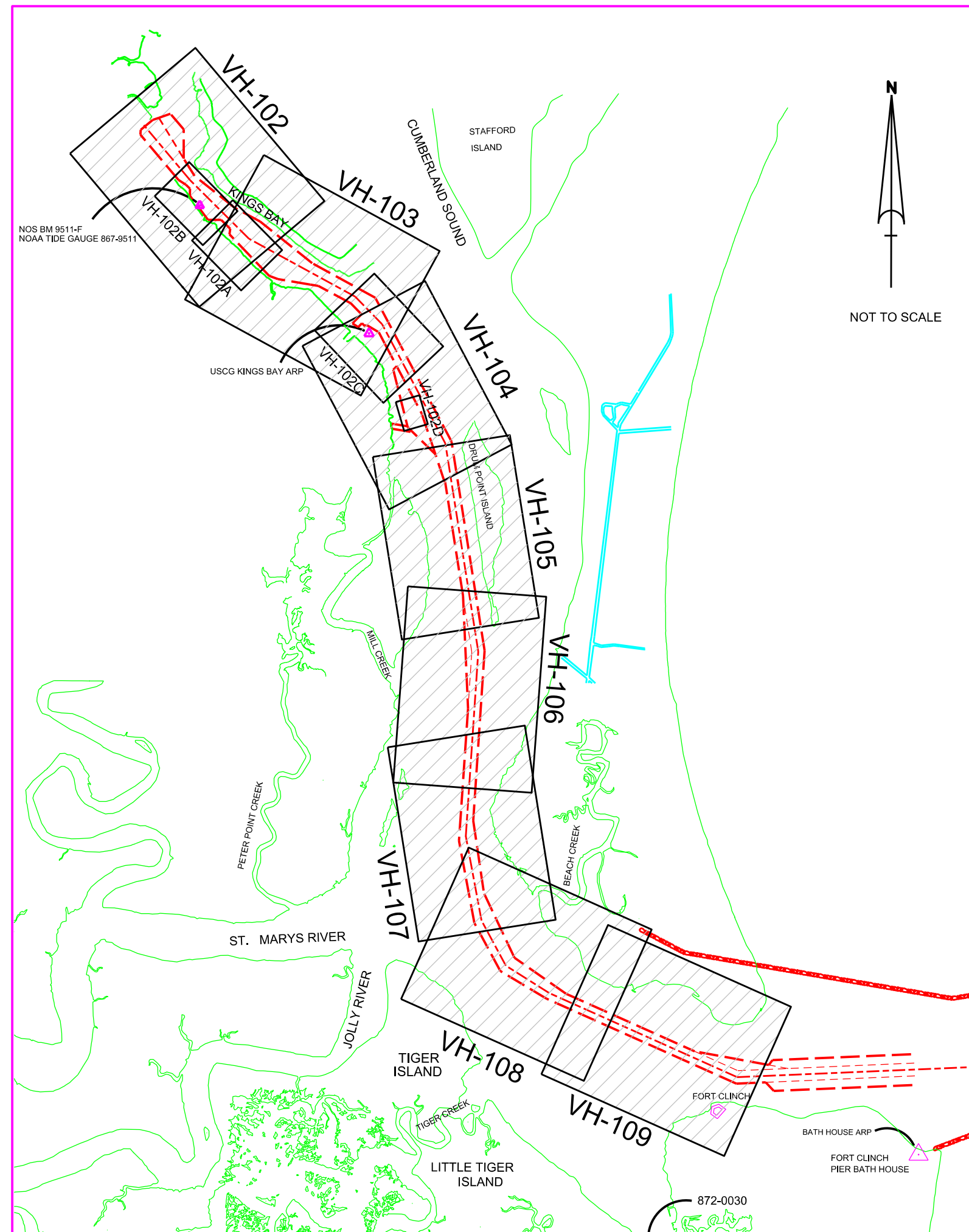


U.S. NAVY SUBMARINE BASE KINGS BAY, GEORGIA KINGS BAY INNER CHANNEL BIMONTHLY EXAMINATION SURVEY - FEB 2019



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. 19-102. THIS SURVEY ALSO CONTAINS AFTER DREDGE DATA FROM SURVEY NO. 19-097, KBIC FY18 MD AND 19-091, KBEC FY19 MD.
 - 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 # BBBC08), 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.
- | VESSEL | DATE OF SURVEY | AREA SURVEYED |
|--------|------------------|---|
| SB-36 | 25 & 30 JAN 2019 | SITE-6 |
| SB-36 | 1 FEB 2019 | RGE-I, RGE-H & RGE-G (INSIDE WRA) |
| SB-36 | 2-3 FEB 2019 | RGE-F & RGE-G (OUTSIDE WRA) |
| SB-36 | 5 FEB 2019 | REFIT WHARF-1 & 2 |
| SB-36 | 6 FEB 2019 | MSF |
| SB-36 | 10 & 14 FEB 2019 | EHW-1, EHW-2 & WARPING WHARF |
| SB-36 | 11 & 23 FEB 2019 | RGE-A & RGE-A1 |
| SB-36 | 12 & 13 FEB 2019 | RGE-A2, RGE-B & RGE-C |
| SB-36 | 11 & 24 FEB 2019 | RGE-D & RGE-E, STA 32+850 TO STA 35+999 |
| SB-36 | 24 FEB 2019 | RGE-E, STA 30+748 TO STA 32+850 |
| SB-36 | 25 FEB 2019 | DRY DOCK & CAISSON AREA |
- 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 1110-2-4056, STANDARDS AND PROCEDURES FOR REFERENCING PROJECT ELEVATION GRADES TO NATIONWIDE VERTICAL DATUMS, 31 DEC 2010.

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

DESIGNED BY: **WRM**
CHECKED BY: **GR**
DRAWN BY: **FWW**
DATE: **FEB 2019**

INDEX LOGBOOK
19-102-GB-BR10L03N
Reference Sheet
19-102-ABIC-VH-101.DGN
File Name

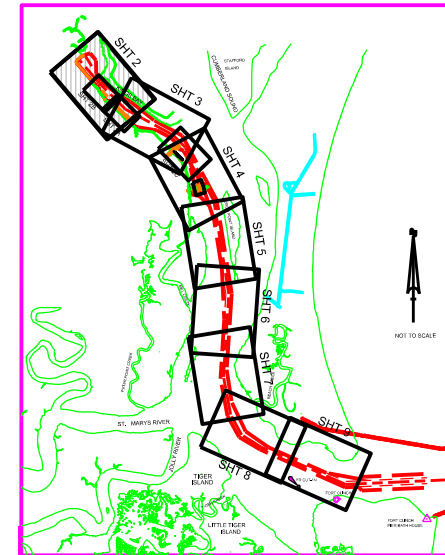
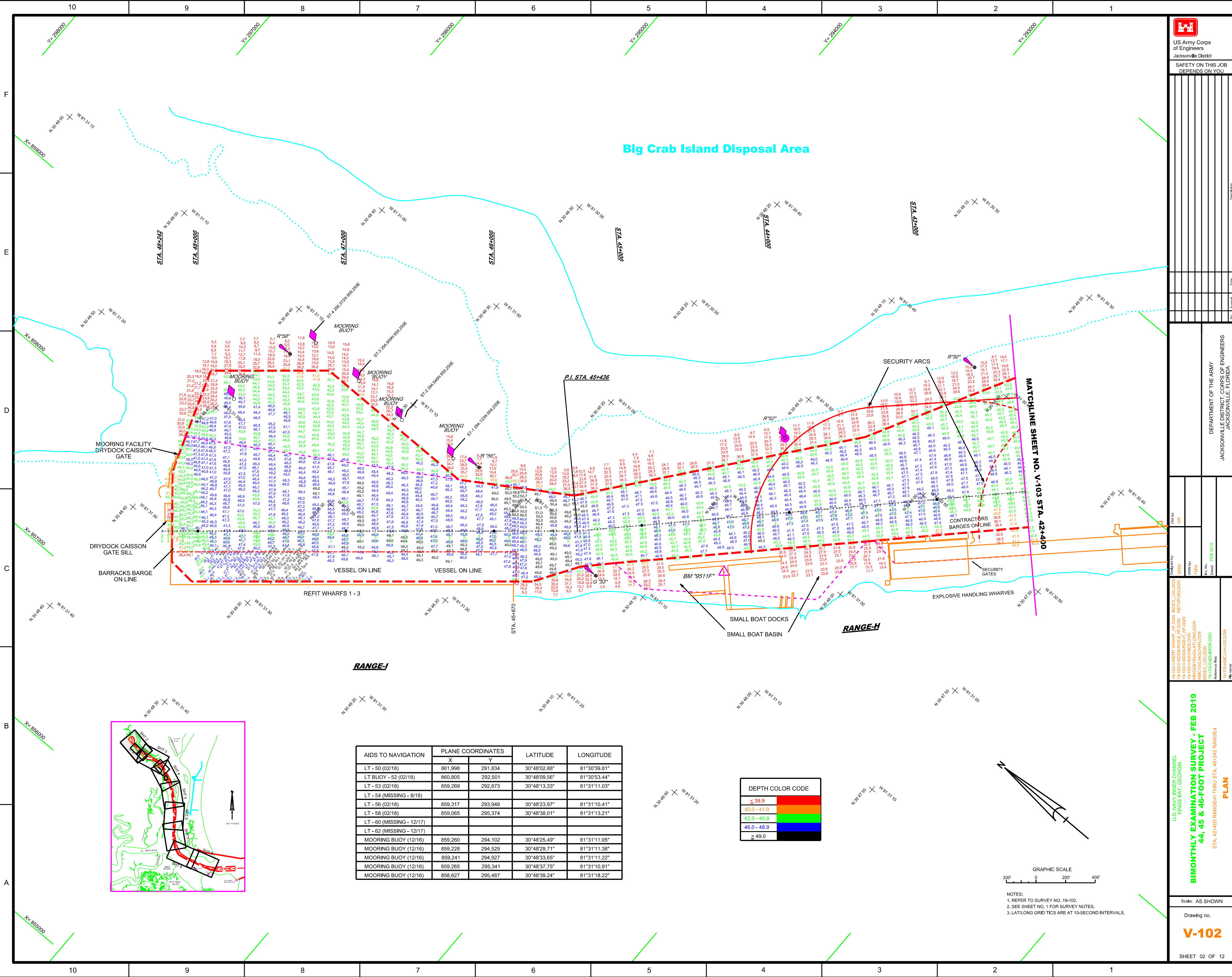
U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA
BIMONTHLY EXAMINATION SURVEY - FEB 2019
44, 45 & 46-FOOT PROJECT
INDEX, LOCATION AND VICINITY
MAP

