



LOCATION MAP

SAN JUAN HARBOR SAN JUAN, PUERTO RICO HYDROGRAPHIC EXAM SURVEY FY13 30 THRU 56-FOOT PROJECT

SURVEY NOTES

1. REFER TO SURVEY NO. 13-043. SOUNDINGS SHOWN FOR CUT-1 AND CUT-2 (STA. 0+00 - 6+00) ARE FROM SURVEY 12-059.
2. SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) TIDAL DATUM RELATIVE TO THE 1983-2001 TIDAL EPOCH.
3. TIDAL REDUCTIONS WERE OBTAINED UTILIZING A REAL-TIME KINEMATIC (RTK) GPS AND REFERENCED TO MLLW UTILIZING A FIXED ORTHOMETRIC VALUE OF 0.77'.
4. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
5. PLANE COORDINATES ARE BASED ON THE LAMBERT CONFORMAL CONIC PROJECTION FOR PR & VI, ZONE 1, NORTH AMERICAN DATUM OF 1983 (NAD83).
6. ALL AZIMUTHS ARE GRID; RECKONED CLOCKWISE FROM SOUTH.
7. ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
8. THIS SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC GPS POSITIONING WITH THE FOLLOWING REFERENCE BASE LOCATION:
REFERENCE BASE LOCATED AT '975 5371 A TIDAL (PID: TV1613)
TIDE STAFF LOCATED FROM '975 5371 A TIDAL*
MLLW ELEVATION: 5.14'
A SIX-FOOT TIDE STAFF WAS SET ON THE SOUTHWEST CORNER OF THE SAN JUAN USCG BASE AT THE NOAA TIDE GAGE.
9. DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW, TIDAL EPOCH 1983-2001 AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). SURVEY WAS CALIBRATED TO THE PUBLISHED MLLW HEIGHTS OF THE BENCHMARKS ASSOCIATED WITH THE TIDE GAGE SITES SPECIFIED BELOW:
NOAA TIDAL STATION 975-5371 USED FOR ENTIRE PROJECT.
VERTICAL MEASUREMENTS WERE MADE USING A ROSS 835 SMARTSOUNDER OPERATING AT 28 AND 200 KHZ. ALL SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.
10. AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.
11. 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.
12. SURVEY ACCURACY PERFORMANCE STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 1 JAN 02.

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	LIGHTED BEACON
	GREEN DAY BEACON
	RED DAY BEACON
	RED LIGHTED BUOY
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	NUN BUOY
	TIDE STAFF
	PROJECT DEPTH

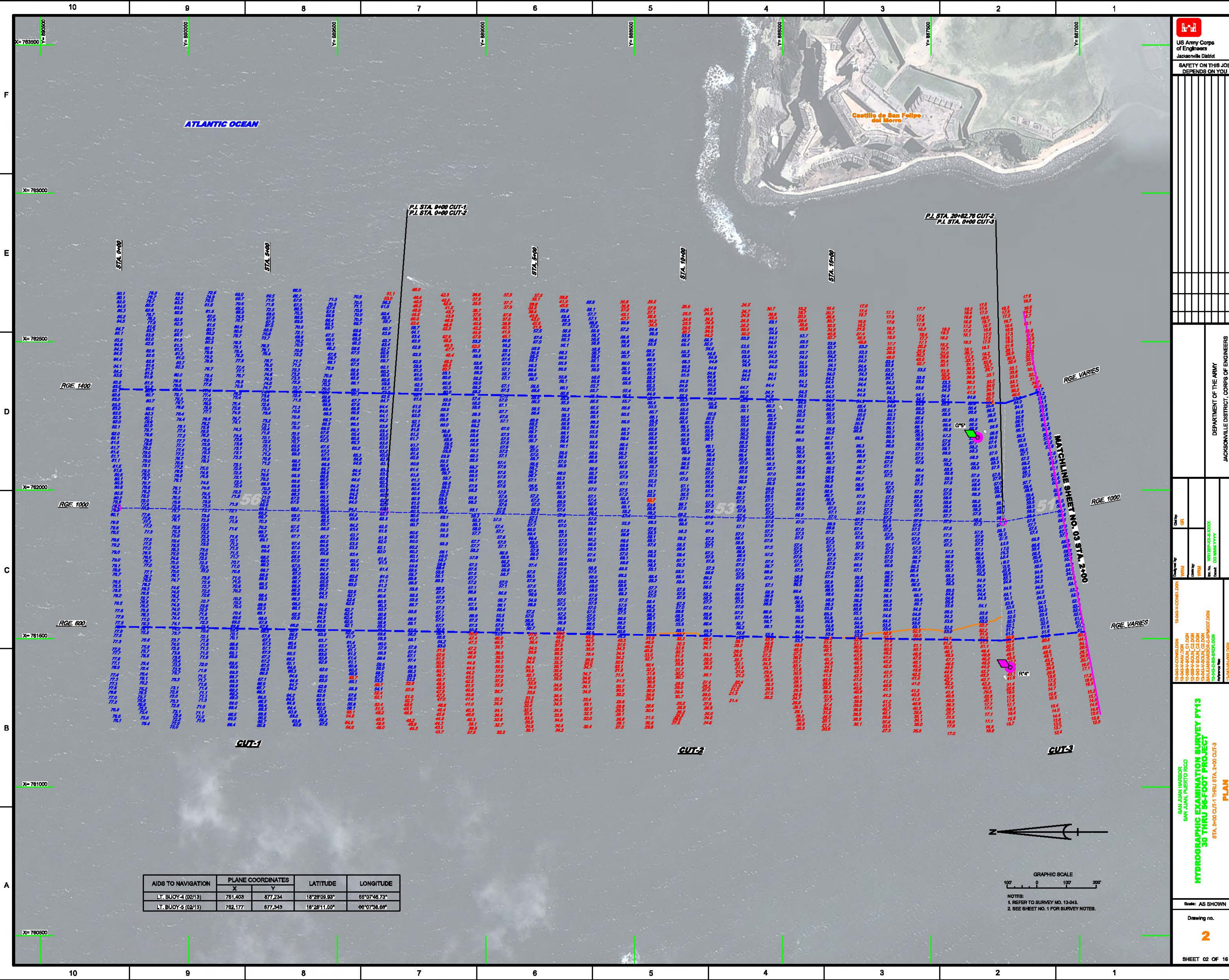
US Army Corps of Engineers
Jacksonville District
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Drawn by	GR
Checked by	GR
Reviewed by	GR
Approved by	GR
Project No.	13-043
Project Name	SAN JUAN HARBOR
Project Location	SAN JUAN, PUERTO RICO
Project Description	HYDROGRAPHIC EXAMINATION SURVEY FY13 30 THRU 56-FOOT PROJECT
Project Status	INDEX, LOCATION AND VICINITY
Project Date	13-043-H-001.DGN
Project File Name	13-043-H-001.DGN

