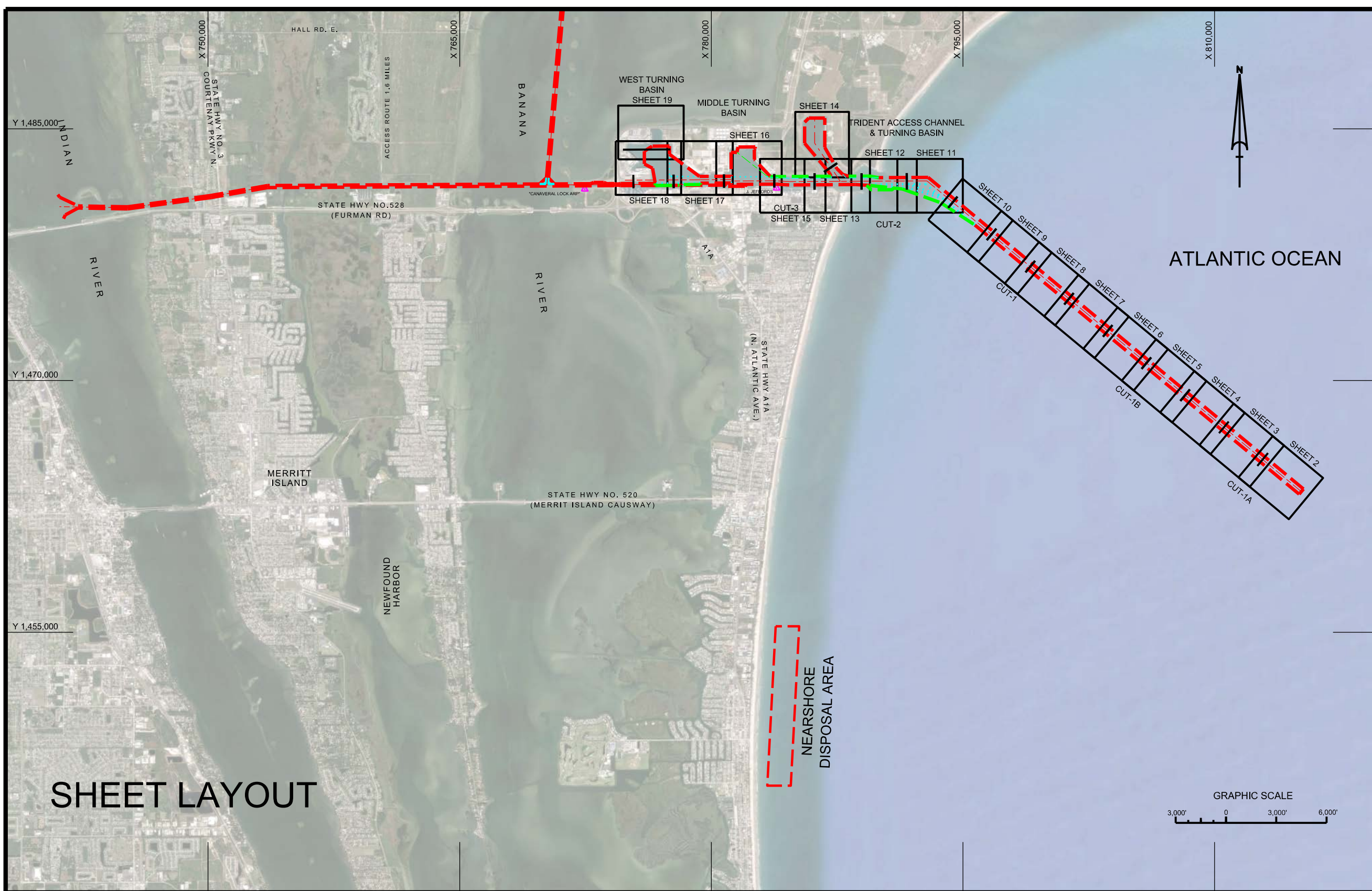
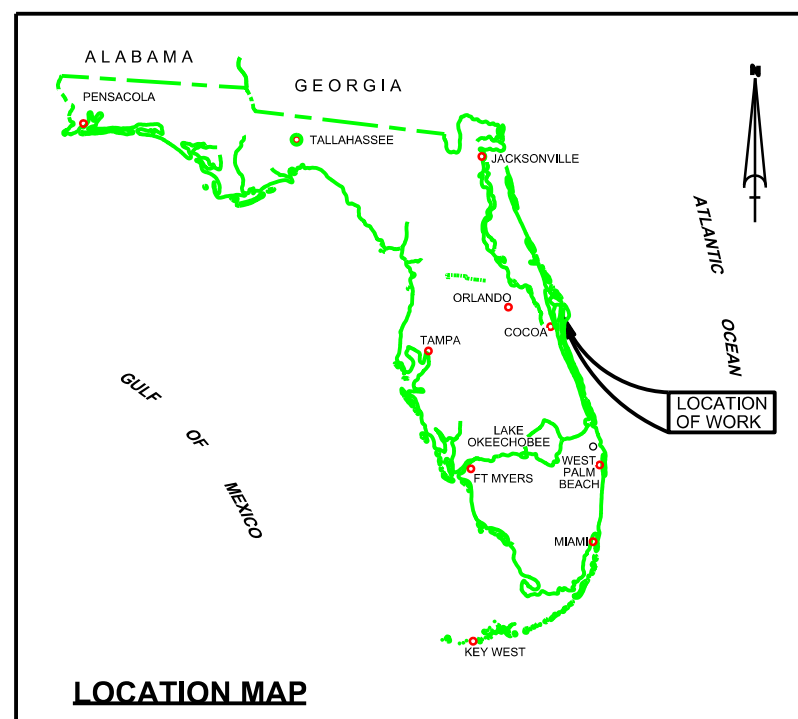