Scale: AS SHOWN

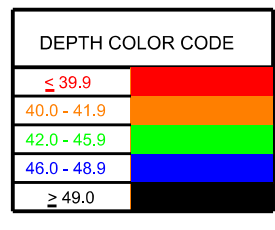
Drawing no.
V-101

SHEET 01 OF 12

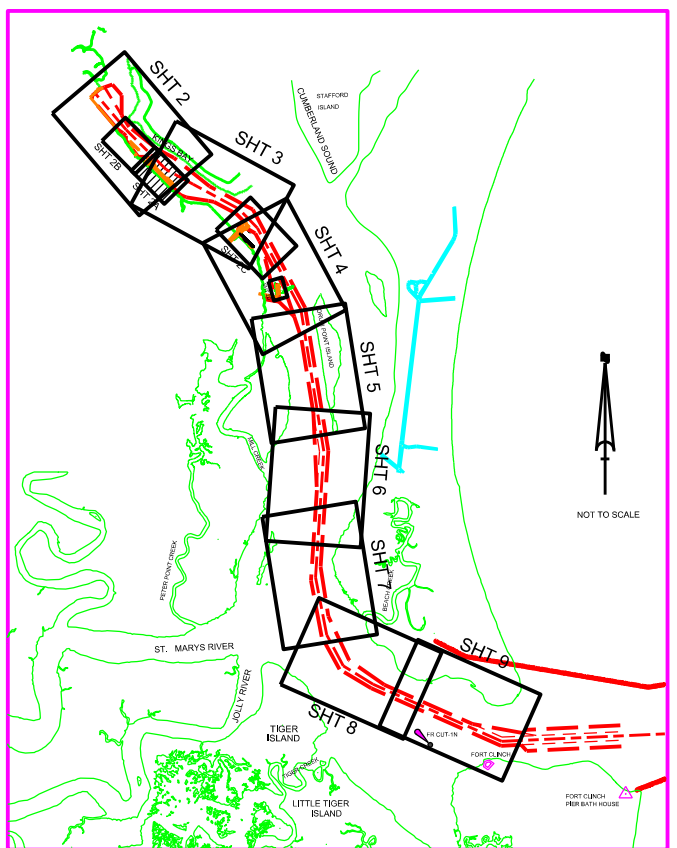
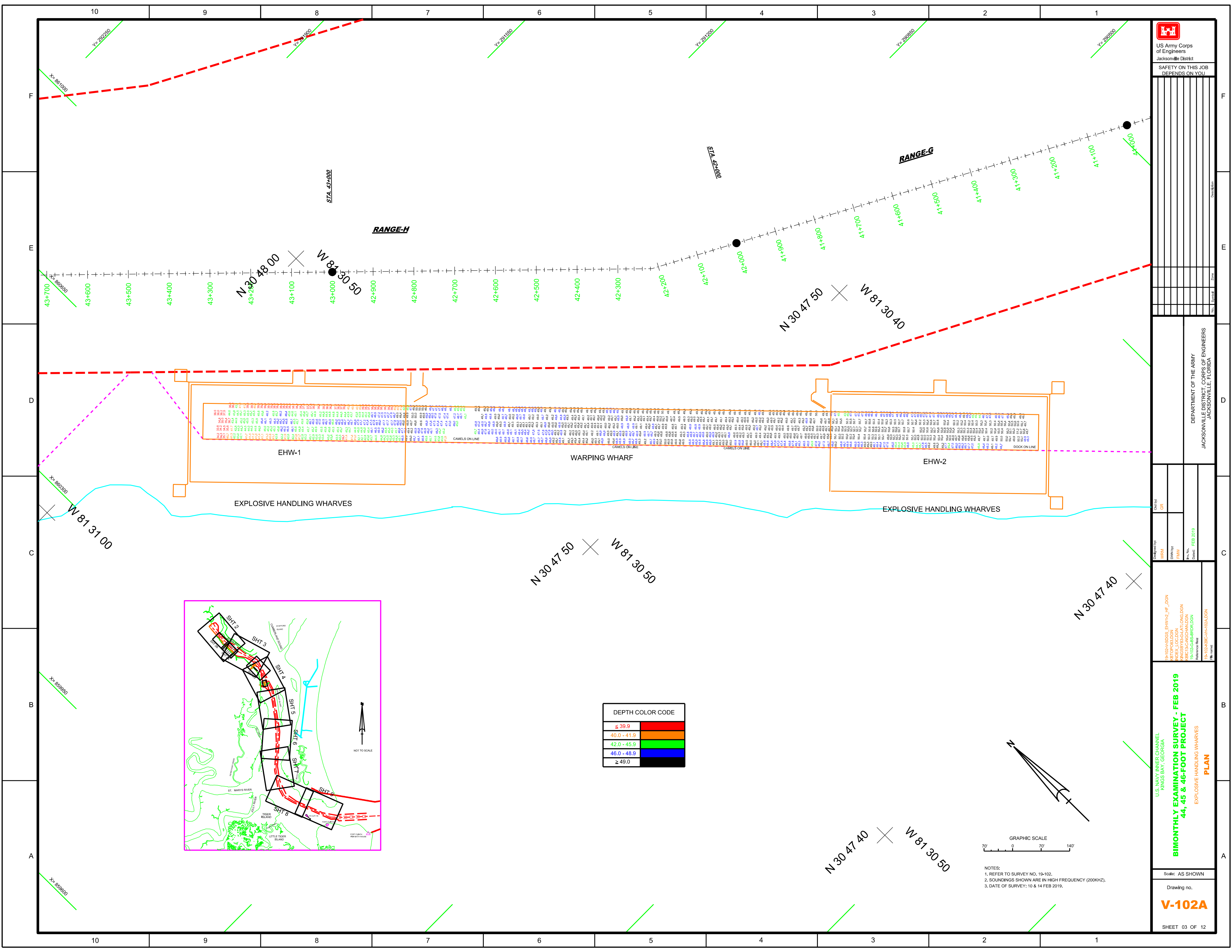
Big Crab Island Disposal Area



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT - 50 (02/18)	861,998	291,834	30°48'02.88"	81°30'39.81"
LT BUOY - 52 (02/18)	860,805	292,501	30°48'09.56"	81°30'53.44"
LT - 53 (02/18)	859,269	292,873	30°48'13.33"	81°31'11.03"
LT - 54 (MISSING - 8/18)				
LT - 56 (02/18)	859,317	293,948	30°48'23.97"	81°31'10.41"
LT - 58 (02/18)	859,065	295,374	30°48'38.01"	81°31'13.21"
LT - 60 (MISSING - 12/17)				
LT - 62 (MISSING - 12/17)				
MOORING BUOY (12/16)	859,260	294,102	30°48'25.49"	81°31'11.05"
MOORING BUOY (12/16)	859,228	294,529	30°48'29.71"	81°31'11.38"
MOORING BUOY (12/16)	859,241	294,927	30°48'33.65"	81°31'11.22"
MOORING BUOY (12/16)	859,265	295,341	30°48'37.75"	81°31'10.91"
MOORING BUOY (12/16)	858,627	295,487	30°48'39.24"	81°31'18.22"