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO
HYDROGRAPHIC EXAMINATION SURVEY FY13
30 THRU 56-FOOT PROJECT
INDEX, LOCATION AND VICINITY
MAP

Scale: AS SHOWN
Drawing no.
1

SHEET 01 OF 16



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-4 (0213)	781.403	877.234	18°28'08.93"	66°07'48.73"
LT. BUOY-5 (0213)	782.177	877.343	18°28'11.00"	66°07'38.68"

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JACKSONVILLE, FLORIDA

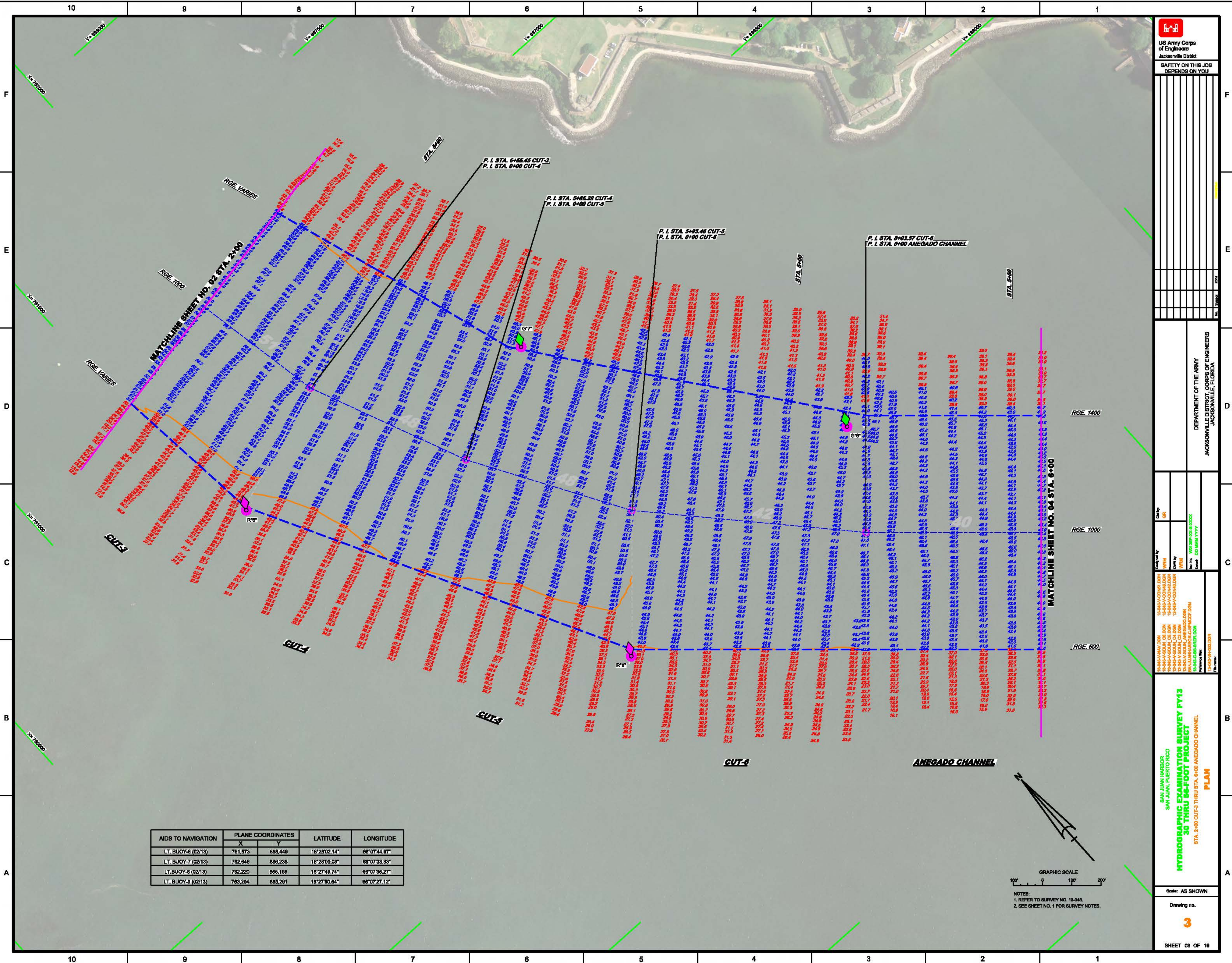
HYDROGRAPHIC EXAMINATION SURVEY FY13
30 THRU 56-FOOT PROJECT
STA 0+00 CUT-1 THRU STA 2+00 CUT-3

Scale: AS SHOWN

Drawing no.

