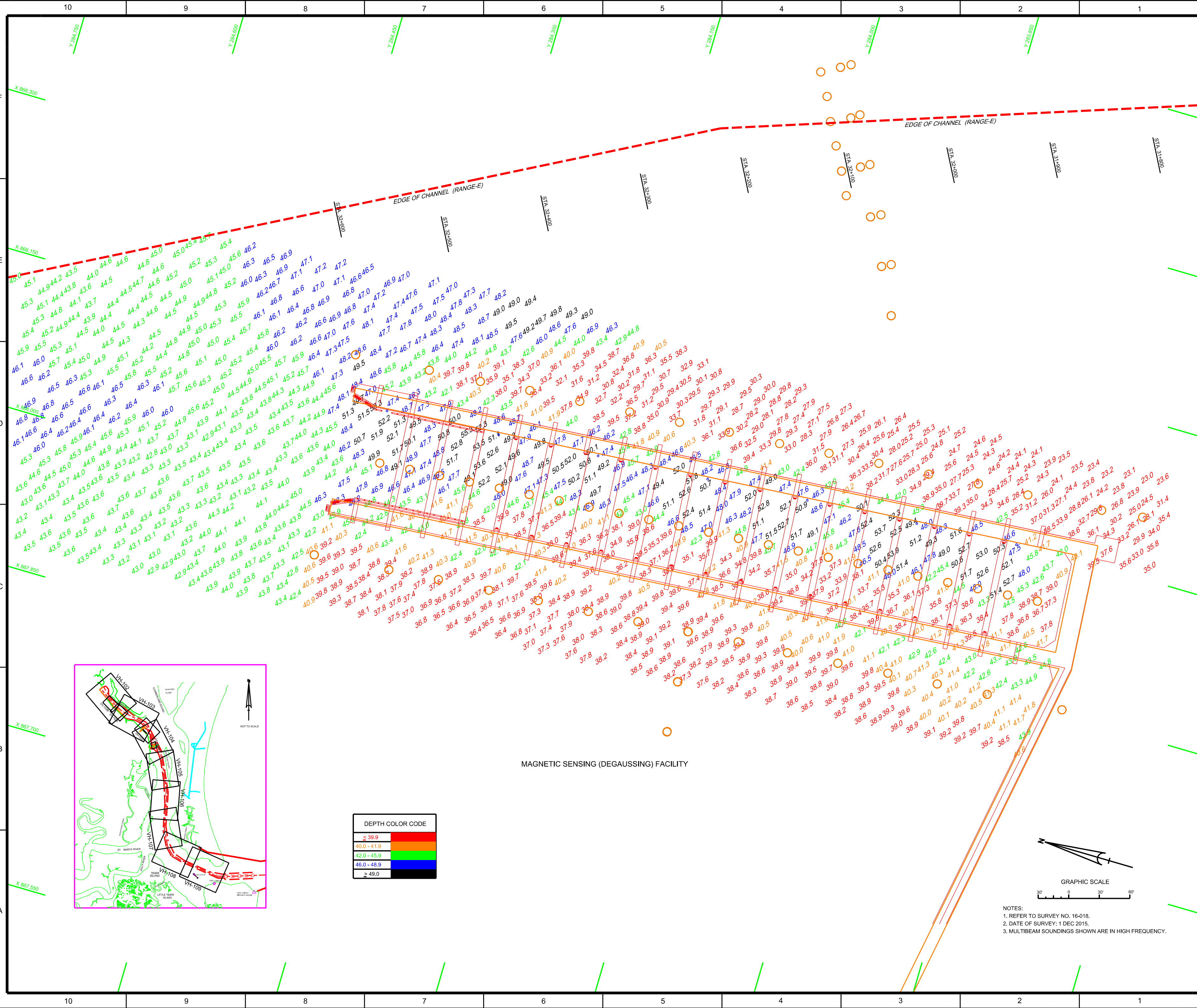
SECURITY FENCE ON LINE

SITE SIX OPERATIONAL AREA
(FORMERLY WARRIOR WHARF)

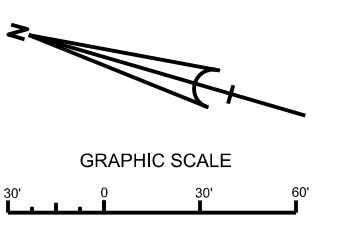
DEPTH COLOR CODE	
≤ 39.9	Red
40.0 - 41.9	Orange
42.0 - 45.9	Green
46.0 - 48.9	Blue
≥ 49.0	Dark Blue



NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
3. DATE OF SURVEY: 7 DEC 2015.



DEPTH COLOR CODE	
< 39.9	Red
40.0 - 41.9	Orange
42.0 - 45.9	Yellow
46.0 - 48.9	Green
> 49.0	Blue



NOTES:
1. REFER TO SURVEY NO. 16-018.
2. DATE OF SURVEY: 1 DEC 2015.
3. MULTIBEAM SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.

MAGNETIC SENSING (DEGAUSSING) FACILITY

EDGE OF CHANNEL (RANGE-E)

EDGE OF CHANNEL (RANGE-E)

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Jacksonville District
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JACKSONVILLE DISTRICT CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