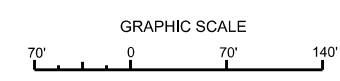


NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



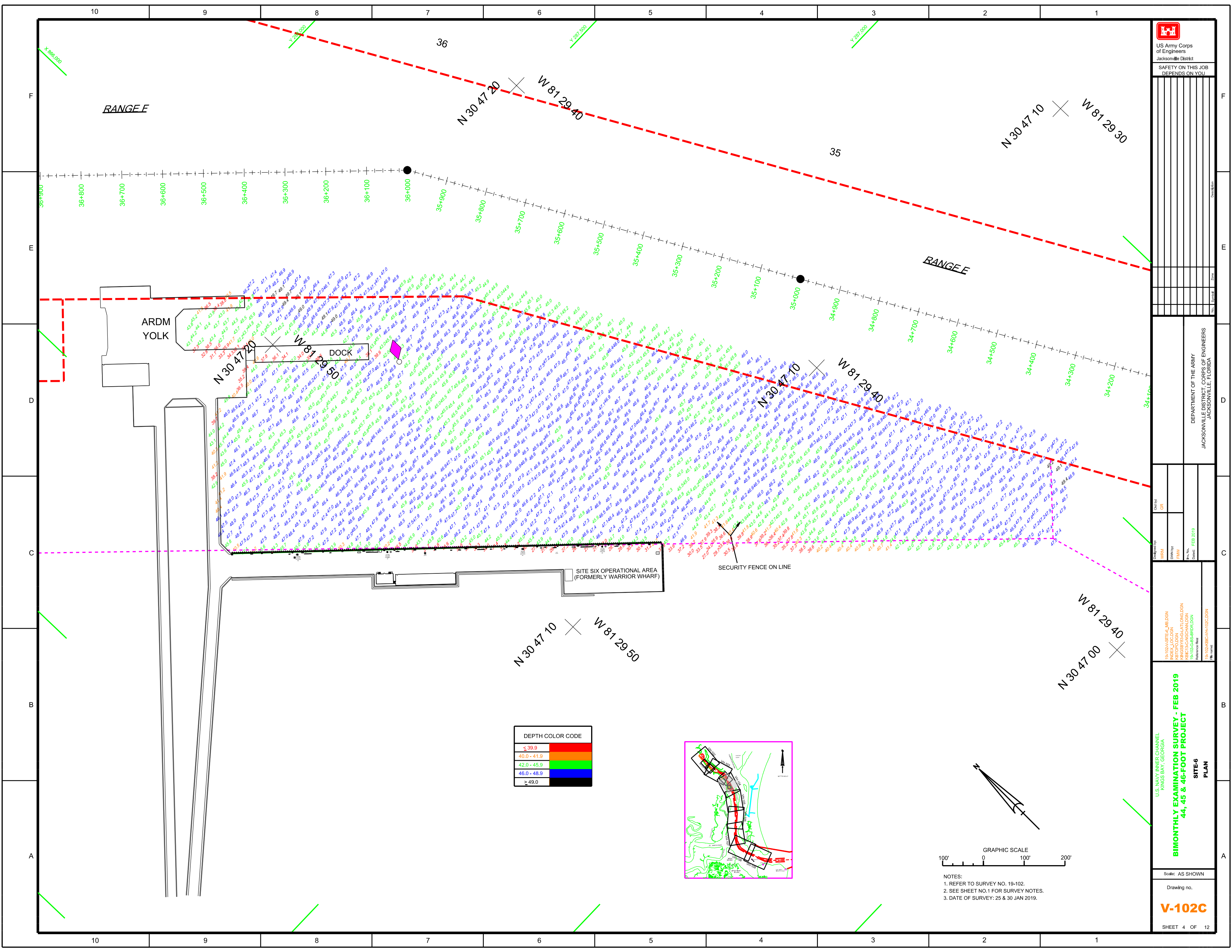
DEPTH COLOR CODE

≤ 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. 19-102.
 2. SOUNDINGS SHOWN ARE IN HIGH FREQUENCY (200KHZ).
 3. DATE OF SURVEY: 10 & 14 FEB 2019.

 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	
Drawn by: WRM	Check by: GRL
Designated by: FHW	Date: FEB 2019
19-102A-SDS-EHW-2_HF_DGN 19-102A-SDS-EHW-2_HF_DGN 19-102A-SDS-EHW-2_HF_DGN 19-102A-SDS-EHW-2_HF_DGN	
BIMONTHLY EXAMINATION SURVEY - FEB 2019 44, 45 & 46-FOOT PROJECT EXPLOSIVE HANDLING WHARVES PLAN	
Scale: AS SHOWN Drawing no. V-102A	
SHEET 03 OF 12	



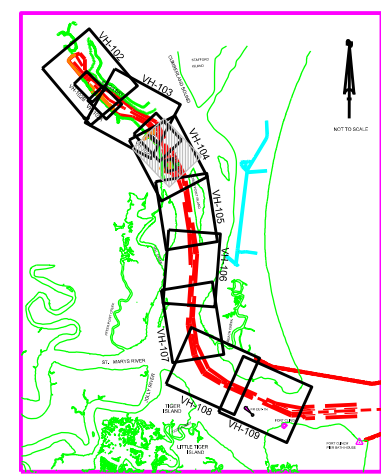
ARDM
YOLK

DOCK


SITE SIX OPERATIONAL AREA
(FORMERLY WARRIOR WHARF)

SECURITY FENCE ON LINE

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. 19-102.
2. SEE SHEET NO.1 FOR SURVEY NOTES.
3. DATE OF SURVEY: 25 & 30 JAN 2019.



US Army Corps of Engineers
Jacksonville District
SAFETY ON THIS JOB
DEPENDS ON YOU

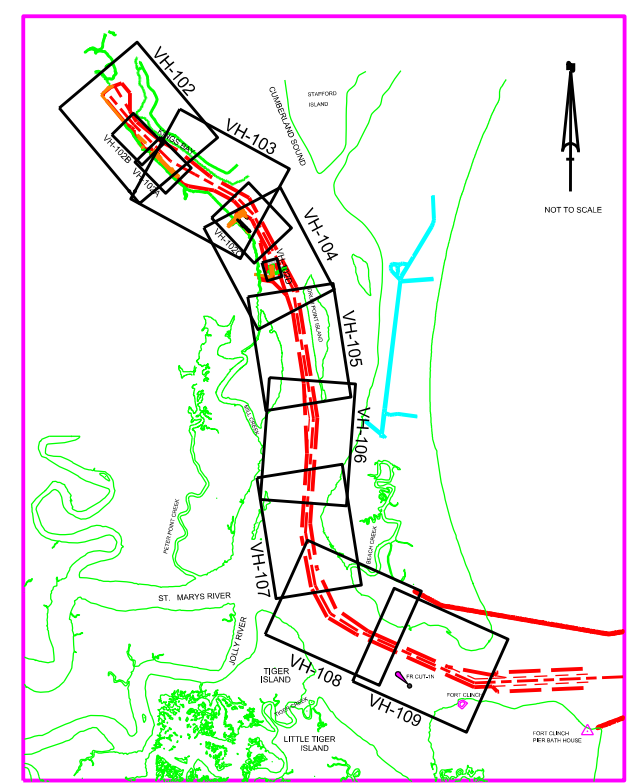
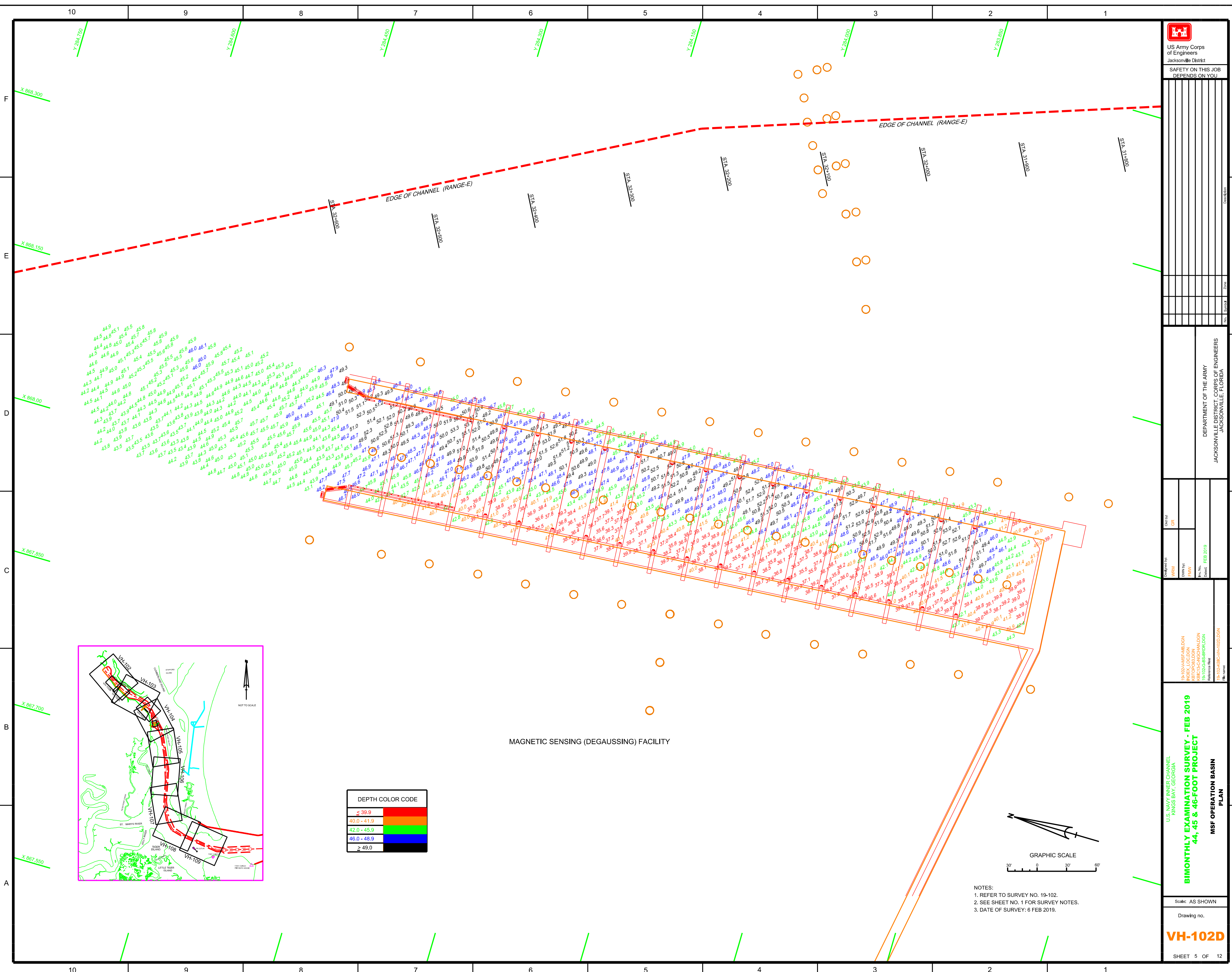
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Drawn by: WRM Check by: GRL Date: FEB 2019	INDEX LOCATION: 19-102C-SITE-6 PROJECT LOCATION: 19-102C-SITE-6 DRAWING NO.: 19-102C-SITE-6-PLAN DATE: FEB 2019
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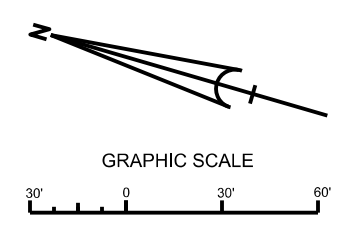
BIMONTHLY EXAMINATION SURVEY - FEB 2019
44, 45 & 46-FOOT PROJECT