2

SHEET 02 OF 16





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Station	Depth (fms)	Station	Depth (fms)
1	10.0	11	10.0
2	10.0	12	10.0
3	10.0	13	10.0
4	10.0	14	10.0
5	10.0	15	10.0
6	10.0	16	10.0
7	10.0	17	10.0
8	10.0	18	10.0
9	10.0	19	10.0
10	10.0	20	10.0

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JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

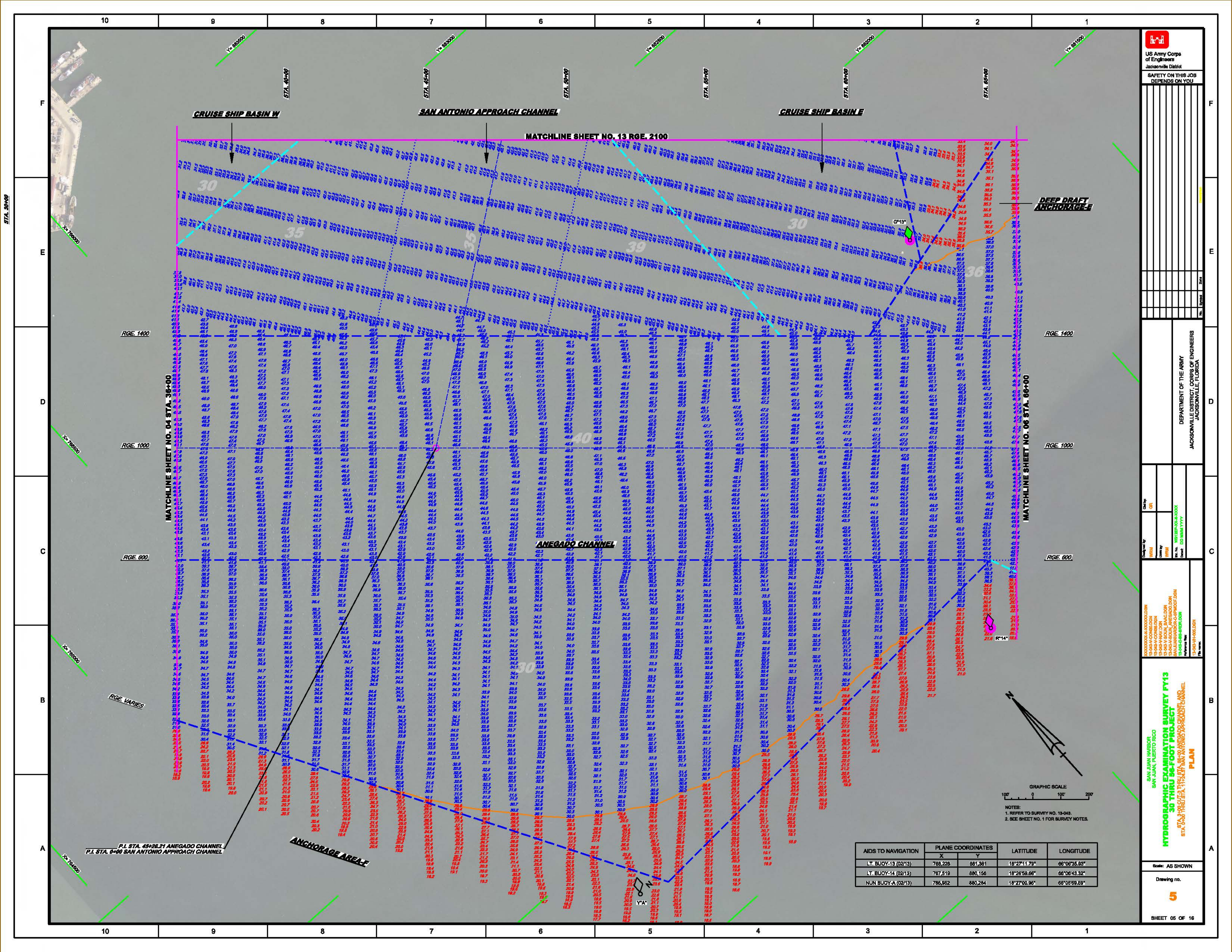
San Juan Harbor
San Juan, Puerto Rico
Hydrographic Examination Survey FY13
30 THRU 50-FOOT PROJECT
STA. 6+00 CUT-3 THRU STA. 8+00 ANEGADO CHANNEL

Scale: AS SHOWN

Drawing no. **4**

SHEET 04 OF 16

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-10 (02/13)	784,110	883,481	18°07'32.48"	66°07'48.67"
LT. BUOY-11 (02/13)	765,710	863,216	18°07'30.03"	66°07'02.05"