CANAVERAL HARBOR BREVARD COUNTY, FLORIDA 3Q HYDROGRAPHIC EXAM SURVEY FY19



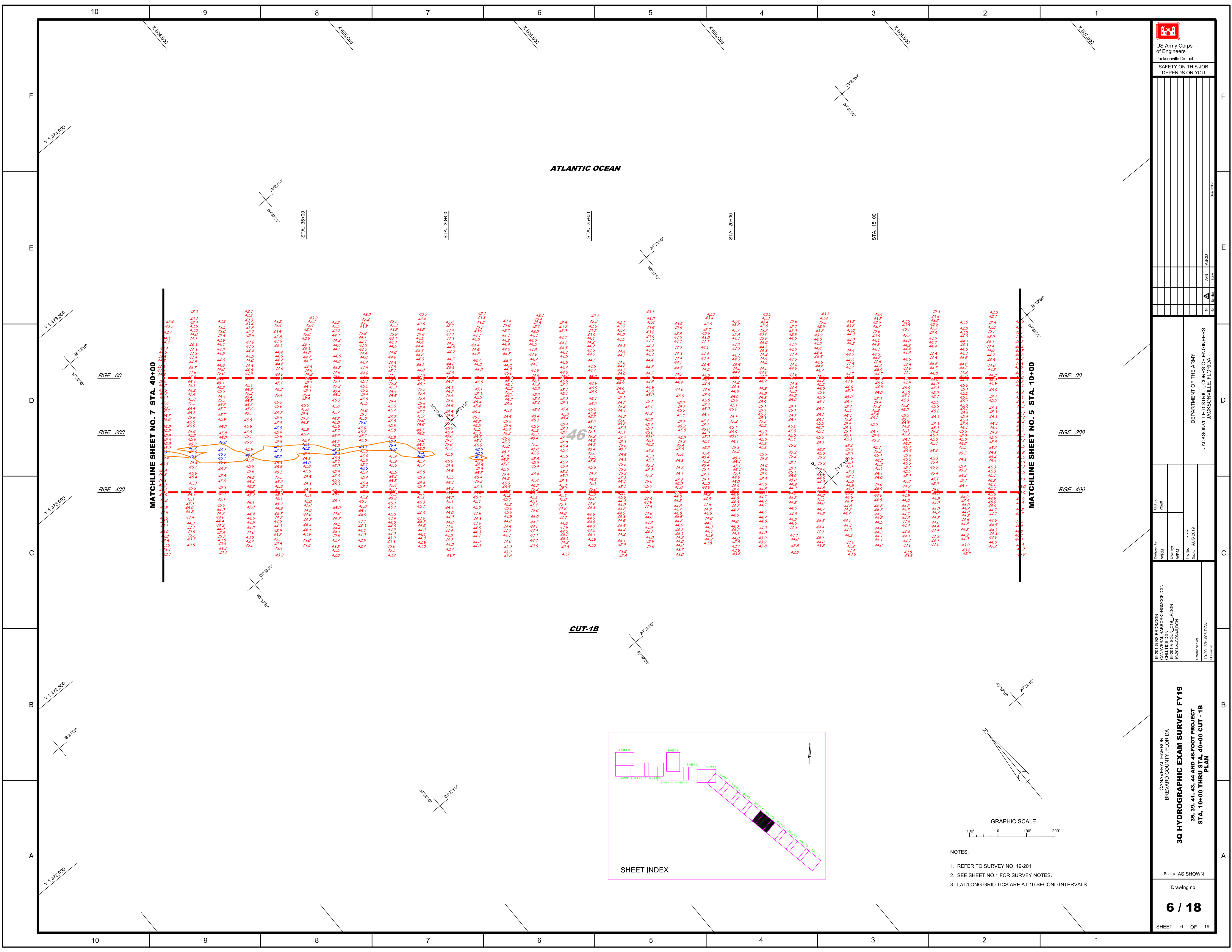
SURVEY NOTES

- REFER TO SURVEY NO. 19-201.
 - TIDAL REDUCTIONS WERE OBTAINED UTILIZING A REAL-TIME KINEMATIC (RTK) GPS AND REFERENCED TO MLLW UTILIZING A HYPACK KINEMATIC TIDE DATUM (KTD) MODEL. KTD FILE NAME IS: "CANAVERALHBR-2015 02 20.KTD".
 - ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
 - PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA 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 LOCATION:
 *REFERENCE BASE LOCATED AT "CANAVERAL LOCK ARP" (OPUS PID: BBCV67)
 *TIDE STAFF LOCATED FROM "JEFFORDS" (COE PID: BBCQ55)
 - DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW, TIDAL EPOCH 1983-2001 AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). A MODIFIED VERSION OF NOAA'S VDATUM MODEL WAS USED TO CALIBRATE TO THE PUBLISHED MLLW HEIGHTS OF THE BENCHMARKS BELOW:
 NOAA TIDAL STATION 872-1604, TRIDENT PIER, CANAVERAL, FL (PID: BBCQ55)
 - VERTICAL MEASUREMENTS WERE MADE USING A R2 SONIC 2024 MULTI-BEAM SYSTEM OPERATING AT 240 KHZ, AN EDGETECH 6205 SIDESCAN AND MULTI-BEAM TRANSDUCER AND A ROSS SMARTSOUNDER SINGLE-BEAM TRANSDUCER OPERATING AT 28200 KHZ. HIGH FREQUENCY SOUNDINGS ARE SHOWN FOR THE WEST ACCESS CHANNEL, WEST TURNING BASIN AND CUT-1A. LOW FREQUENCY SOUNDINGS SHOWN FOR CUTS 1B, 1, 2, 3, MTB AND THE POSEIDON WHARF.
- | VESSEL | DATE OF SURVEY | CUT |
|---------------|----------------------|--|
| SB-48 | 23-25, 30 JUL 2019 | MTB, WAC, WTB, CUT-2, CUT-3, POSEIDON WHARF, N, CARGO PIER |
| SV FLORIDA II | 30 JUL - 01 AUG 2019 | CUTS 1, 1A, 1B |
- 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.
 - SURVEY ACCURACY PERFORMANCE STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USAGE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 30 NOV 2013.