SITE-6 PLAN

Scale: AS SHOWN
Drawing no.
V-102C
SHEET 4 OF 12



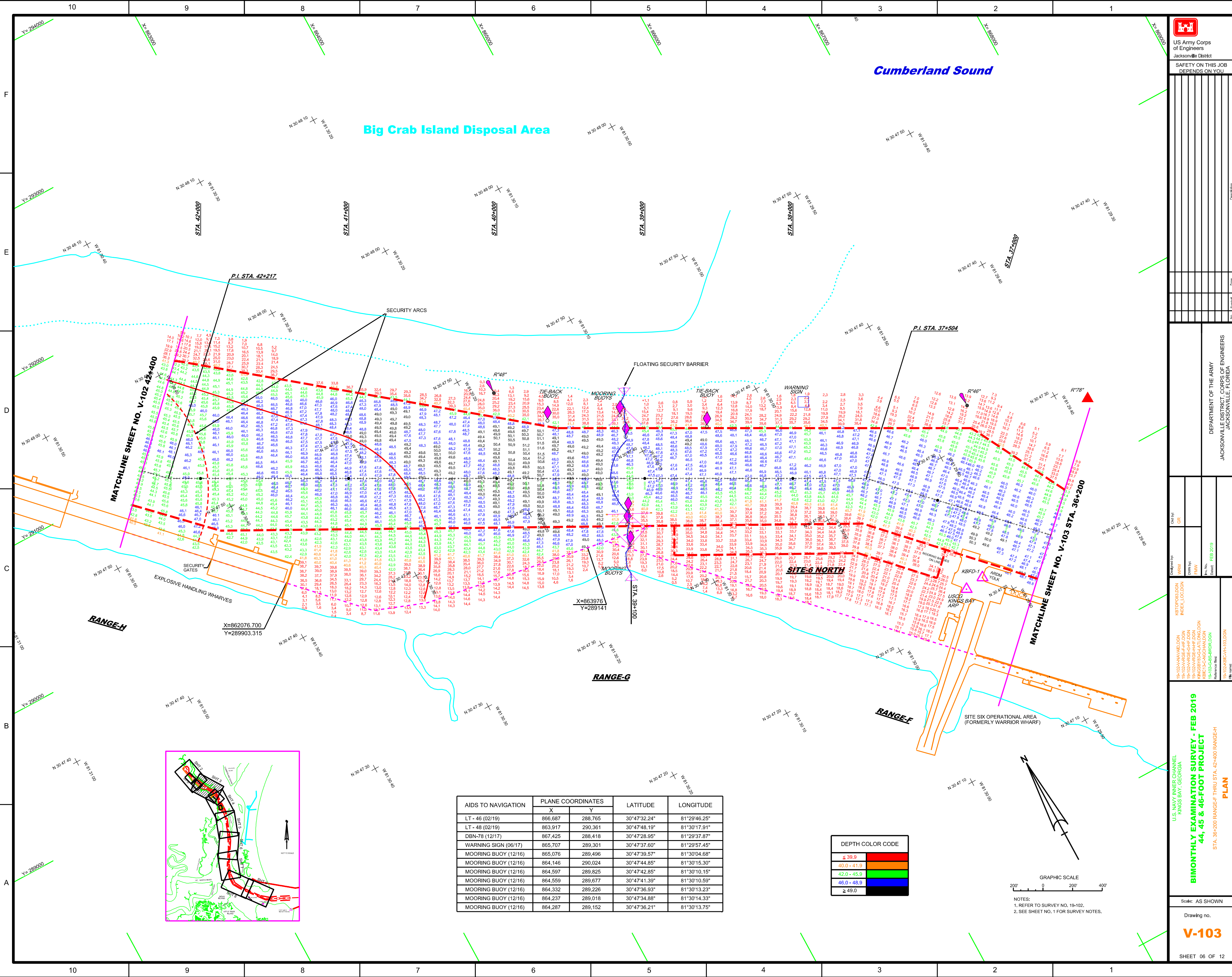
DEPTH COLOR CODE	
< 39.9	Red
40.0 - 41.9	Orange
42.0 - 45.9	Yellow
46.0 - 48.9	Green
> 49.0	Blue



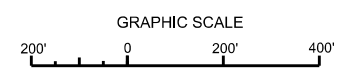
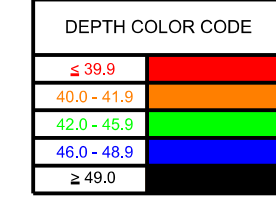
NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
3. DATE OF SURVEY: 6 FEB 2019.

Cumberland Sound

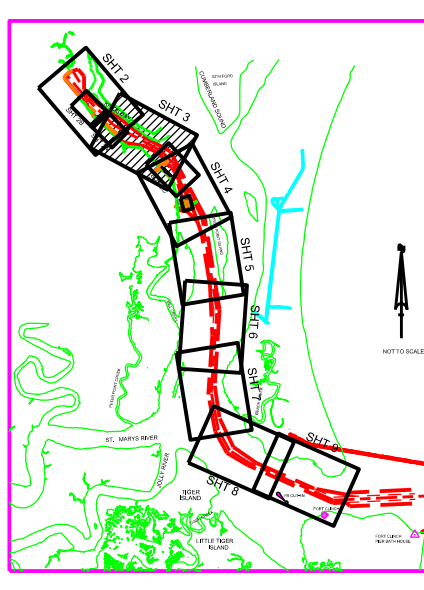
Big Crab Island Disposal Area



AIDS TO NAVIGATION	PLANE COORDINATES	LATITUDE	LONGITUDE
	X	Y	
LT - 46 (02/19)	866,687	288,765	30°47'32.24"
LT - 48 (02/19)	863,917	290,361	30°47'48.19"
DBN-78 (12/17)	867,425	288,418	30°47'28.95"
WARNING SIGN (06/17)	865,707	289,301	30°47'37.60"
MOORING BUOY (12/16)	865,076	289,496	30°47'39.57"
MOORING BUOY (12/16)	864,146	290,024	30°47'44.85"
MOORING BUOY (12/16)	864,597	289,825	30°47'42.85"
MOORING BUOY (12/16)	864,559	289,677	30°47'41.39"
MOORING BUOY (12/16)	864,332	289,226	30°47'36.93"
MOORING BUOY (12/16)	864,237	289,018	30°47'34.88"
MOORING BUOY (12/16)	864,287	289,152	30°47'36.21"



NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



US Army Corps of Engineers
Jacksonville District
SAFETY ON THIS JOB
DEPENDS ON YOU

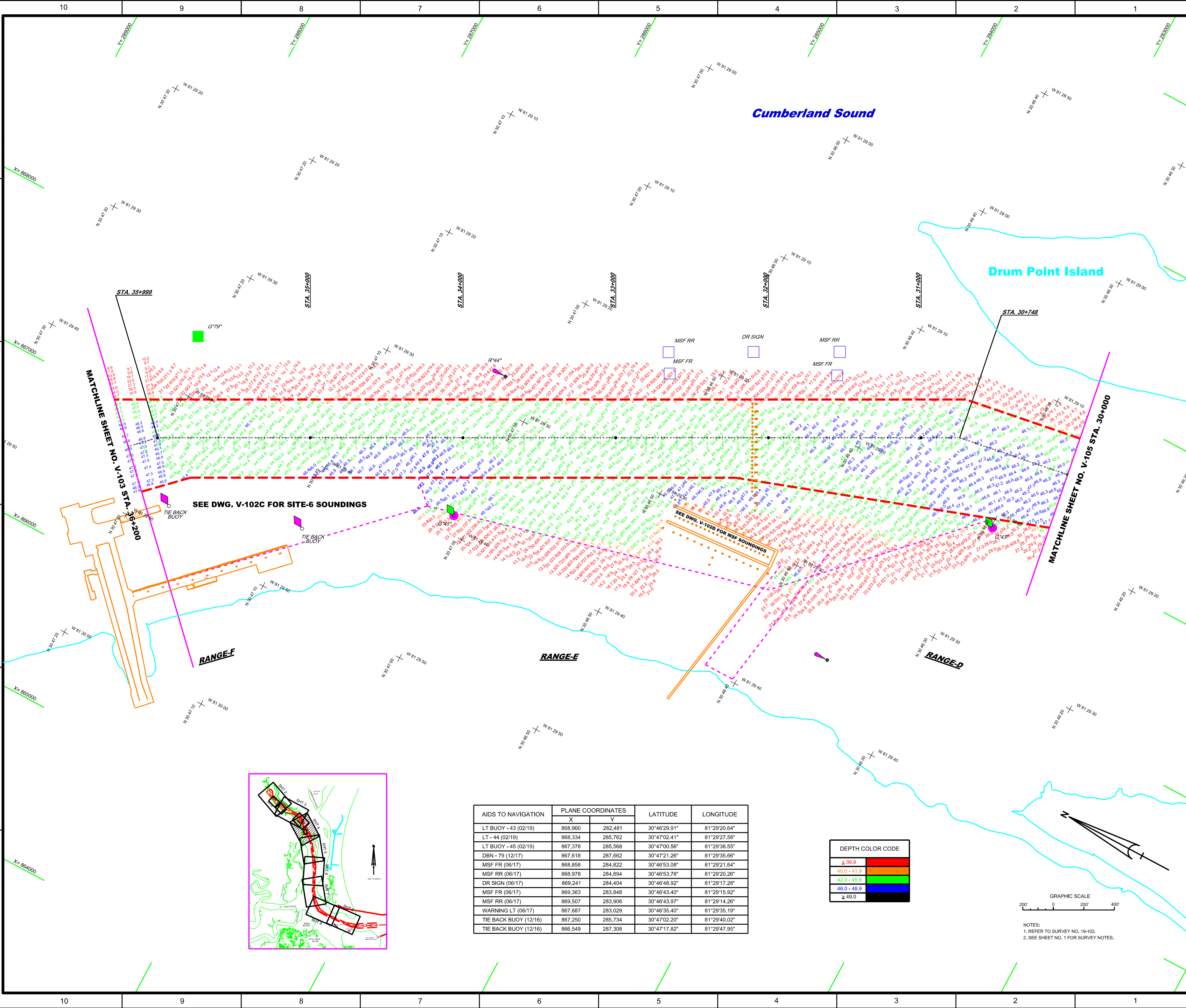
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Drawn by: GR
Checked by: GR
Date: FEB 2019

Project: RTOPORLDON
INDEX_LOCATION
18-102A-RANGE-E-16.DGN
18-102A-RANGE-D-16.DGN
18-102A-RANGE-F-16.DGN
18-102A-RANGE-G-16.DGN
18-102A-RANGE-H-16.DGN
18-102A-RANGE-I-16.DGN
Reference files:
18-102A-RANGE-E-16.DGN
18-102A-RANGE-D-16.DGN
18-102A-RANGE-F-16.DGN
18-102A-RANGE-G-16.DGN
18-102A-RANGE-H-16.DGN
18-102A-RANGE-I-16.DGN

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA
BIMONTHLY EXAMINATION SURVEY - FEB 2019
44, 45 & 46-FOOT PROJECT
STA. 30+000 RANGE-D THRU STA. 36+200 RANGE-F
PLAN

Scale: AS SHOWN
Drawing no.
V-104
SHEET 07 OF 12



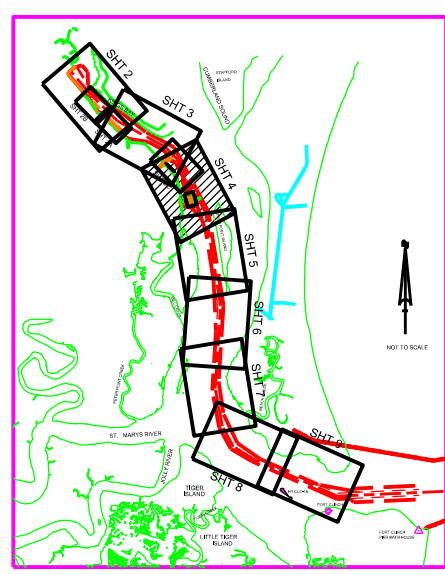
SEE DWG. V-102C FOR SITE-6 SOUNDINGS

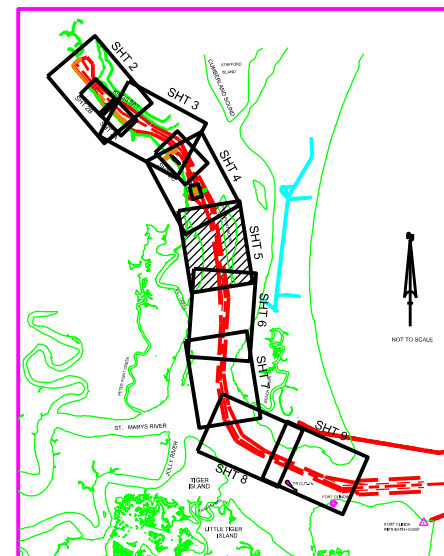
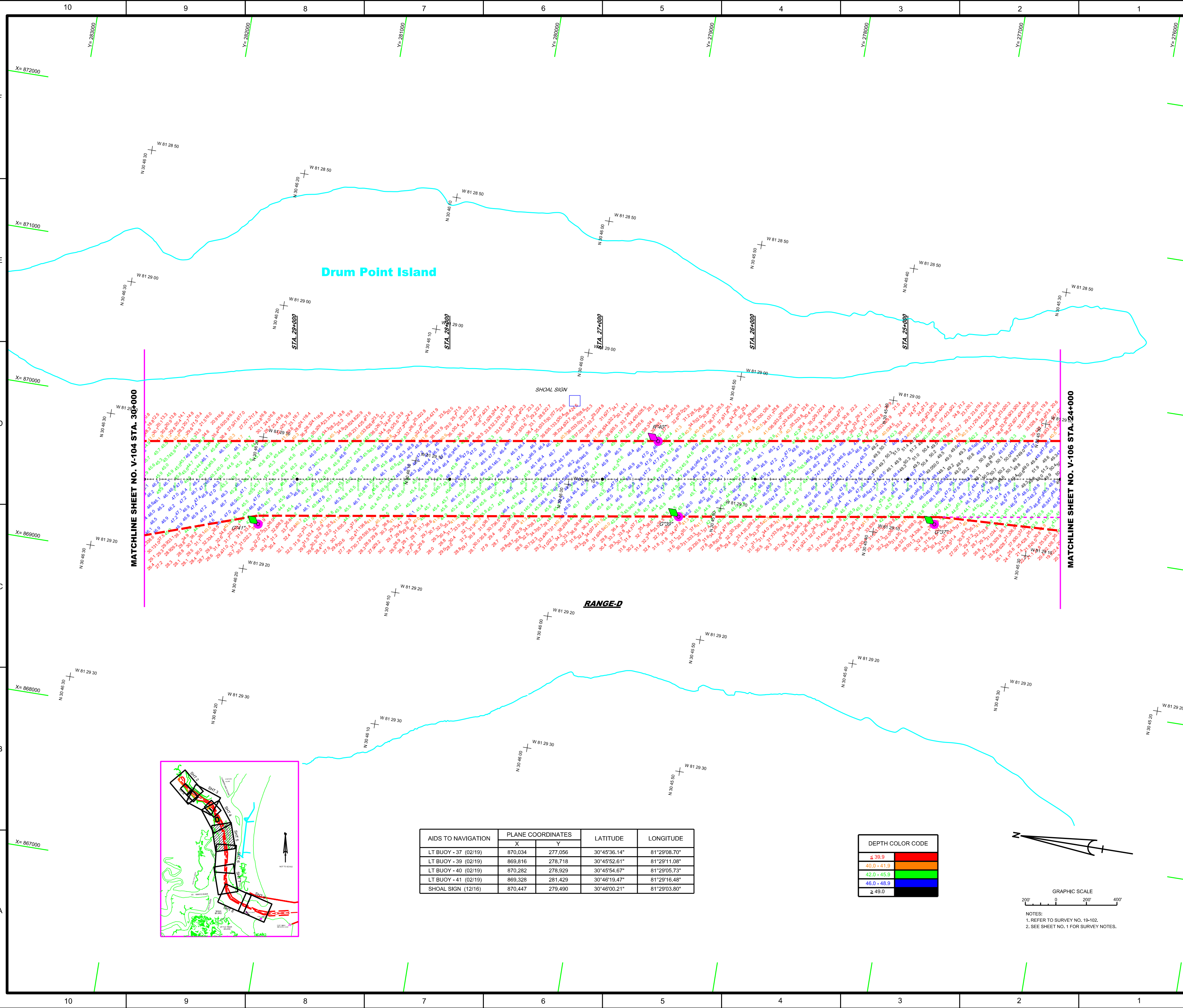
SEE DWG. V-102D FOR MSF SOUNDINGS