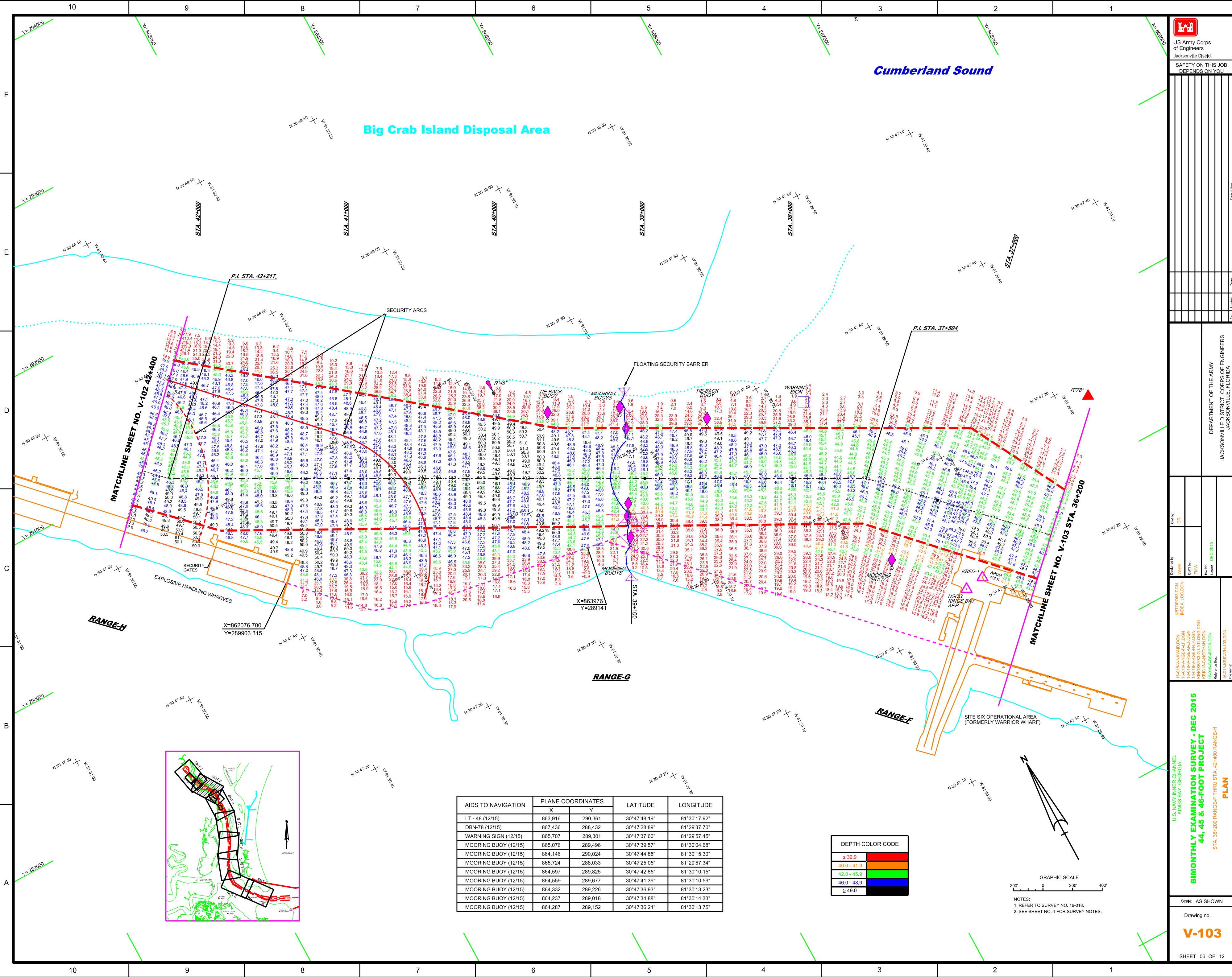
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Designed By: WRM
Drawn By: FHW
Scale: AS SHOWN
Date: DEC 2015

US NAVY INNER CHANNEL
KINGS BAY, GEORGIA
BIMONTHLY EXAMINATION SURVEY - DEC 2015
STA. 36+200 RANGE-F THRU STA. 42+400 RANGE-H
PLAN

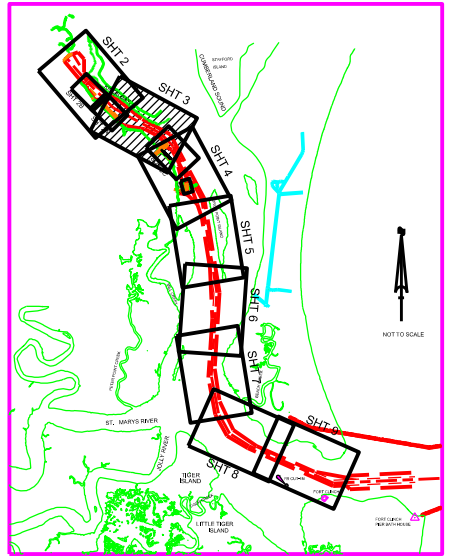
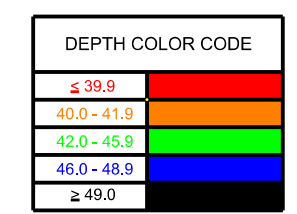
Scale: AS SHOWN
Drawing No. **V-103**
SHEET 06 OF 12