LEGEND	
	MONUMENT
	LIGHTED BEACON
	GREEN DAYBEACON
	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
	CAN BUOY
	NUN BUOY
	TIDE STAFF
	PROJECT DEPTH

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

<p>3Q HYDROGRAPHIC EXAM SURVEY FY19 35, 39, 41, 43, 44 AND 46-FOOT PROJECT INDEX, LOCATION AND VICINITY PLAN</p>	<p>DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA</p>
<p>Scale: AS SHOWN</p>	<p>Drawing no.</p>
<p>1 / 18</p>	<p>SHEET 1 OF 19</p>



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

19-201-CA-S-BRDLDGN

 CANAVERAL HARBOR-CANAL

 19-201-AS-SOUP_C1B_LF.DGN

 19-201-VA-COIN46.DGN

3Q HYDROGRAPHIC EXAM SURVEY FY19

 35, 39, 41, 43, 44 AND 46-FOOT PROJECT

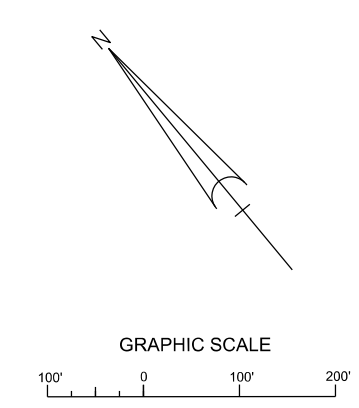
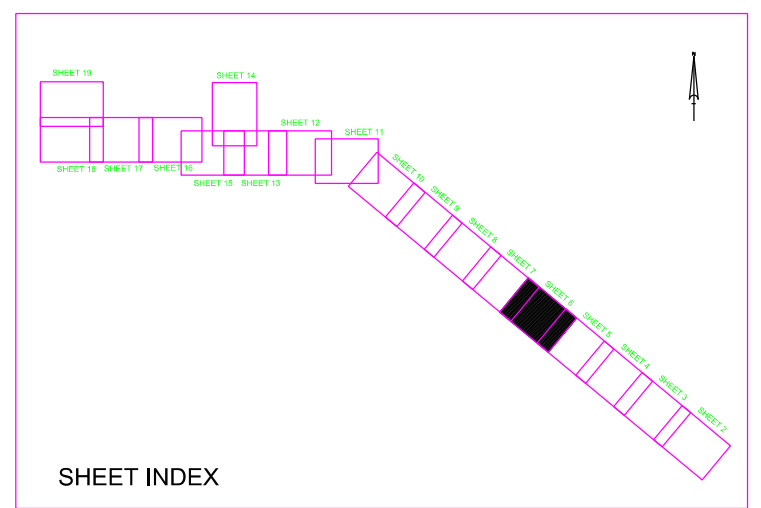
 STA. 10+00 THRU STA. 40+00 CUT - 1B PLAN

Scale: AS SHOWN

 Drawing no.

6 / 18

 SHEET 6 OF 19



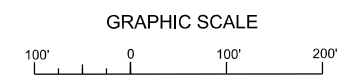
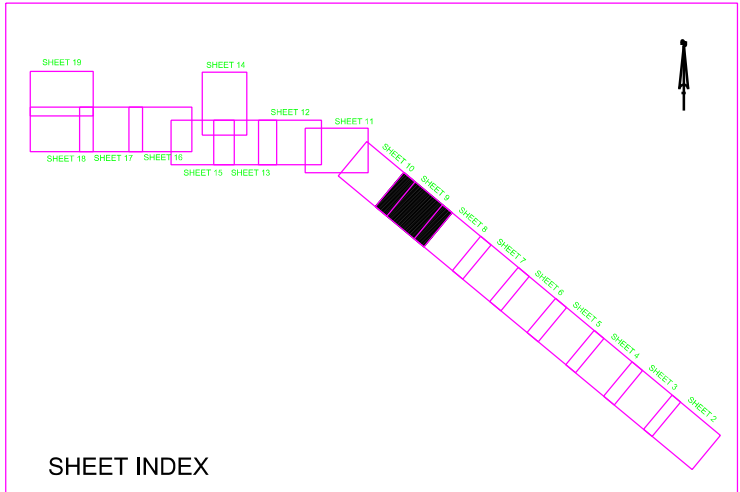
- NOTES:
1. REFER TO SURVEY NO. 19-201.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.
 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