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 43 (02/19)	868,960	282,481	30°46'29.91"	81°29'20.64"
LT - 44 (02/19)	868,334	285,762	30°47'02.41"	81°29'27.58"
LT BUOY - 45 (02/19)	867,378	285,568	30°47'00.56"	81°29'38.55"
DBN - 79 (12/17)	867,618	287,662	30°47'21.26"	81°29'35.66"
MSF FR (06/17)	868,858	284,822	30°46'53.08"	81°29'21.64"
MSF FR (06/17)	868,978	284,894	30°46'53.78"	81°29'20.26"
DR SIGN (06/17)	869,241	284,404	30°46'48.92"	81°29'17.28"
MSF FR (06/17)	869,363	283,848	30°46'43.40"	81°29'15.92"
MSF RR (06/17)	869,507	283,906	30°46'43.97"	81°29'14.26"
WARNING LT (06/17)	867,687	283,029	30°46'35.40"	81°29'35.19"
TIE BACK BUOY (12/16)	867,250	285,734	30°47'02.20"	81°29'40.02"
TIE BACK BUOY (12/16)	866,549	287,308	30°47'17.82"	81°29'47.95"

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

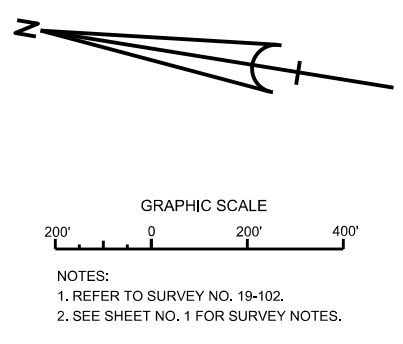
GRAPHIC SCALE
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NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



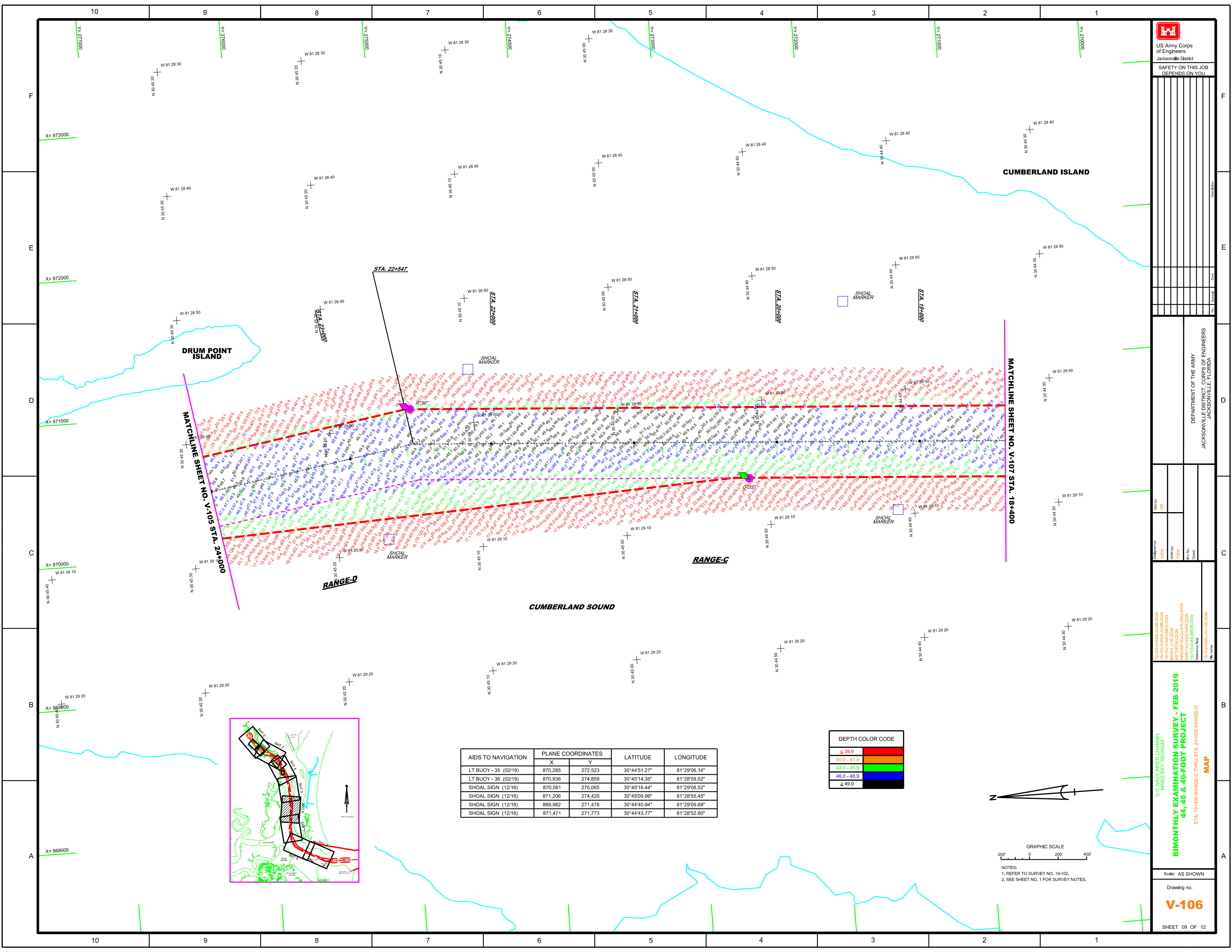


AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 37 (02/19)	870,034	277,056	30°45'36.14"	81°29'08.70"
LT BUOY - 39 (02/19)	869,816	278,718	30°45'52.61"	81°29'11.08"
LT BUOY - 40 (02/19)	870,282	278,929	30°45'54.67"	81°29'05.73"
LT BUOY - 41 (02/19)	869,328	281,429	30°46'19.47"	81°29'16.48"
SHOAL SIGN (12/16)	870,447	279,490	30°46'00.21"	81°29'03.80"

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

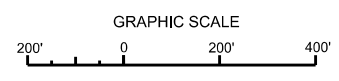
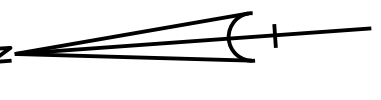
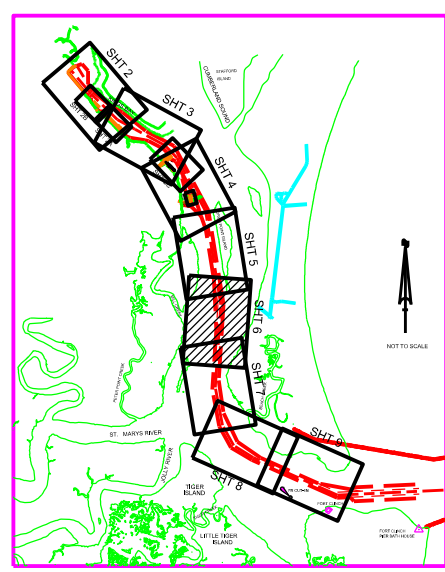


NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

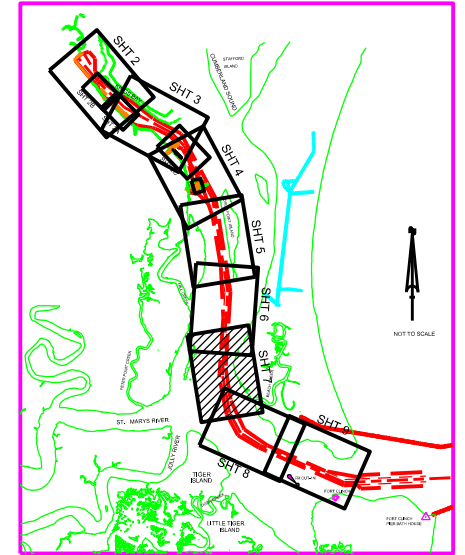
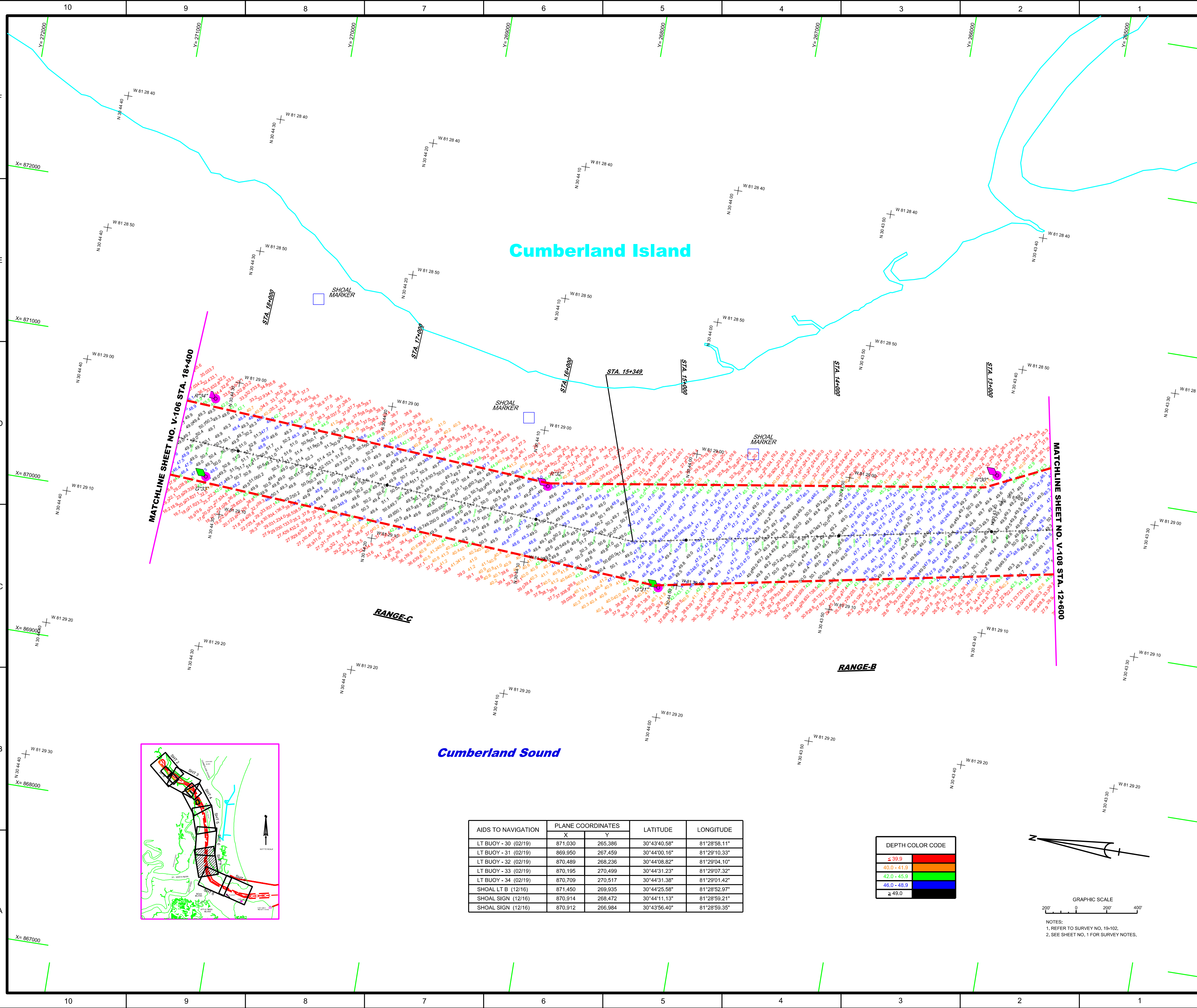


DEPTH COLOR CODE	
≤ 39.9	Red
40.0 - 41.9	Orange
42.0 - 45.9	Yellow
46.0 - 48.9	Green
≥ 49.0	Blue

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 35 (02/19)	870,285	272,523	30°44'51.27"	81°29'06.14"
LT BUOY - 36 (02/19)	870,936	274,859	30°45'14.35"	81°28'58.52"
SHOAL SIGN (12/16)	870,061	275,065	30°45'16.44"	81°29'08.52"
SHOAL SIGN (12/16)	871,206	274,420	30°45'09.99"	81°28'55.45"
SHOAL SIGN (12/16)	869,982	271,478	30°44'40.94"	81°29'09.69"
SHOAL SIGN (12/16)	871,471	271,773	30°44'43.77"	81°28'52.60"



NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 30 (02/19)	871,030	265,386	30°43'40.58"	81°28'58.11"
LT BUOY - 31 (02/19)	869,950	267,459	30°44'00.16"	81°29'10.33"
LT BUOY - 32 (02/19)	870,489	268,236	30°44'08.82"	81°29'04.10"
LT BUOY - 33 (02/19)	870,195	270,499	30°44'31.23"	81°29'07.32"
LT BUOY - 34 (02/19)	870,709	270,517	30°44'31.38"	81°29'01.42"
SHOAL LT B (12/16)	871,450	269,935	30°44'25.58"	81°28'52.97"
SHOAL SIGN (12/16)	870,914	268,472	30°44'11.13"	81°28'59.21"
SHOAL SIGN (12/16)	870,912	266,984	30°43'56.40"	81°28'59.35"

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

GRAPHIC SCALE
200' 0 200' 400'
NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

Zone	
Scale	
Unit	
Year	
Author	
Checker	
Project	
Date	
Revision	

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

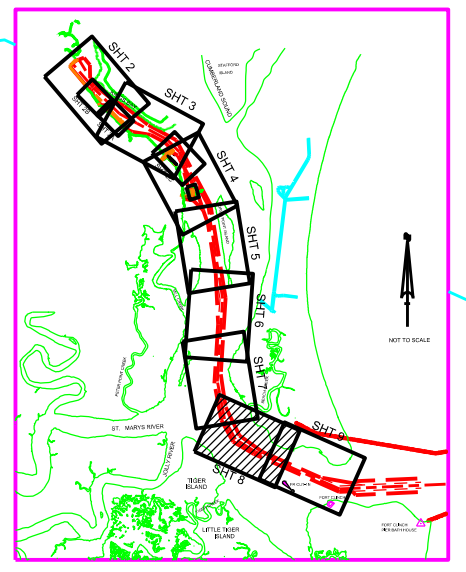
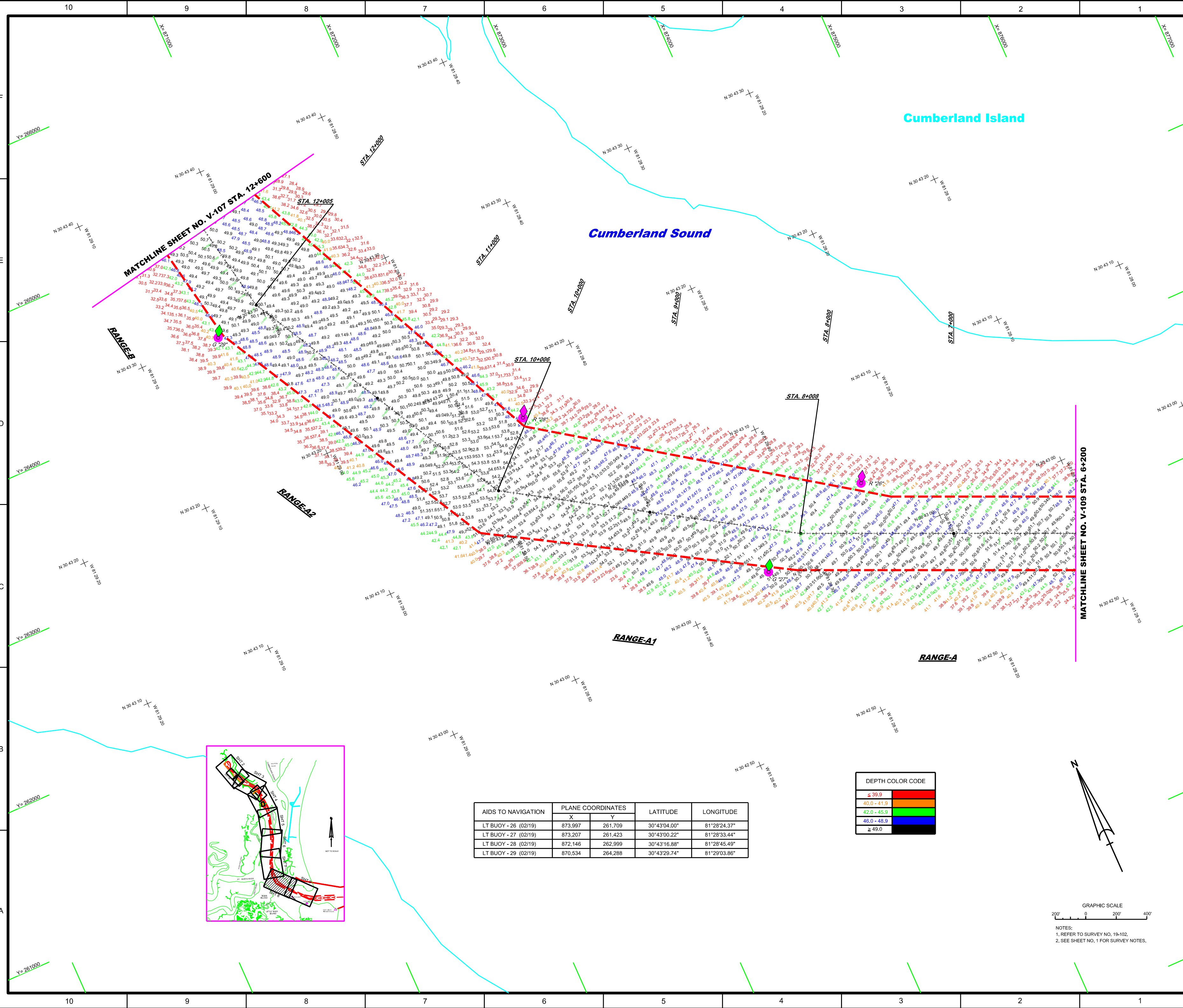
Designed By:	WRM
Checked By:	GR
Drawn By:	FWW
Date:	FEB 2019