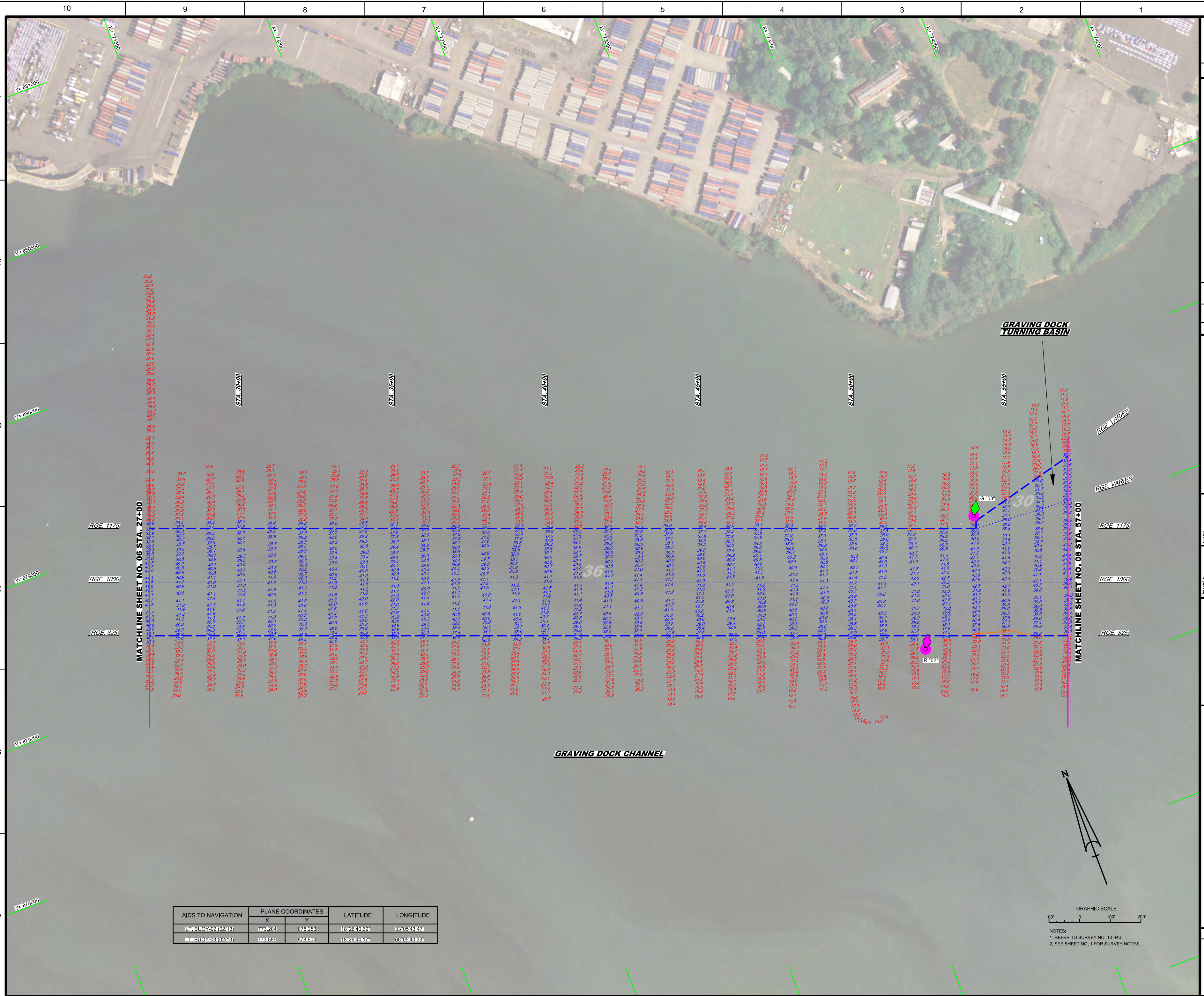
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JACKSONVILLE, FLORIDA

San Juan Harbor
San Juan, Puerto Rico
Hydrographic Examination Survey FY13
30 THRU 60-FOOT PROJECT
STA. 60+00 THRU STA. 69+00 APPROACH CHANNEL
PLAN

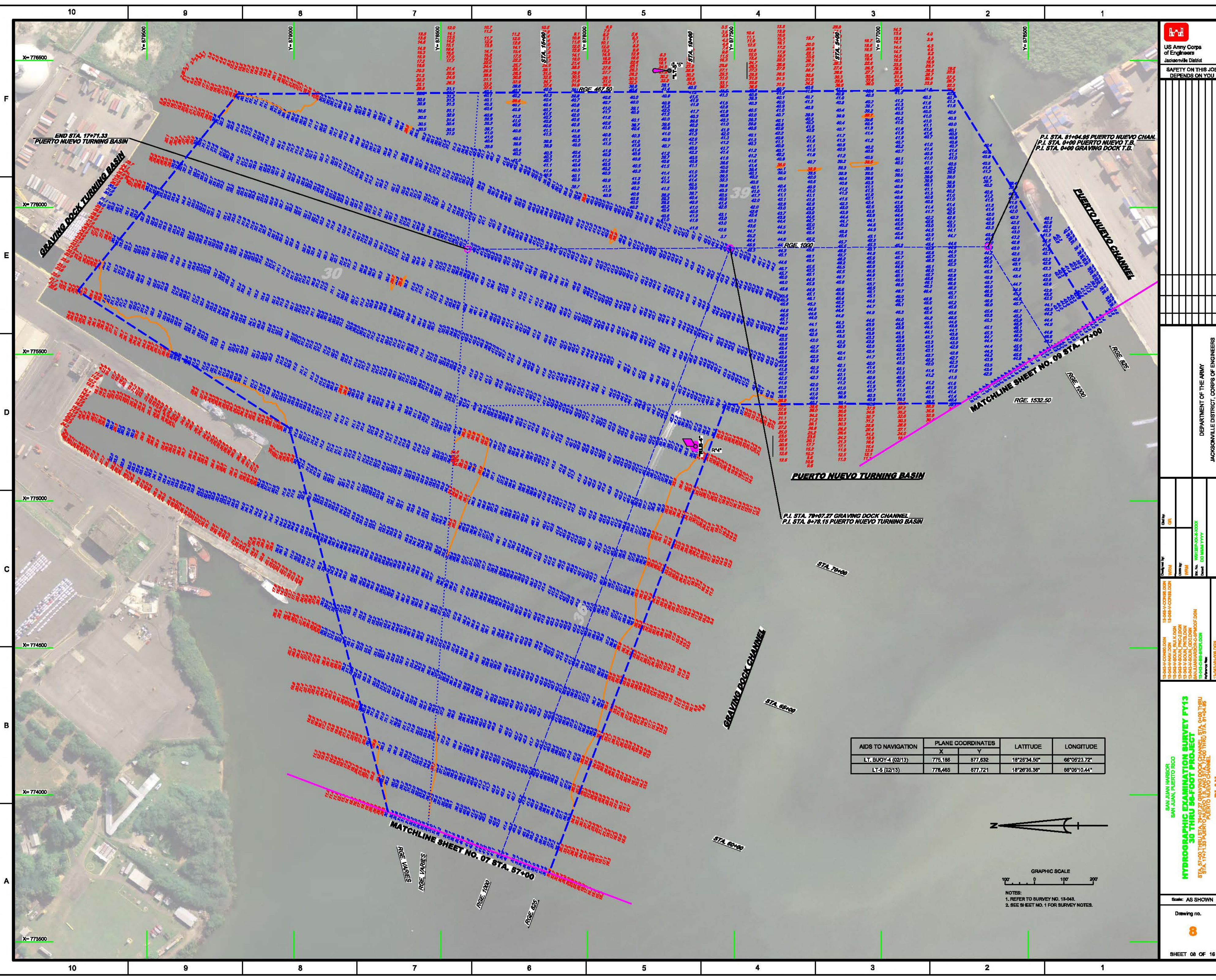
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SHEET 05 OF 16