ATLANTIC OCEAN

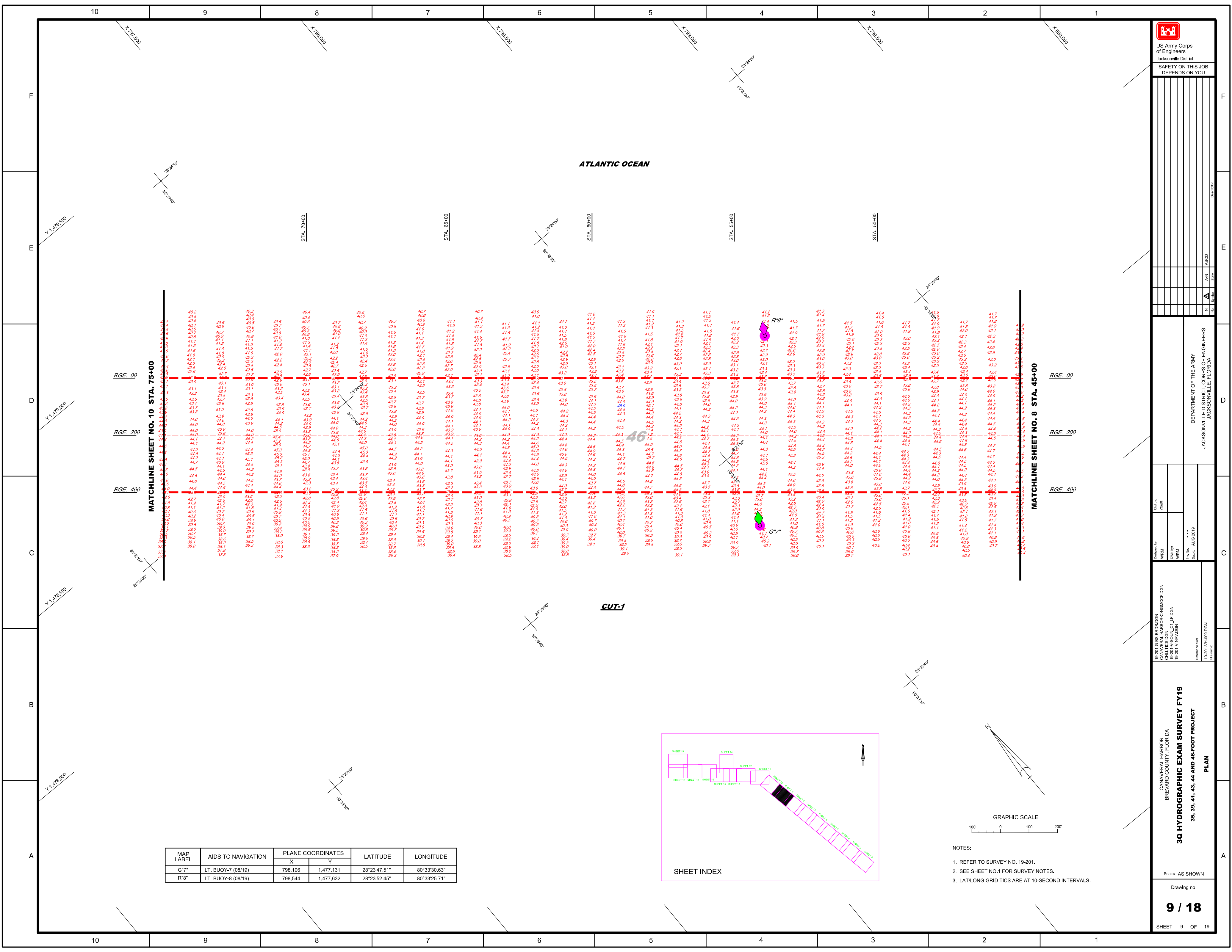
CUT-1

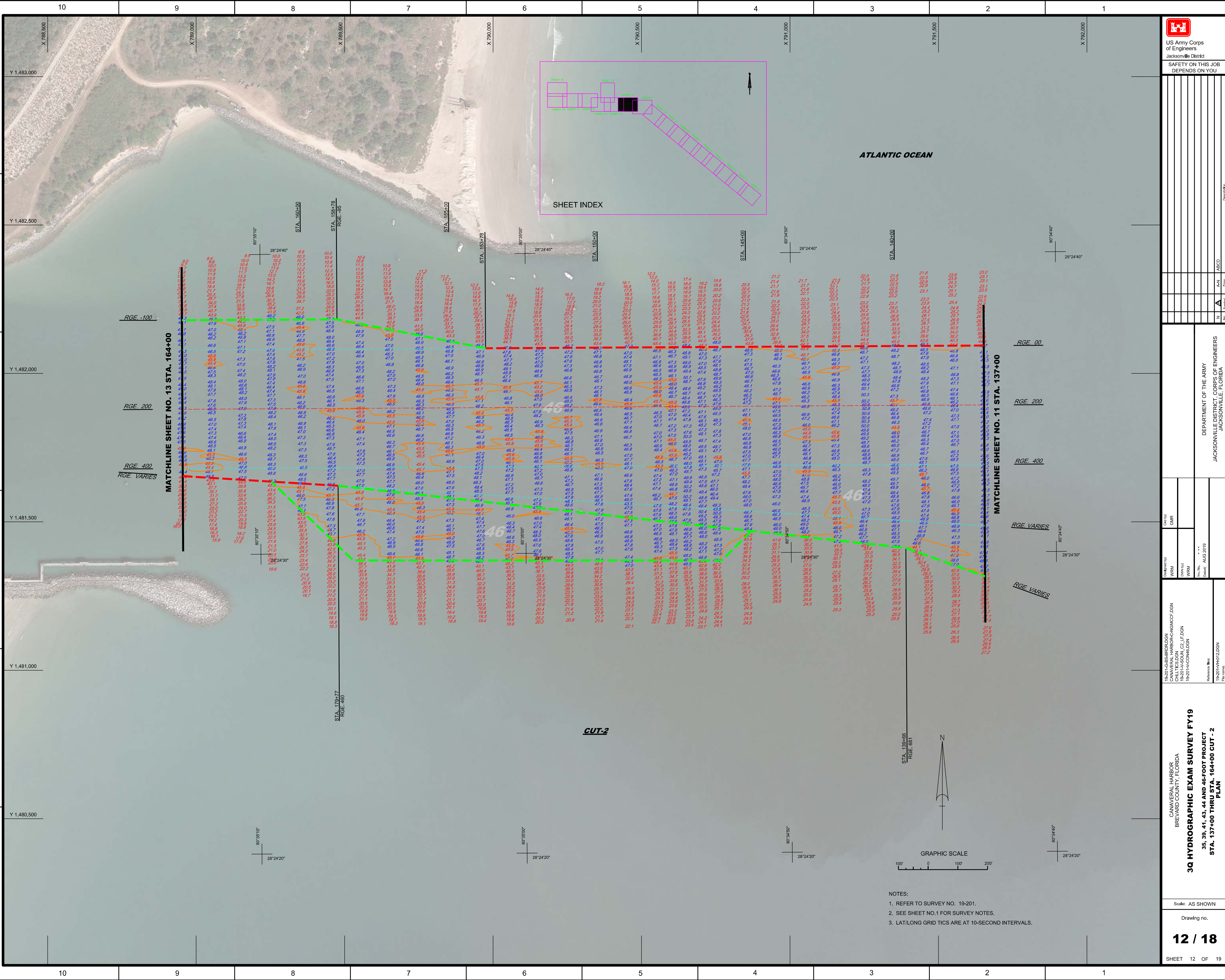
Matchline data table with columns for stationing (STA. 75+00 to STA. 45+00) and range (RGE. 00 to RGE. 400). The table contains a grid of numerical values representing hydrographic survey data points.

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G7"	LT. BUOY-7 (08/19)	798.106	1,477.131	28°23'47.51"	80°33'30.63"
R8"	LT. BUOY-8 (08/19)	798.544	1,477.632	28°23'52.45"	80°33'25.71"



- NOTES:
1. REFER TO SURVEY NO. 19-201.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.
 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.