INDEX LOCATION	18-102A-RANGE-A-1
INDEX LOCATION	18-102A-RANGE-A-2
INDEX LOCATION	18-102A-RANGE-A-3
INDEX LOCATION	18-102A-RANGE-A-4
INDEX LOCATION	18-102A-RANGE-A-5
INDEX LOCATION	18-102A-RANGE-A-6
INDEX LOCATION	18-102A-RANGE-A-7
INDEX LOCATION	18-102A-RANGE-A-8
INDEX LOCATION	18-102A-RANGE-A-9
INDEX LOCATION	18-102A-RANGE-A-10

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA
BIMONTHLY EXAMINATION SURVEY - FEB 2019
44, 45 & 46-FOOT PROJECT
STA. 6+200 RANGE-A THRU STA. 12+600 RANGE-B
PLAN

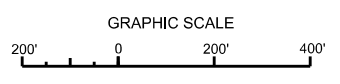
Scale: AS SHOWN

Drawing no.
V-108



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY - 26 (02/19)	873.997	261.709	30°43'04.00"	81°28'24.37"
LT BUOY - 27 (02/19)	873.207	261.423	30°43'00.22"	81°28'33.44"
LT BUOY - 28 (02/19)	872.146	262.999	30°43'16.88"	81°28'45.49"
LT BUOY - 29 (02/19)	870.534	264.288	30°43'29.74"	81°29'03.86"

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. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

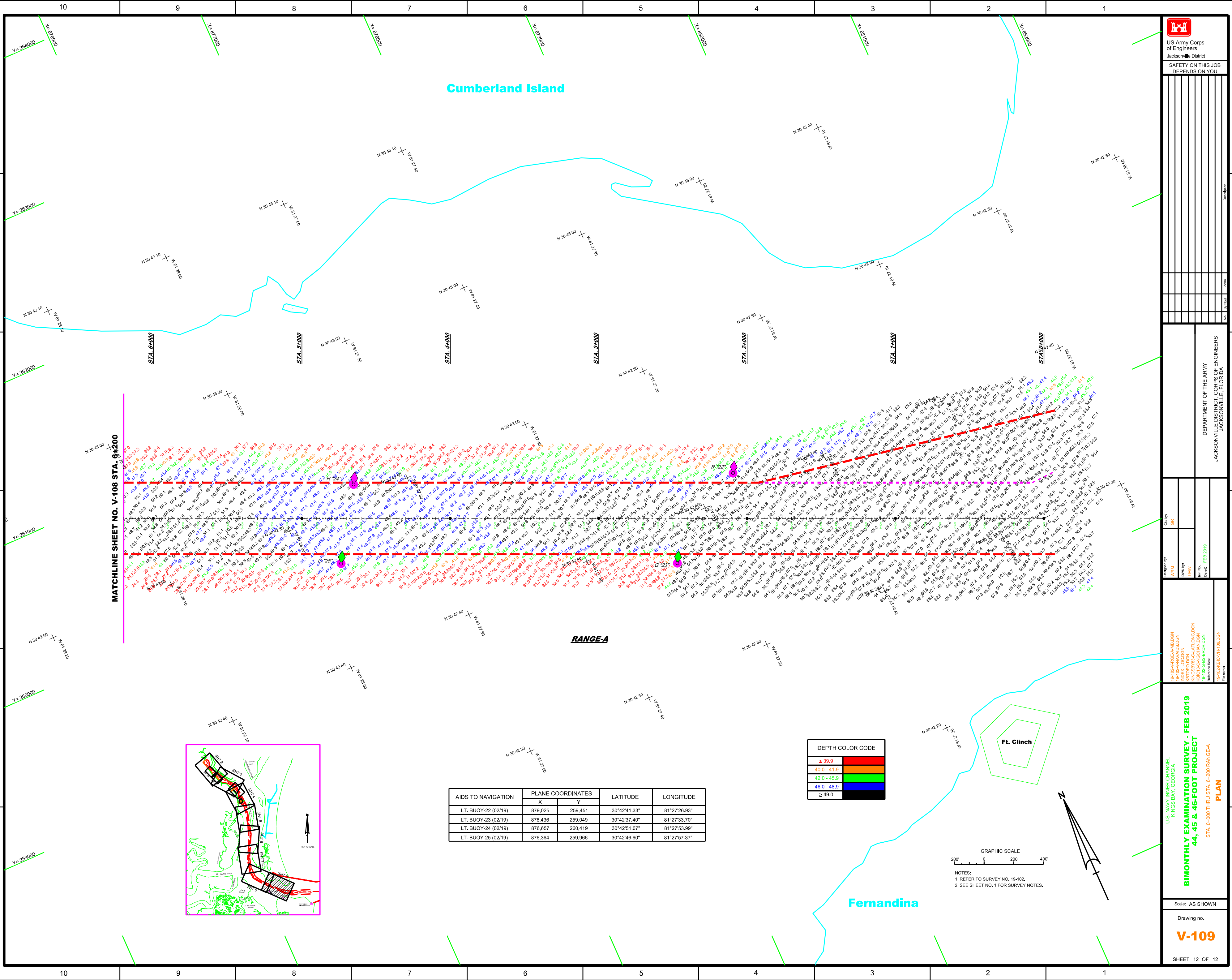
SAFETY ON THIS JOB
DEPENDS ON YOU

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

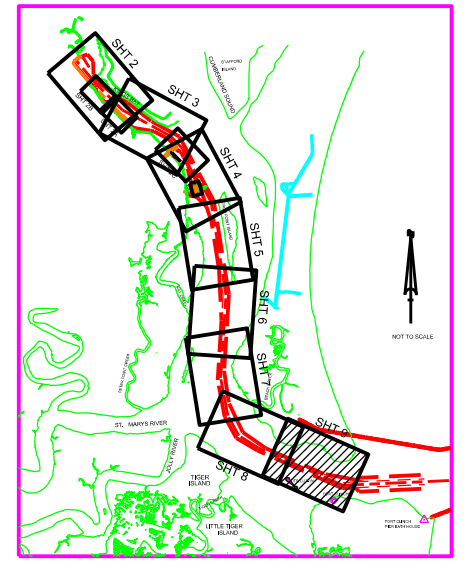
Checked By: GRL
Drawn By: FHW
Date: FEB 2019

19-102-AR-000-0000
INDEX LOCATION
19-102-AR-000-0000
19-102-AR-000-0000
19-102-AR-000-0000

Cumberland Island



MATCHLINE SHEET NO. V-108 STA. 6+200



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-22 (02/19)	879,025	259,451	30°42'41.33"	81°27'26.93"
LT. BUOY-23 (02/19)	878,436	259,049	30°42'37.40"	81°27'33.70"
LT. BUOY-24 (02/19)	876,657	260,419	30°42'51.07"	81°27'53.99"
LT. BUOY-25 (02/19)	876,364	259,966	30°42'46.60"	81°27'57.37"

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

GRAPHIC SCALE
0 200 400

NOTES:
1. REFER TO SURVEY NO. 19-102.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

U.S. NAVY INNER CHANNEL
KINGS BAY, GEORGIA

BIMONTHLY EXAMINATION SURVEY - FEB 2019
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