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-13 (02/13)	788,228	881,381	18°27'11.78"	66°08'35.59"
LT. BUOY-14 (02/13)	787,519	880,156	18°26'59.66"	66°08'43.32"
NUN BUOY-A (02/13)	786,952	880,284	18°27'00.96"	66°08'59.59"



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-02 (02/13)	773,284	878,253	18°26'40.69"	33°05'43.47"
LT. BUOY-03 (02/13)	773,585	878,604	18°26'44.17"	66°05'40.33"

[illegible]



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-4 (02/13)	775,188	877,632	18°26'34.50"	66°05'23.72"
LT-5 (02/13)	778,465	877,721	18°26'35.36"	66°05'10.44"

NOTES:
1. REFER TO SURVEY NO. 13-043.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

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JACKSONVILLE, FLORIDA

Call by: GRL
Drawing by: WRM
Checked by: WRM
Date: 02/13/13
Scale: AS SHOWN

13-043-1-CORR01.DGN
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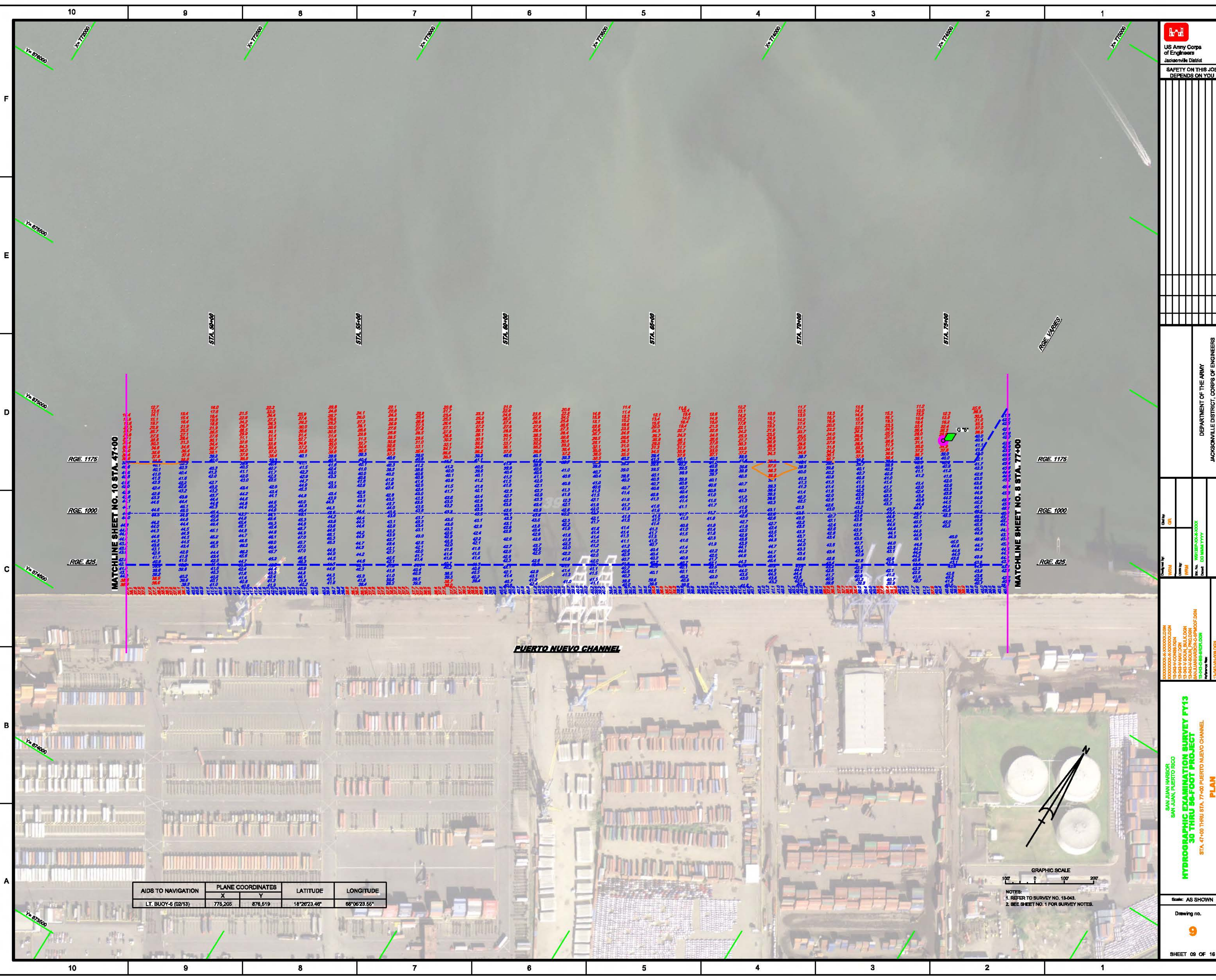
**HYDROGRAPHIC EXAMINATION SURVEY FY13
30 THRU 56-FOOT PROJECT**

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STA. 94+00 TO STA. 97+00 TURNING BASIN
STA. 97+00 TO STA. 100+00 GRAVING DOCK CHANNEL

Scale: AS SHOWN

Drawing no. **8**

SHEET 08 OF 16



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-5 (02/13)	776,205	876,519	18°26'23.46"	66°06'23.56"

GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 13-043.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