Zone	N	A	ABCD
Sheet	12	13	14

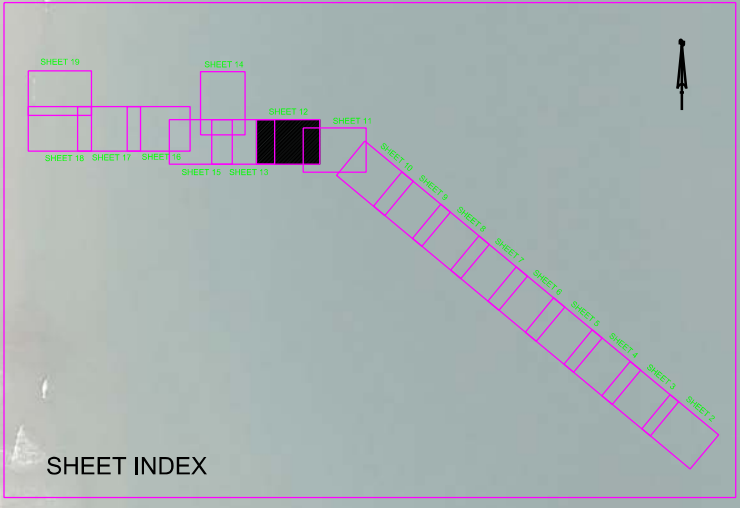
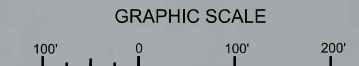
DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT CORPS OF ENGINEERS
 JACKSONVILLE, FLORIDA

Designed by: WRM
 Drawn by: WRM
 Checked: AUG 2019

3Q HYDROGRAPHIC EXAM SURVEY FY19
 35, 39, 41, 43, 44 AND 46-FOOT PROJECT
 STA. 137+00 THRU STA. 164+00 CUT - 2
 PLAN

Scale: AS SHOWN
 Drawing no.
12 / 18
 SHEET 12 OF 19

- NOTES:
1. REFER TO SURVEY NO. 19-201.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.
 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



SHEET INDEX

ATLANTIC OCEAN

CUT-2

MATCHLINE SHEET NO. 13 STA. 164+00

MATCHLINE SHEET NO. 11 STA. 137+00

RGE -100
 RGE 200
 RGE 400
 RGE VARIES

RGE 00
 RGE 200
 RGE 400
 RGE VARIES
 RGE VARIES

80°35'10"
 28°24'20"

80°35'00"
 28°24'20"

80°34'50"
 28°24'20"

80°34'40"
 28°24'20"