Cumberland Sound

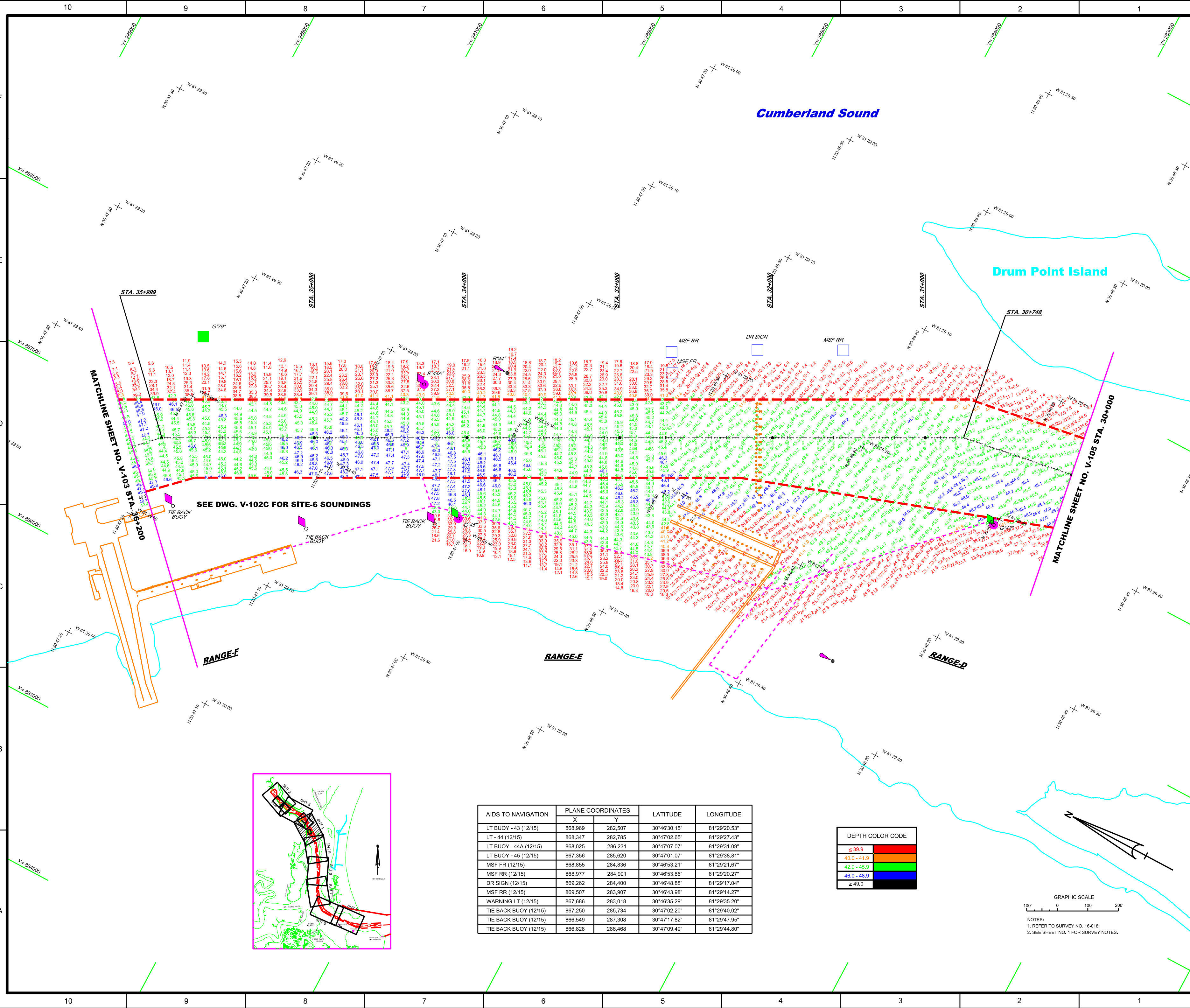
Big Crab Island Disposal Area



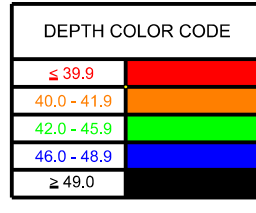
AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT - 48 (12/15)	863,916	290,361	30°47'48.19"	81°30'17.92"
DBN-78 (12/15)	867,436	288,432	30°47'28.89"	81°29'37.70"
WARNING SIGN (12/15)	865,707	289,301	30°47'37.60"	81°29'57.45"
MOORING BUOY (12/15)	865,076	289,496	30°47'39.57"	81°30'04.68"
MOORING BUOY (12/15)	864,146	290,024	30°47'44.85"	81°30'15.30"
MOORING BUOY (12/15)	865,724	288,033	30°47'25.05"	81°29'57.34"
MOORING BUOY (12/15)	864,597	289,825	30°47'42.85"	81°30'10.15"
MOORING BUOY (12/15)	864,559	289,677	30°47'41.39"	81°30'10.59"
MOORING BUOY (12/15)	864,332	289,226	30°47'36.93"	81°30'13.23"
MOORING BUOY (12/15)	864,237	289,018	30°47'34.88"	81°30'14.33"
MOORING BUOY (12/15)	864,287	289,152	30°47'36.21"	81°30'13.75"



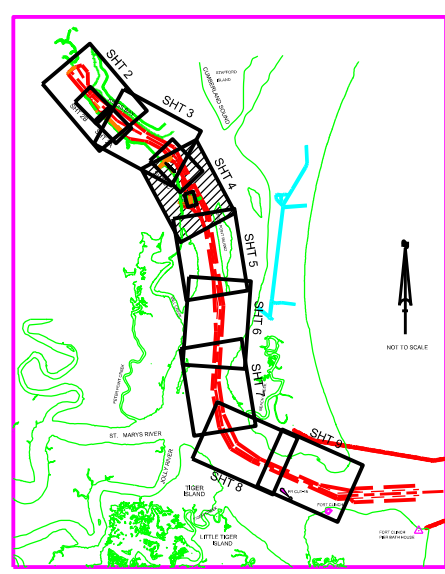
GRAPHIC SCALE
NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

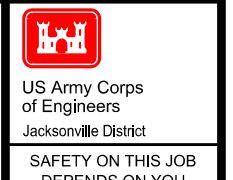


AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 43 (12/15)	868,969	282,507	30°46'30.15"	81°29'20.53"
LT - 44 (12/15)	868,347	282,785	30°47'02.65"	81°29'27.43"
LT BUOY - 44A (12/15)	868,025	286,231	30°47'07.07"	81°29'31.09"
LT BUOY - 45 (12/15)	867,356	285,620	30°47'01.07"	81°29'38.81"
MSF FR (12/15)	868,855	284,836	30°46'53.21"	81°29'21.67"
MSF RR (12/15)	868,977	284,901	30°46'53.86"	81°29'20.27"
DR SIGN (12/15)	869,262	284,400	30°46'48.88"	81°29'17.04"
MSF RR (12/15)	869,507	283,907	30°46'43.98"	81°29'14.27"
WARNING LT (12/15)	867,686	283,018	30°46'35.29"	81°29'35.20"
TIE BACK BUOY (12/15)	867,250	285,734	30°47'02.20"	81°29'40.02"
TIE BACK BUOY (12/15)	866,549	287,308	30°47'17.82"	81°29'47.95"
TIE BACK BUOY (12/15)	866,828	286,468	30°47'09.49"	81°29'44.80"