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JACKSONVILLE, FLORIDA

San Juan Harbor
San Juan, Puerto Rico

**HYDROGRAPHIC EXAMINATION SURVEY FY13
30 THRU 56-FOOT PROJECT**

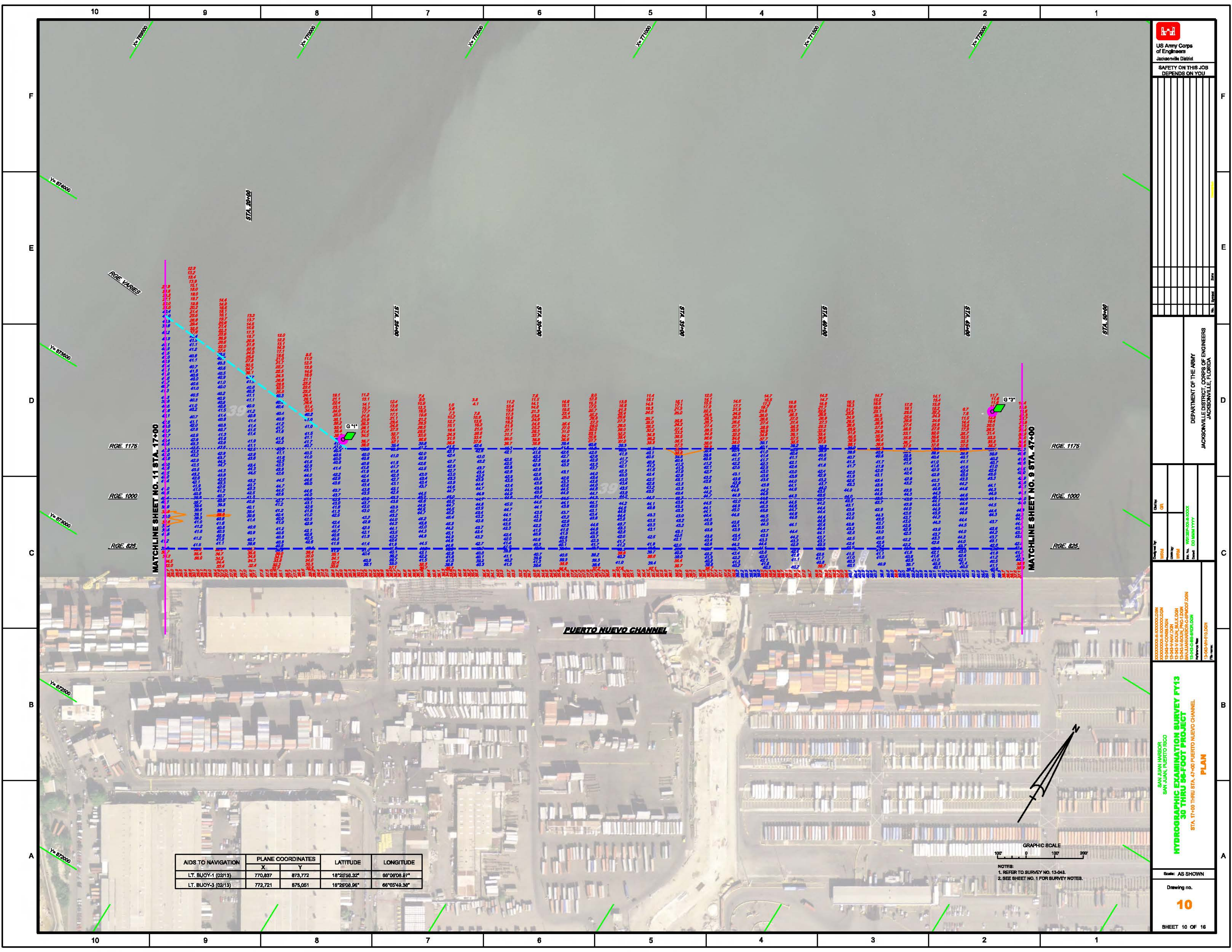
STA. 47+00 THRU STA. 77+00 PUERTO NUEVO CHANNEL

PLAN

Scale: AS SHOWN

Drawing no.
9

SHEET 08 OF 16



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-1 (02/13)	770,837	875,772	18°25'58.32"	66°09'08.87"
LT. BUOY-3 (02/13)	772,721	875,051	18°25'08.96"	66°05'49.38"

GRAPHIC SCALE
0 100 200
NOTES:
1. REFER TO SURVEY NO. 13-043.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