STA. 164+00
 RGE 39

STA. 163+75
 RGE 36

STA. 163+25

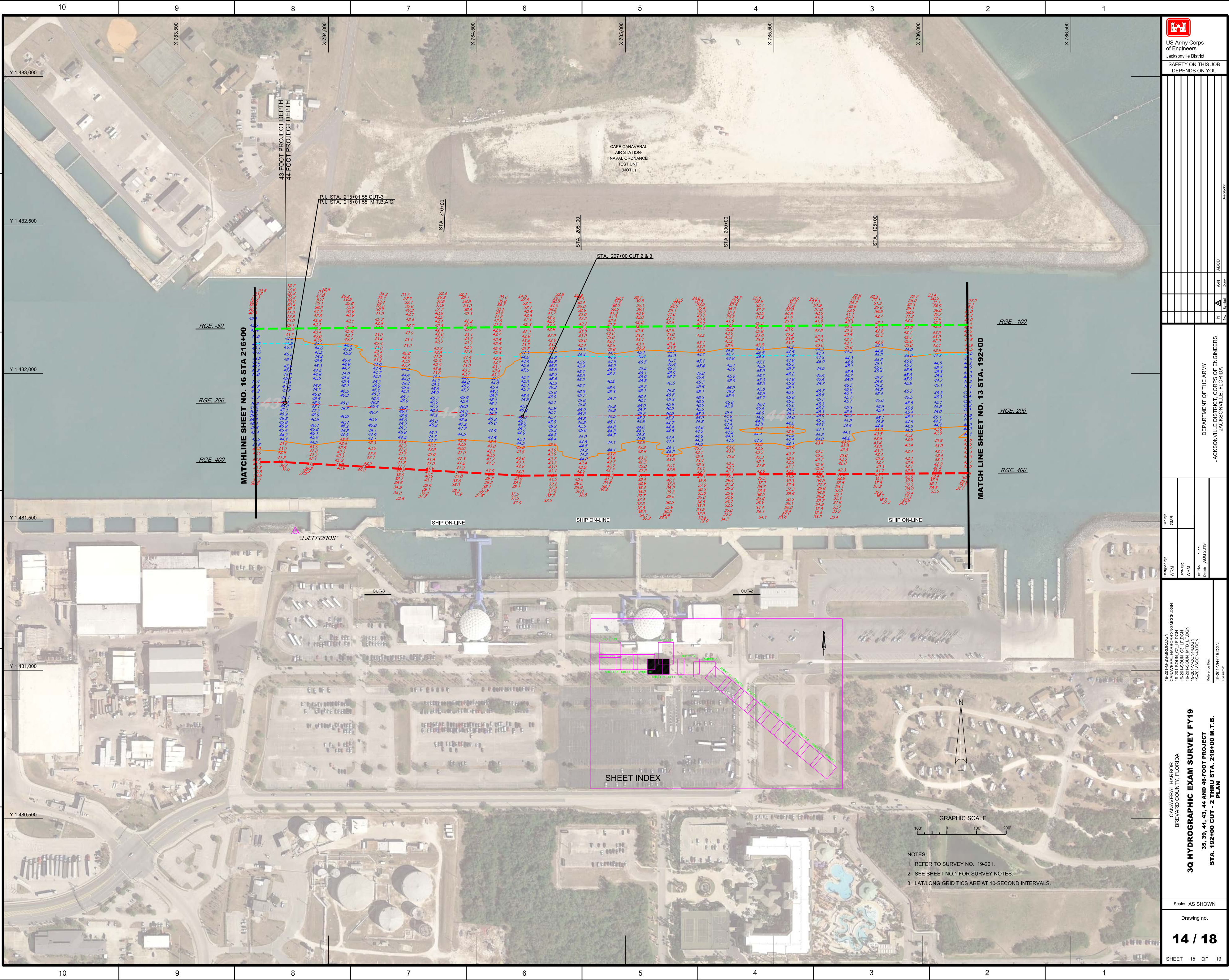
STA. 160+00

STA. 145+00

STA. 140+00

STA. 179+77
 RGE 460

STA. 138+66
 RGE 681



Zone	1	2	3	4	5	6	7	8	9	10
Grid	A	B	C	D	E	F	G	H	I	J

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

Checked by:	GHR
Designed by:	WRM
Drawn by:	WRM
Scale:	AS SHOWN
Date:	AUG 2019

19-201-CA-S-BR/BD/DN
CANAVERAL HARBOR/BAY
BREVARD COUNTY, FLORIDA
3Q HYDROGRAPHIC EXAM SURVEY FY19
STA. 192+00 CUT - 2 THRU STA. 216+00 M.T.B.
PLAN

- NOTES:
1. REFER TO SURVEY NO. 19-201.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.
 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



SHEET INDEX

MATCHLINE SHEET NO. 16 STA 216+00

MATCHLINE SHEET NO. 13 STA. 192+00

P.I. STA. 215+01.55 CUT-3
P.I. STA. 215+01.55 M.T.B.A.C.

STA. 207+00 CUT 2 & 3

STA. 210+00

STA. 205+00

STA. 200+00

STA. 195+00

RGE -50

RGE 200

RGE 400

RGE -100

RGE 200

RGE 400

SHIP ON-LINE

SHIP ON-LINE

SHIP ON-LINE

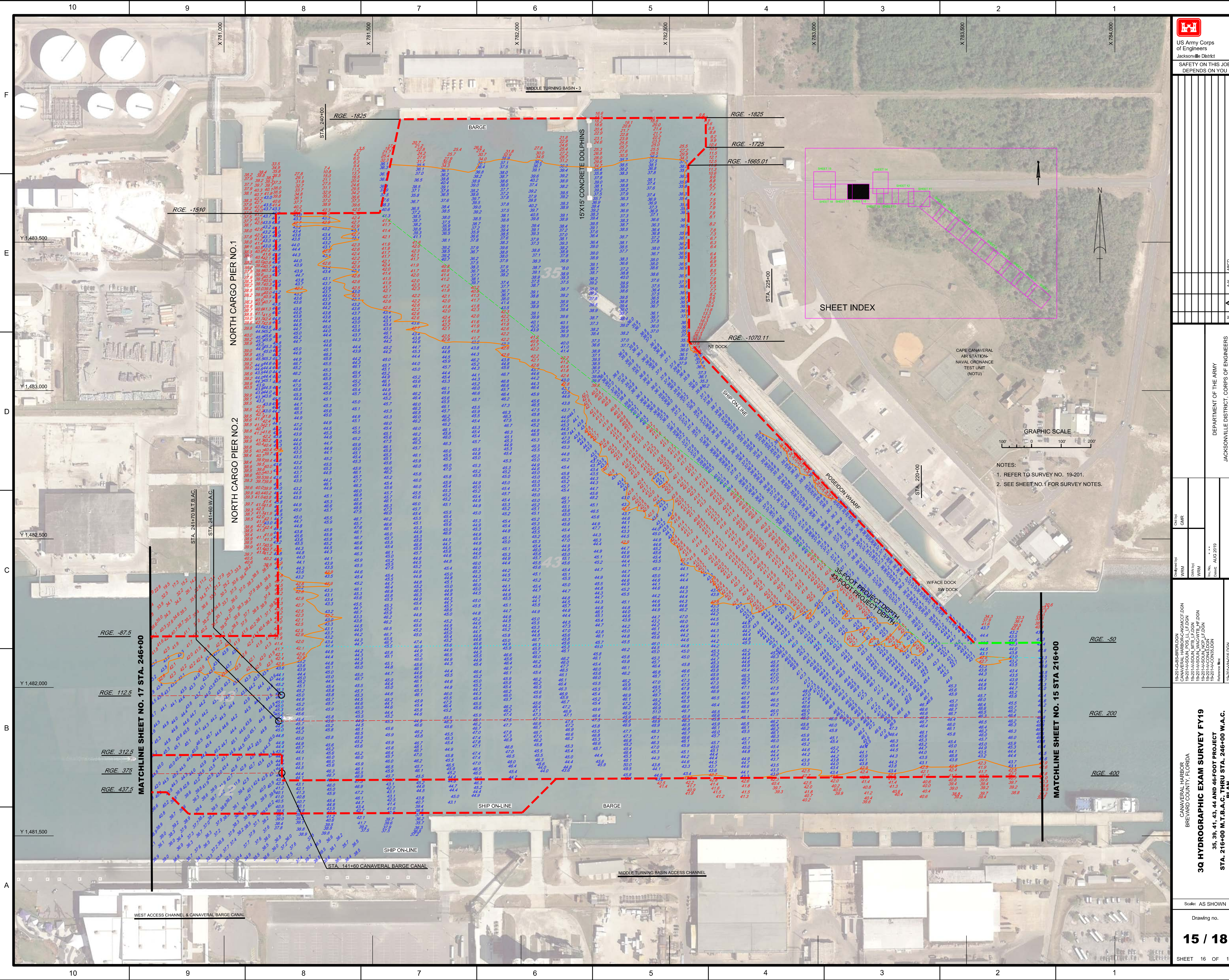
"J.JEFFORDS"

CUT-3

CUT-2

GRAPHIC SCALE

N



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

DESIGNED BY: WRM
 CHECKED BY: GHR
 DRAWN BY: WRM
 DATE: AUG 2019

19-201-H-R01-DGN
 CANAVERAL HARBOR-CHINA-NGRCC-DGN
 19-201-H-R01-LTB-LF-DGN
 19-201-H-R01-WAC-WF-DGN
 19-201-H-R01-CON-LF-DGN
 19-201-H-R01-CONS-DGN

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

- NOTES:
- REFER TO SURVEY NO. 19-201.
 - SEE SHEET NO. 17 FOR SURVEY NOTES.