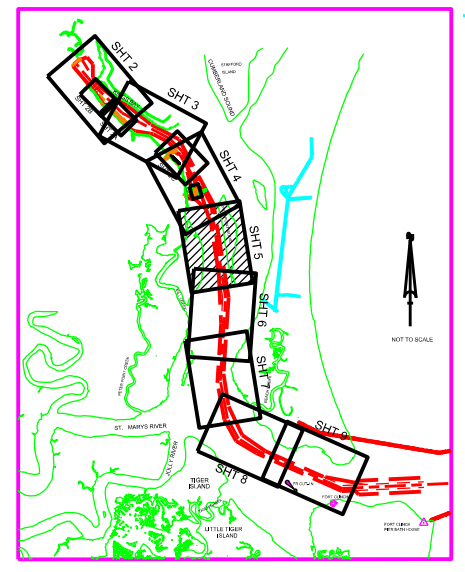
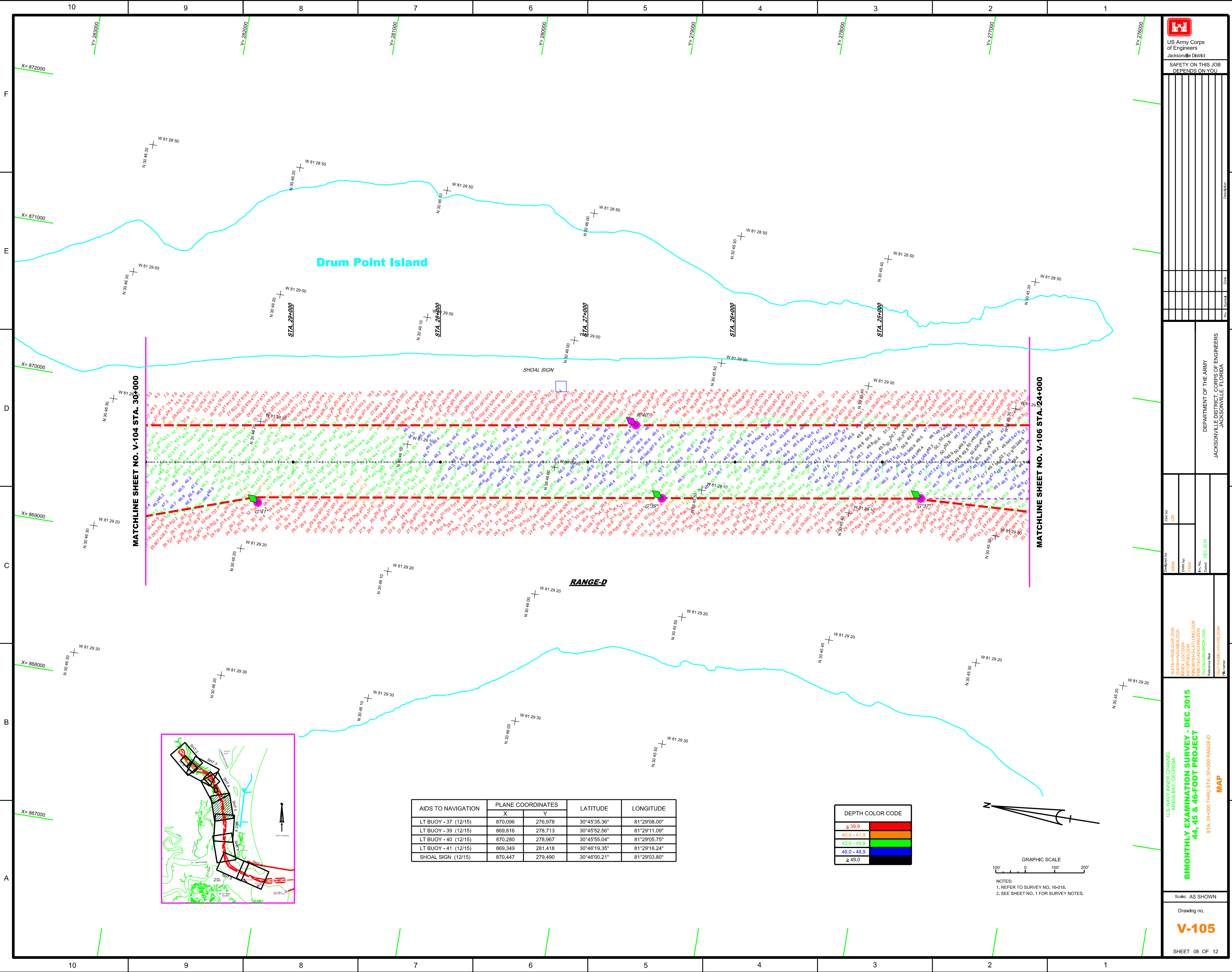
NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.





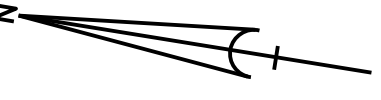
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Jacksonville District

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AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 37 (12/15)	870,096	276,978	30°45'35.36"	81°29'08.00"
LT BUOY - 39 (12/15)	869,816	278,713	30°45'52.56"	81°29'11.09"
LT BUOY - 40 (12/15)	870,280	278,967	30°45'55.04"	81°29'05.75"
LT BUOY - 41 (12/15)	869,349	281,418	30°46'19.35"	81°29'16.24"
SHOAL SIGN (12/15)	870,447	279,490	30°46'00.21"	81°29'03.80"