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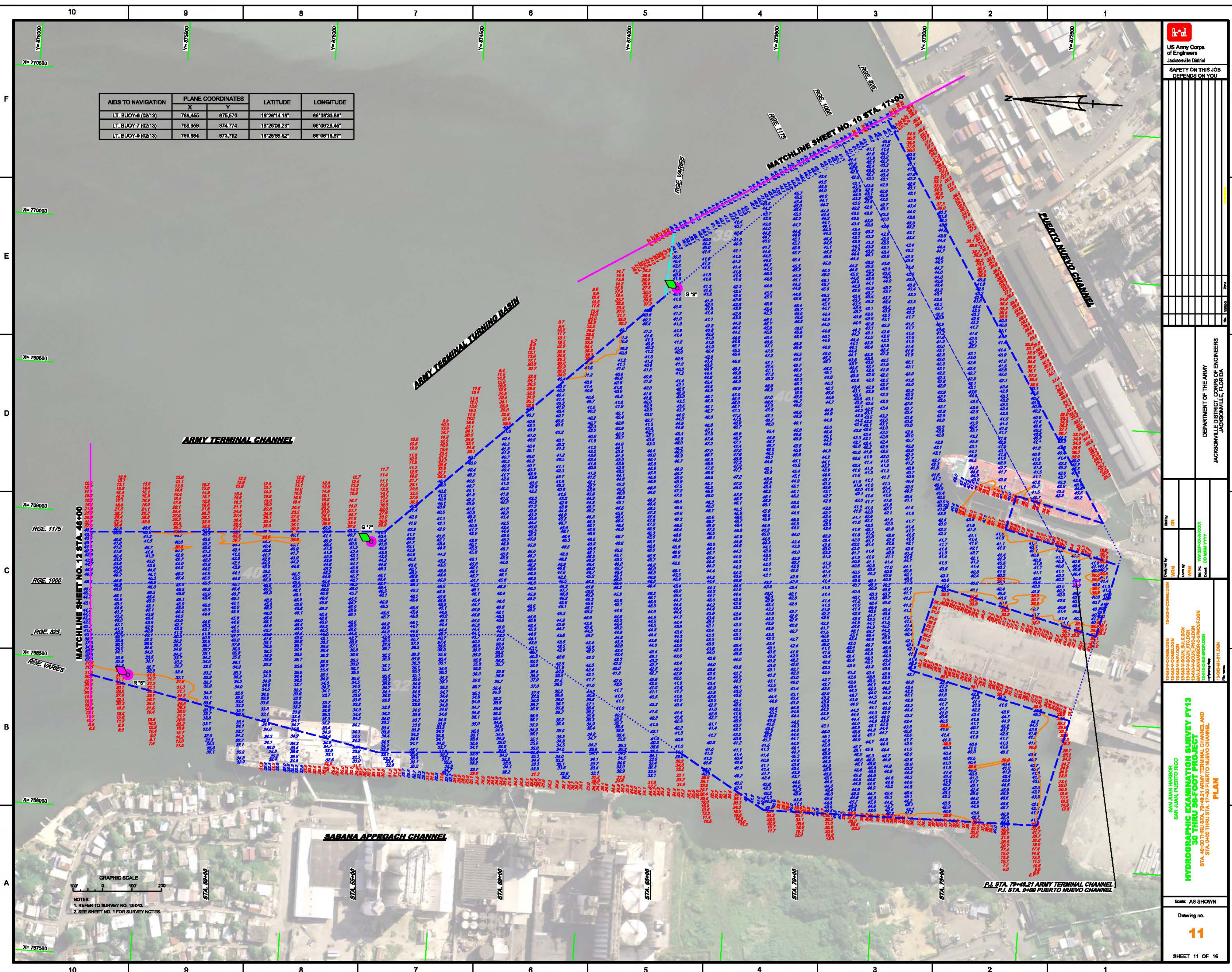
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Drawn by	WPM
Scale	AS SHOWN
Project No.	13-043-H-1 (LDN)
Sheet No.	10
Project Name	SAN JUAN HARBOR SAN JUAN, PUERTO RICO HYDROGRAPHIC EXAMINATION SURVEY FY13 30 THRU 56-FOOT PROJECT STA. 17+00 THRU STA. 47+00 PUERTO NUEVO CHANNEL
Department of the Army	JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA

PLAN

SHEET 10 OF 16

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-6 (02/13)	768,455	875,570	18°26'14.18"	08°08'33.68"
LT. BUOY-7 (02/13)	768,969	874,774	18°25'06.28"	06°06'28.45"
LT. BUOY-9 (02/13)	769,884	873,782	18°25'56.52"	06°06'18.87"



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Jacksonville District

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AVILLE DISTRICT, CORPS OF ENGINEERS

Account type:	MM	Card type:	QFC
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13-043-V-NAV.DGN
13-043-V-SOUN_BULK.DGN
13-043-V-SOUN_ATC.DGN
13-043-V-SOUN_PNO-2.DGN
SANJUAN/HARBOR-C-SPMOOF.DGN
13-043-C-89-8-RCDF.DGN

Reference: "see"