Scale: AS SHOWN

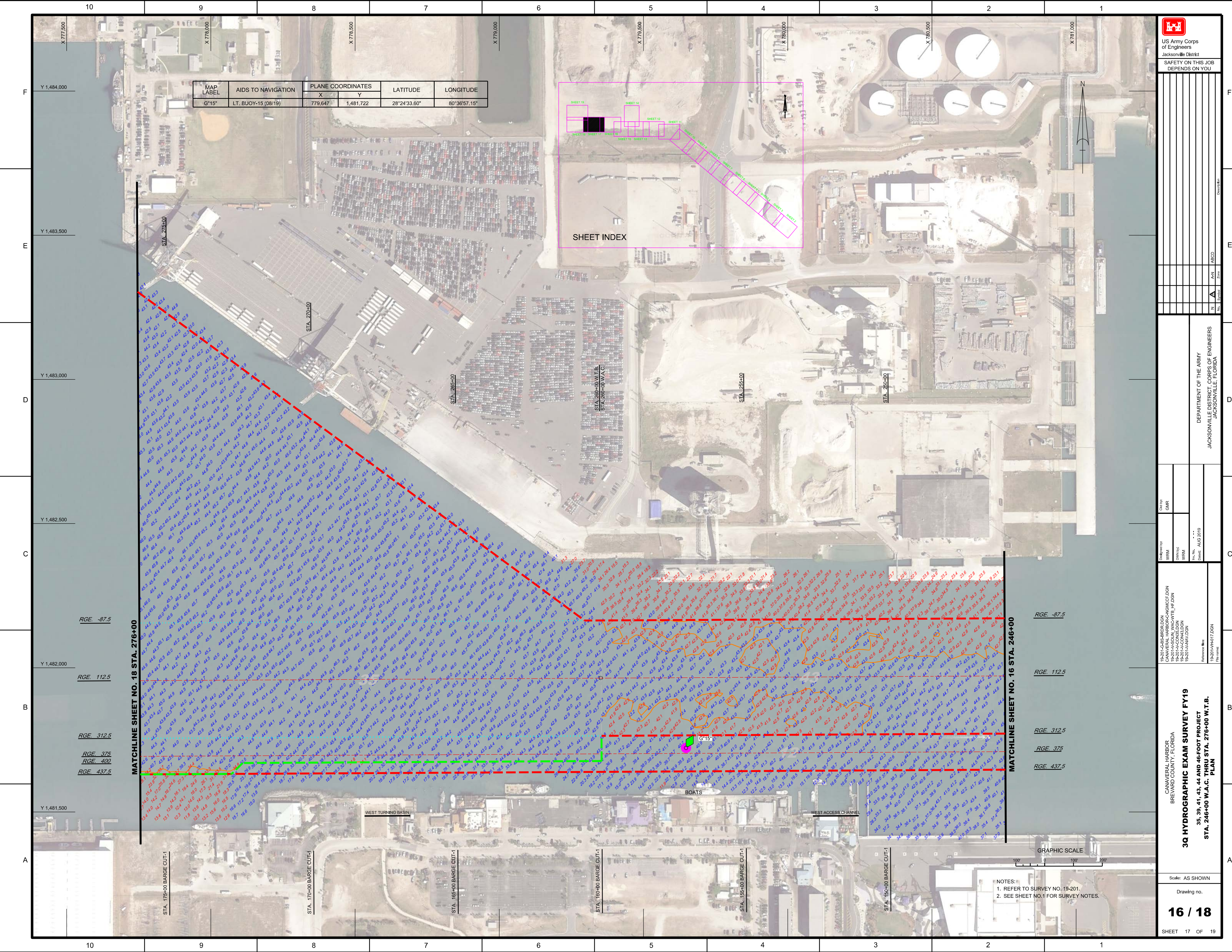
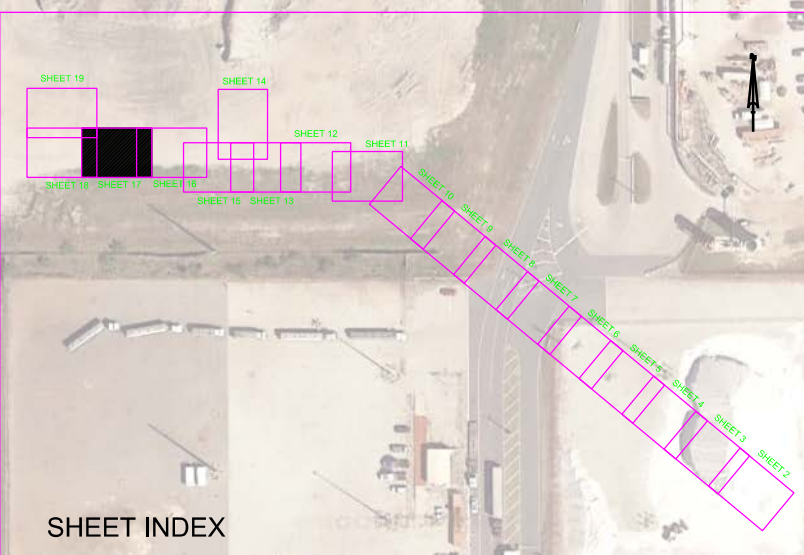
Drawing no.

15 / 18

SHEET 16 OF 19

3Q HYDROGRAPHIC EXAM SURVEY FY19
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 216+00 M.T.B.A.C. THRU STA. 246+00 W.A.C.
PLAN

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G-15	LT. BUOY-15 (08/19)	779,647	1,481,722	28°24'33.60"	80°36'57.15"



MATCHLINE SHEET NO. 18 STA. 276+00

MATCHLINE SHEET NO. 16 STA. 246+00

RGE. -87.5
RGE. 112.5
RGE. 312.5
RGE. 375
RGE. 400
RGE. 437.5

RGE. -87.5
RGE. 112.5
RGE. 312.5
RGE. 375
RGE. 437.5

STA. 175+00 BARGE CUT-1

STA. 170+00 BARGE CUT-1

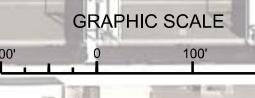
STA. 165+00 BARGE CUT-1

STA. 160+00 BARGE CUT-1

STA. 155+00 BARGE CUT-1

STA. 150+00 BARGE CUT-1

- NOTES:
1. REFER TO SURVEY NO. 19-201.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.