DEPTH COLOR CODE	
≤ 39.9	
40.0 - 41.9	
42.0 - 45.9	
46.0 - 48.9	
≥ 49.0	



GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

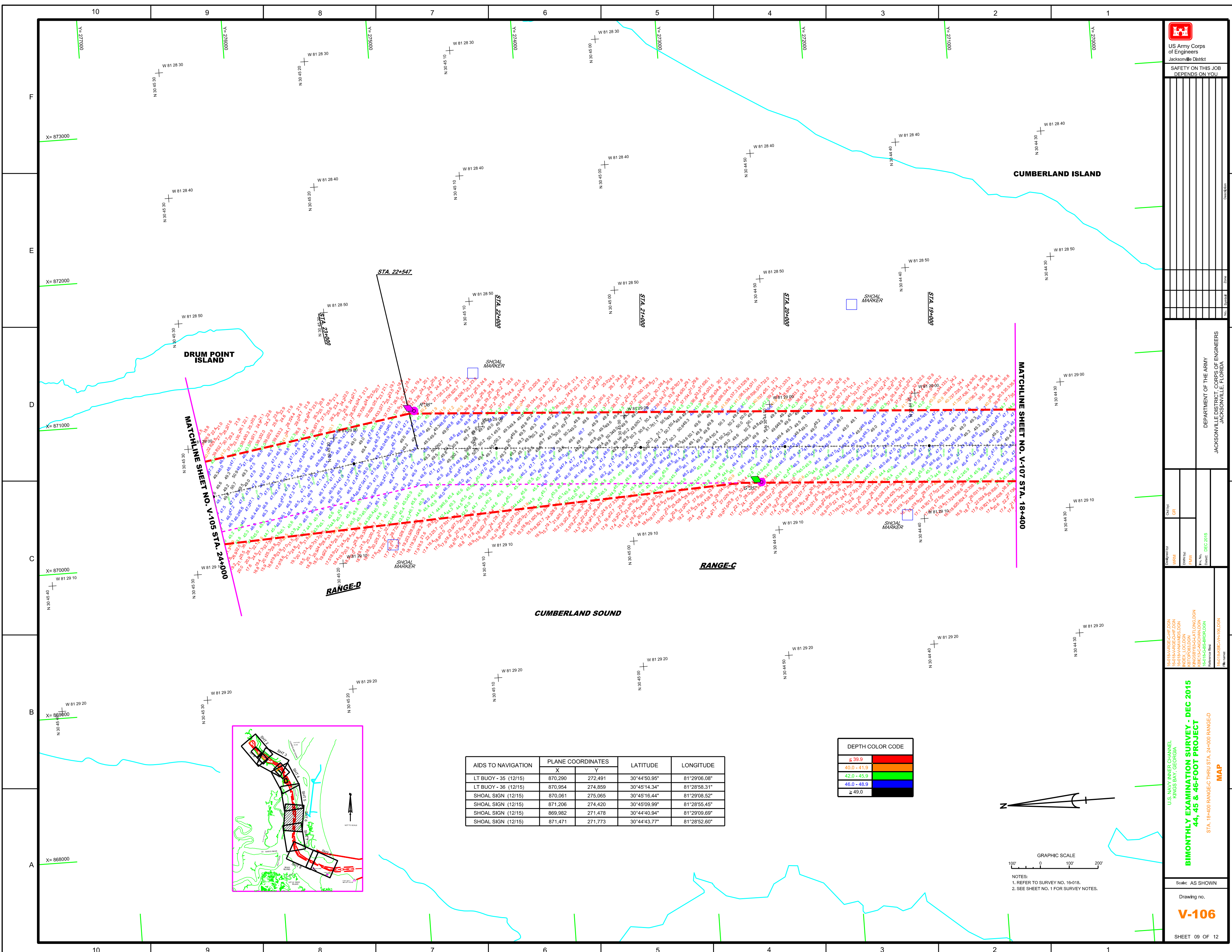
DESIGNATION	
No.	Name

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Designed By:	WRM
Checked By:	GR
Drawn By:	FWW
File No.:	DEC 2015
Date:	DEC 2015

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA
BIMONTHLY EXAMINATION SURVEY - DEC 2015
44, 45 & 46-FOOT PROJECT
MAP
STA. 24+00 THRU STA. 30+00 RANGE-D
Reference Sheet:
R-01 BARC-VH-105.DGN
File Name:

Scale: AS SHOWN
Drawing no.
V-105
SHEET 08 OF 12



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JACKSONVILLE, FLORIDA

Checked By: GRL
Designed By: WRM
Drawn By: FHW
Date: DEC 2015

16-01-BARGE-C-1F.DGN
16-01-BARGE-C-1F.DGN
16-01-BARGE-C-1F.DGN
16-01-BARGE-C-1F.DGN
16-01-BARGE-C-1F.DGN
16-01-BARGE-C-1F.DGN

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA

BIMONTHLY EXAMINATION SURVEY - DEC 2015
44, 45 & 46-FOOT PROJECT

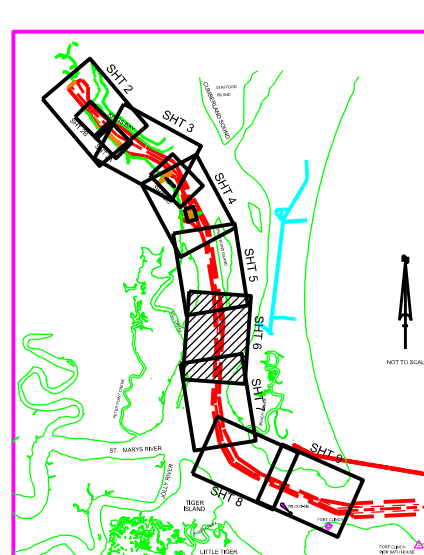
STA. 18+400 RANGE-C THRU STA. 24+000 RANGE-D

MAP

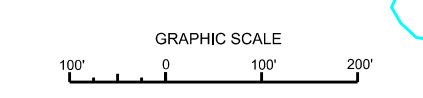
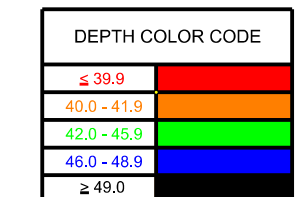
Scale: AS SHOWN