13-043-V-04-014.DGN

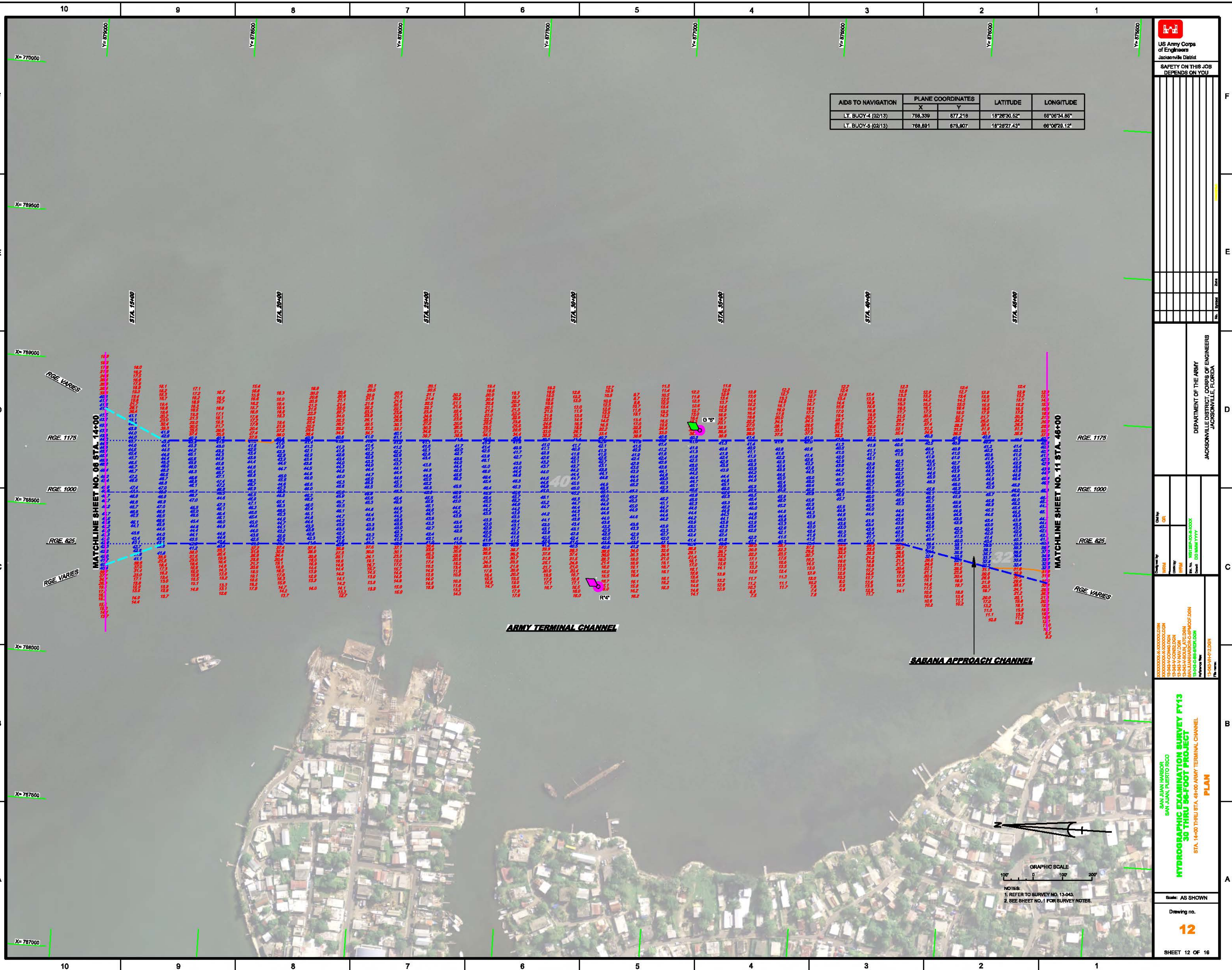
PLAN

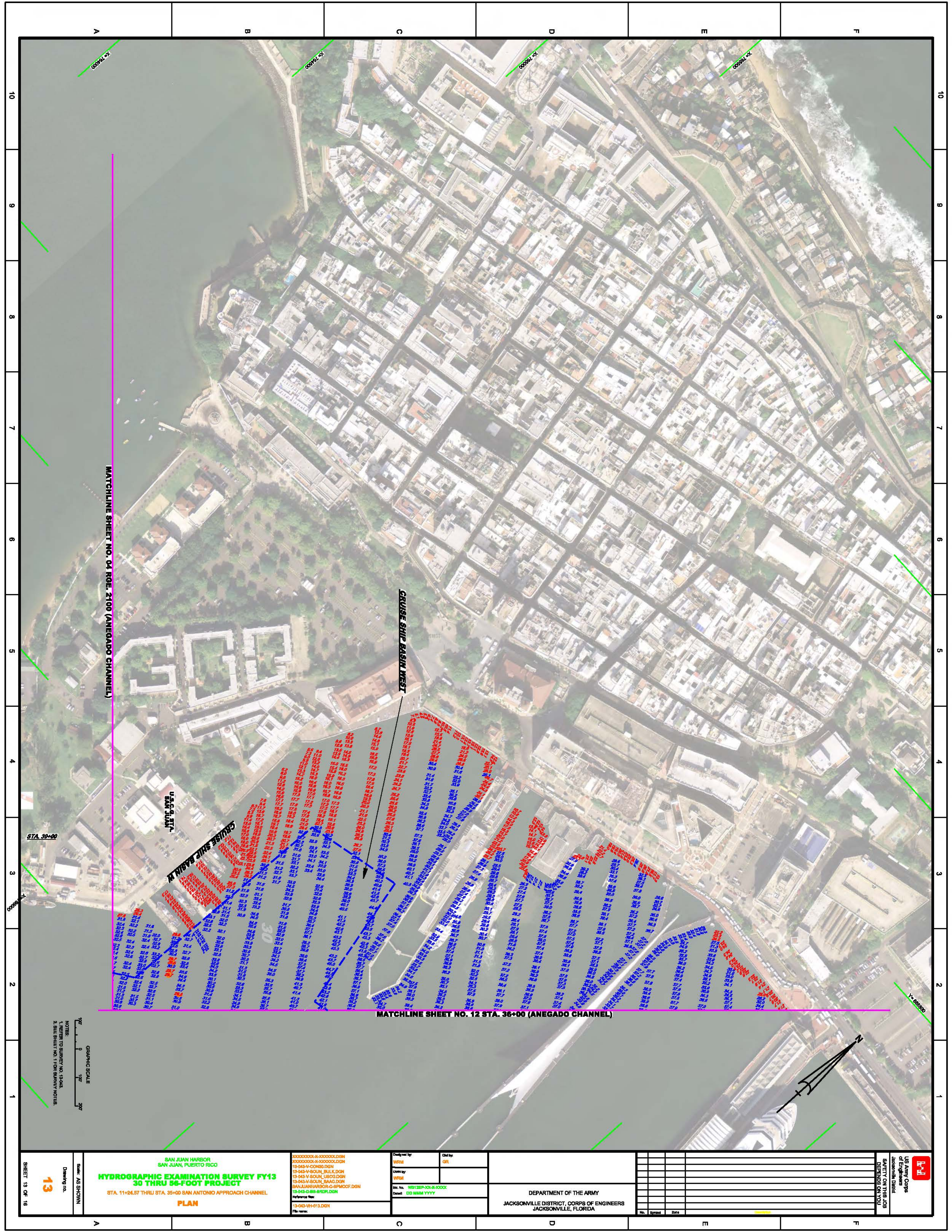
HYDROGRAPH
30
STA. 46+00 TH
STA. 0+00

Scale: AS SHOWN

Drawing no.

11





HYDROGRAPHIC EXAMINATION SURVEY FY13 30 THRU 36-FOOT PROJECT STA. 11+24.57 THRU STA. 35+00 SAN ANTONIO APPROACH CHANNEL PLAN		DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA		US Army Corps of Engineers Jacksonville District SAFETY ON THIS JOB DEPENDS ON YOU			
SAN JUAN HARBOR SAN JUAN, PUERTO RICO		3000000000-00000000.DGN 3000000000-00000000.DGN 13-043-V-CON0.DGN 13-043-V-SOUN_BULK.DGN 13-043-V-SOUN_US03.DGN 13-043-V-SOUN_S040.DGN SANJUANHARBOR-C-SPW00F.DGN 13-043-G-BB-BR01.DGN Reference file: 13-043-VH-013.DGN File name:		Designed by: WRM Checked by: GR Drawn by: WRM Rev. No.: 00120P-000-0000 Date: 00 MM YYYY		No. Symbol Zone	
NOTES: 1. REFER TO SURVEY NO. 13043. 2. SEE SHEET NO. 1 FOR SURVEY NOTES.		Drawing no. 13		SHEET 13 OF 16			