3Q HYDROGRAPHIC EXAM SURVEY FY19
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 246+00 W.A.C. THRU STA. 276+00 W.T.B.
PLAN

Scale: AS SHOWN
Drawing no.

16 / 18

SHEET 17 OF 19

CANAVEL HARBOR
BREVARD COUNTY, FLORIDA

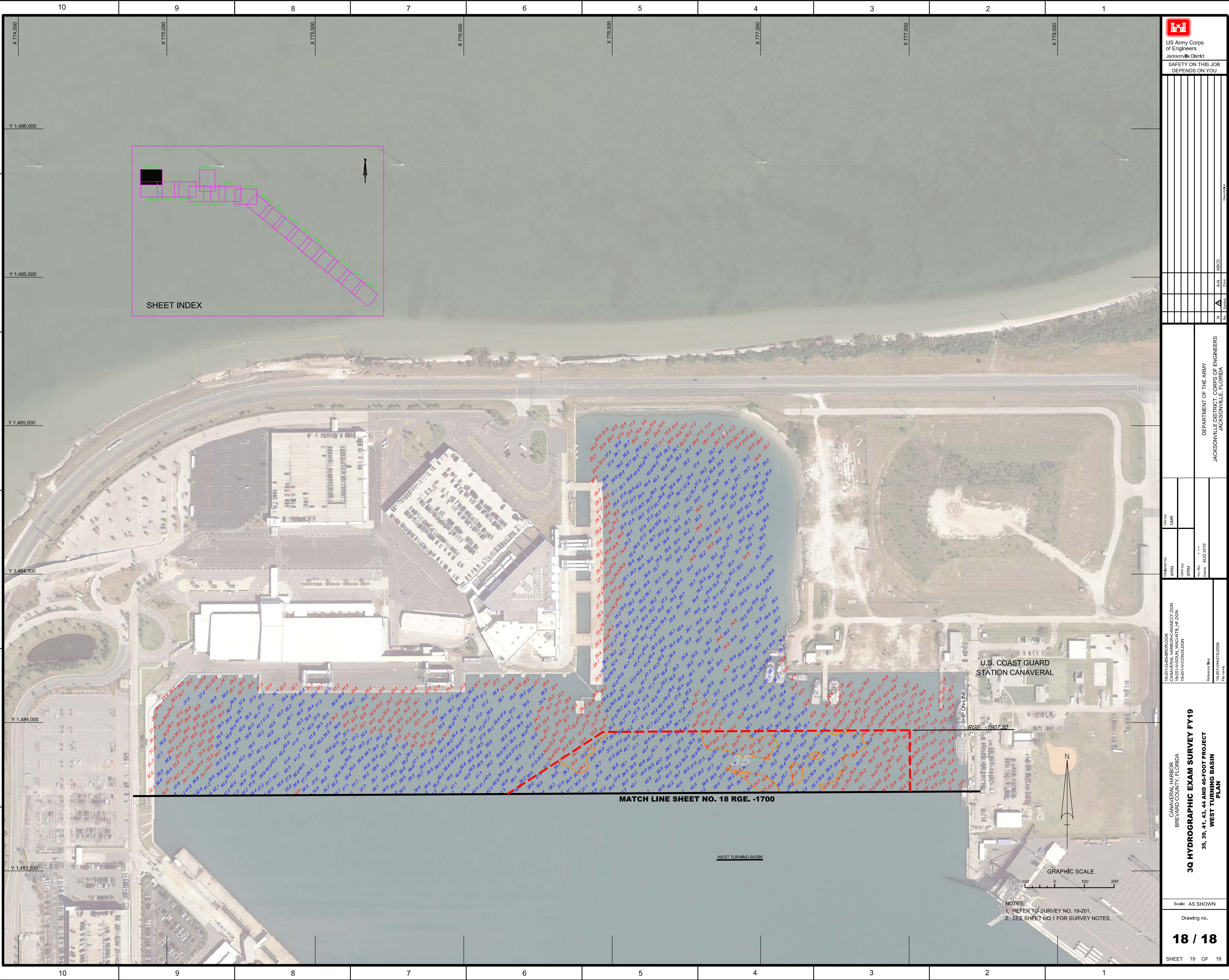
19-201-GS-BIRD/DGN
CANAVEL HARBOR-CANAL/CG-DOJ
19-201-HYDRO/DOJ
19-201-ACON/DOJ
19-201-HAN/DOJ

Designed by:
WRM
WRM
WRM
WRM
WRM
WRM
WRM
WRM

Checked by:
GHR

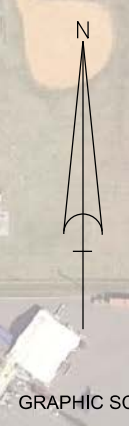
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Zone: N
Scale: AS SHOWN



SHEET INDEX

U.S. COAST GUARD
STATION CANAVERAL



NOTES:
1. REFER TO SURVEY NO. 19-201.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

MATCH LINE SHEET NO. 18 RGE. -1700

WEST TURNING BASIN

SHIP ON-LINE

RGE. -1907.50

<p>US Army Corps of Engineers Jacksonville District</p>	
<p>SAFETY ON THIS JOB DEPENDS ON YOU</p>	
<p>Drawn by: _____</p>	<p>Checked by: _____</p>
<p>Designed by: _____</p>	<p>Reviewed by: _____</p>
<p>19-201-CAS-BRDLDGN CANAVERAL HARBOR-CANAVERRIDGE 19-201-A-COINLSDGN</p>	<p>19-201-HAR18DGN FILE NAME</p>
<p>DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA</p>	
<p>Scale: AS SHOWN</p>	
<p>Drawing no.</p>	
<p>18 / 18</p>	
<p>SHEET 19 OF 19</p>	