Drawing no.
V-106

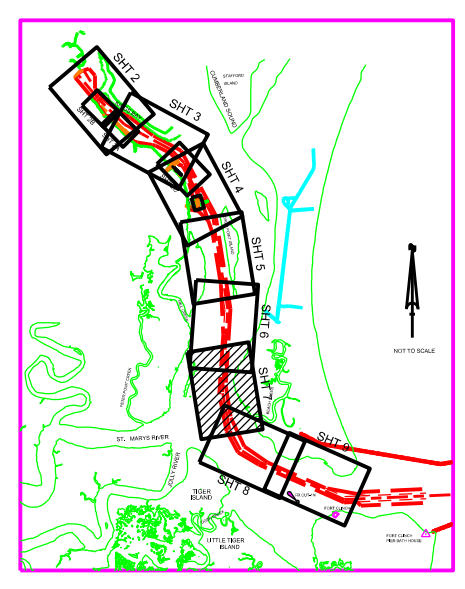
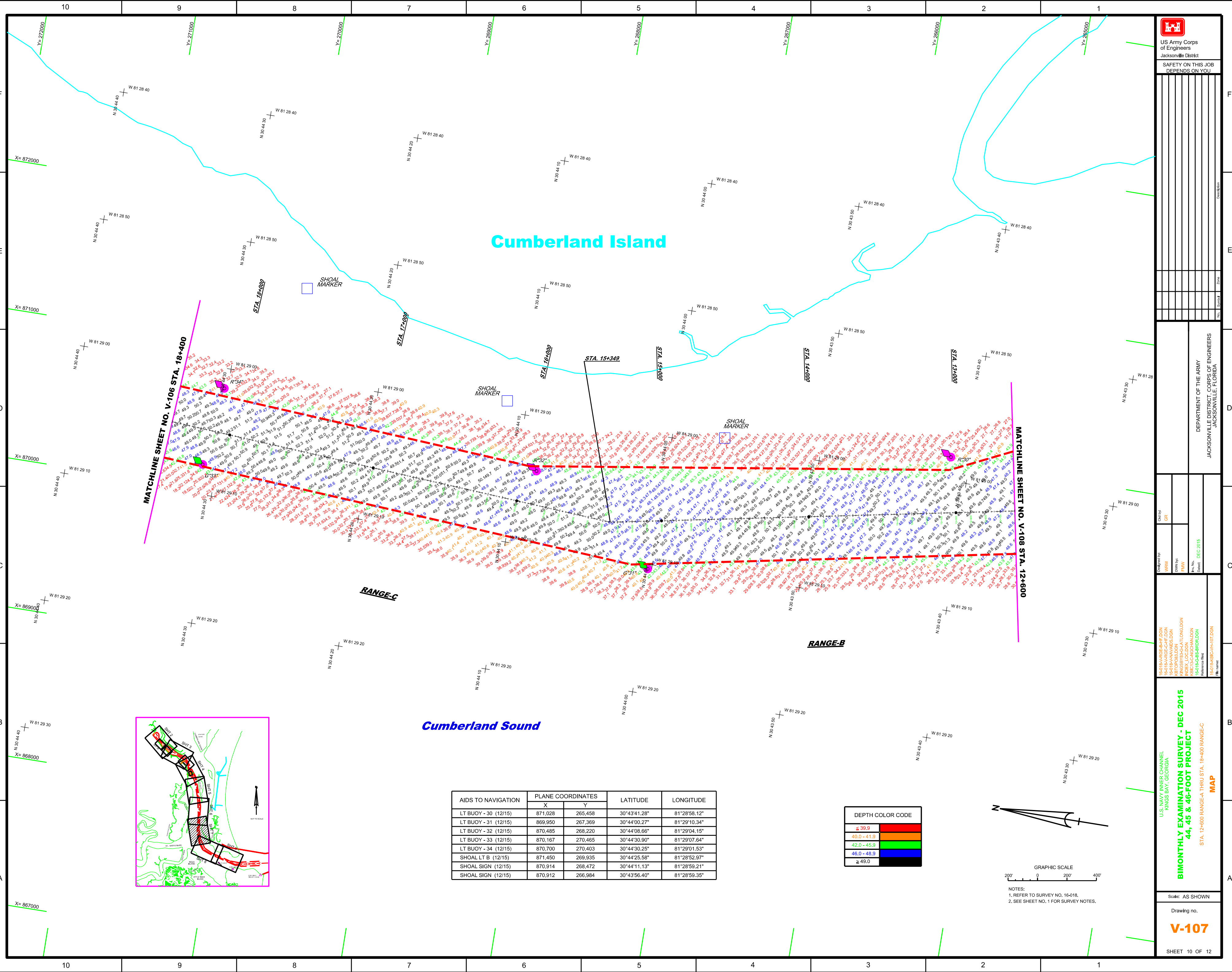
SHEET 09 OF 12



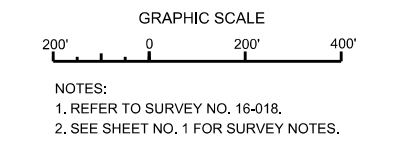
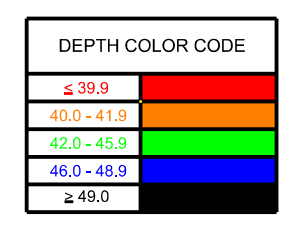
AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 35 (12/15)	870,290	272,491	30°44'50.95"	81°29'06.08"
LT BUOY - 36 (12/15)	870,954	274,859	30°45'14.34"	81°28'58.31"
SHOAL SIGN (12/15)	870,061	275,065	30°45'16.44"	81°29'08.52"
SHOAL SIGN (12/15)	871,206	274,420	30°45'09.99"	81°28'55.45"
SHOAL SIGN (12/15)	869,982	271,478	30°44'40.94"	81°29'09.69"
SHOAL SIGN (12/15)	871,471	271,773	30°44'43.77"	81°28'52.60"

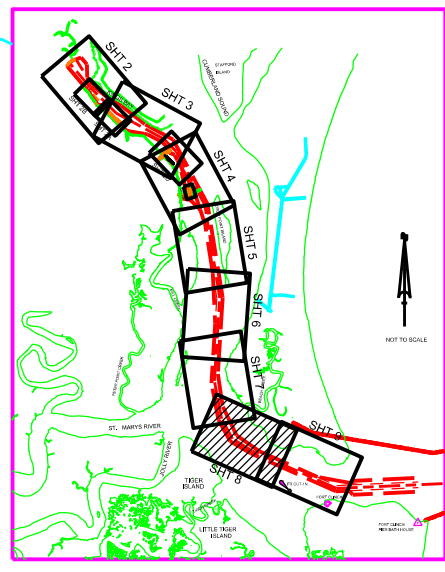
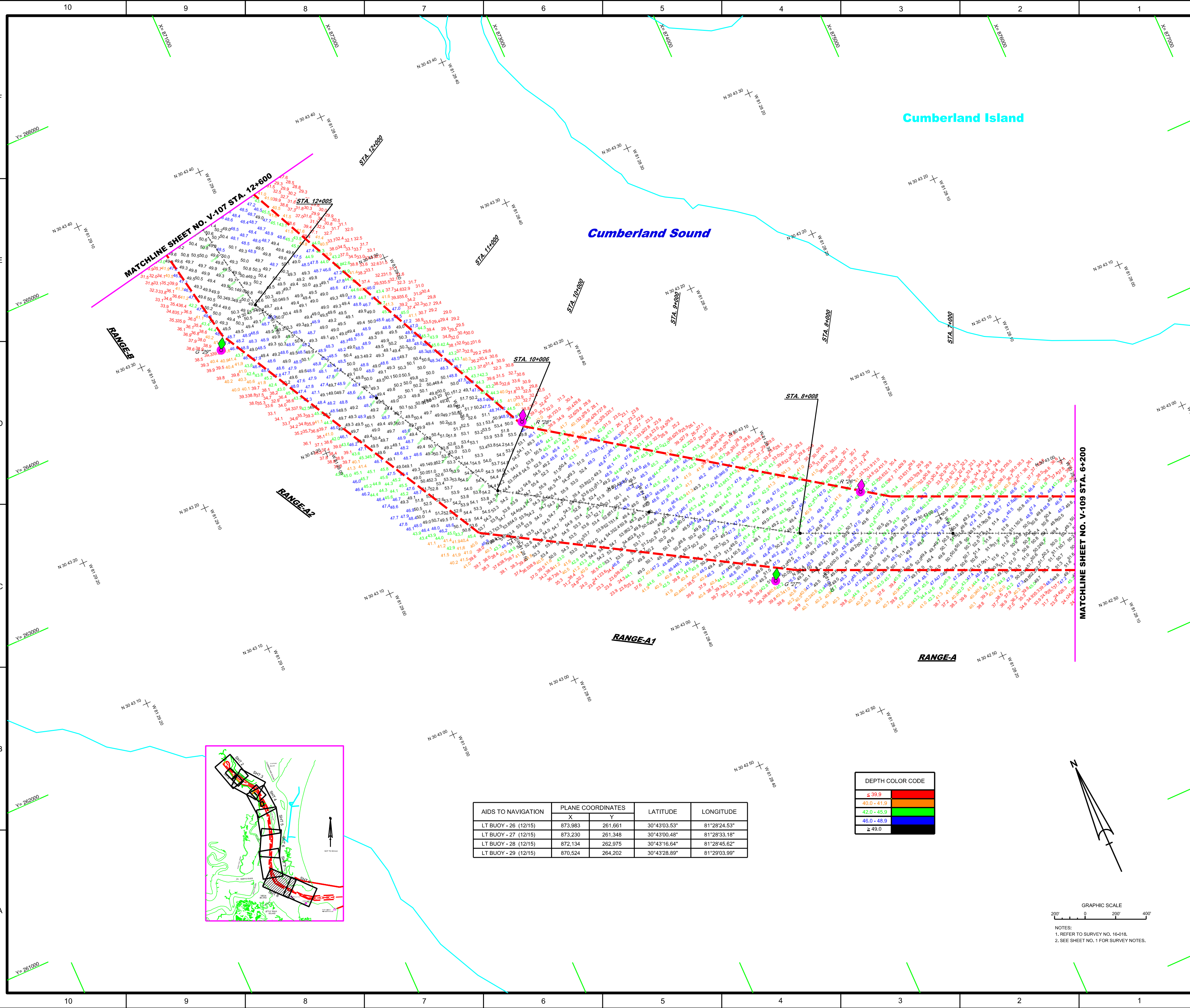


NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



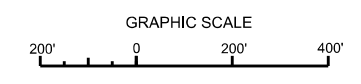
AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 30 (12/15)	871,028	265,458	30°43'41.28"	81°28'58.12"
LT BUOY - 31 (12/15)	869,950	267,369	30°44'00.27"	81°29'10.34"
LT BUOY - 32 (12/15)	870,485	268,220	30°44'08.66"	81°29'04.15"
LT BUOY - 33 (12/15)	870,167	270,465	30°44'30.90"	81°29'07.64"
LT BUOY - 34 (12/15)	870,700	270,403	30°44'30.25"	81°29'01.53"
SHOAL LT B (12/15)	871,450	269,935	30°44'25.58"	81°28'52.97"
SHOAL SIGN (12/15)	870,914	268,472	30°44'11.13"	81°28'59.21"
SHOAL SIGN (12/15)	870,912	266,984	30°43'56.40"	81°28'59.35"





AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 26 (12/15)	873,983	261,661	30°43'03.53"	81°28'24.53"
LT BUOY - 27 (12/15)	873,230	261,348	30°43'00.48"	81°28'33.18"
LT BUOY - 28 (12/15)	872,134	262,975	30°43'16.64"	81°28'45.62"
LT BUOY - 29 (12/15)	870,524	264,202	30°43'28.89"	81°29'03.99"

DEPTH COLOR CODE	
≤ 39.9	Red
40.0 - 41.9	Orange
42.0 - 45.9	Yellow
46.0 - 48.9	Green
≥ 49.0	Blue



NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB
DEPENDS ON YOU

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Checked By: GRL
Drawn By: FHW
Date: DEC 2015

16-01B-BAE-BAH-F-DGN
16-01B-BAE-BAH-L-DGN
16-01B-BAE-BAH-S-DGN
16-01B-BAE-BAH-T-DGN
16-01B-BAE-BAH-U-DGN
16-01B-BAE-BAH-V-DGN
16-01B-BAE-BAH-W-DGN
16-01B-BAE-BAH-X-DGN
16-01B-BAE-BAH-Y-DGN
16-01B-BAE-BAH-Z-DGN

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA

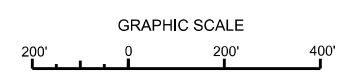
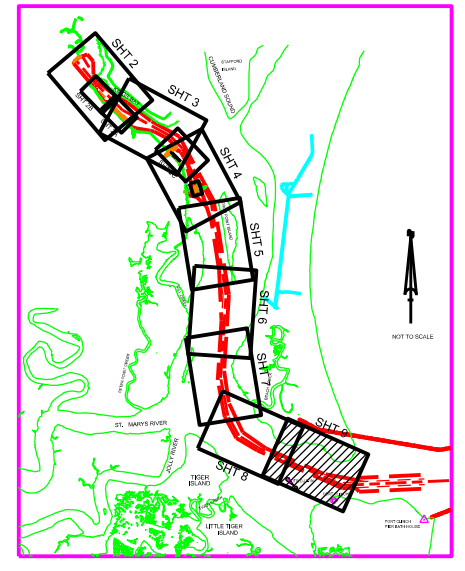
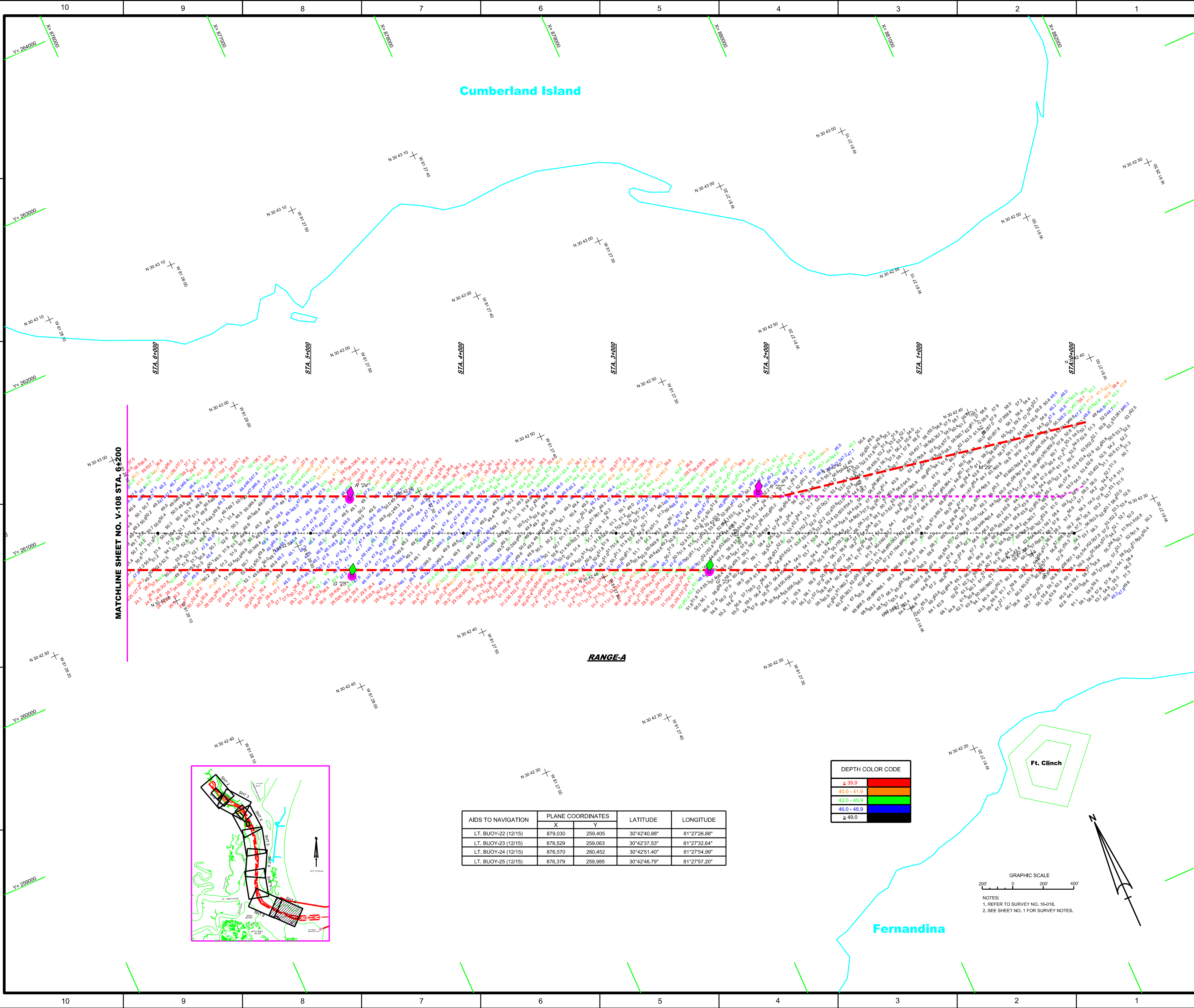
BIMONTHLY EXAMINATION SURVEY - DEC 2015
44, 45 & 46-FOOT PROJECT
STA. 0+00 THRU STA. 6+200 RANGE-A
PLAN

Scale: AS SHOWN

Drawing no.
V-109

SHEET 12 OF 12

Cumberland Island



NOTES:
1. REFER TO SURVEY NO. 16-018.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.