

SAN JUAN HARBOR SAN JUAN, PUERTO RICO HYDROGRAPHIC EXAM SURVEY FY22 30 THRU 56-FOOT PROJECT

SURVEY NOTES

- REFER TO SURVEY NO. 22-009.
- 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.
- 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 "SANJUAN-2011APRIL06.KTD".
- ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
- PLANE COORDINATES ARE BASED ON THE LAMBERT CONFORMAL CONIC PROJECTION FOR PUERTO RICO & THE VIRGIN ISLANDS, ZONE 5200, 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 "USCG SAN JUAN ARP" (PID: BBN06)
TIDE STAFF LOCATED FROM "975 5371 A TIDAL" (PID: TV1513)
MLLW ELEVATION: 5.14'
A MEASURE DOWN POINT WAS SET FROM SURVEY MONUMENT "975 5371 A TIDAL", LOCATED ON THE EDGE OF USCG BULKHEAD ADJACENT TO THE BASE STATION POINT.
- DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW, TIDAL EPOCH 1983-2001 AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). THE NOAA TIDAL STATION LISTED BELOW WAS USED TO CALIBRATE TO THE PUBLISHED MLLW HEIGHTS OF THE BENCHMARKS ASSOCIATED WITH THE TIDE GAGE SITE SPECIFIED BELOW:
NOAA TIDAL STATION 975-5371 A TIDAL USED FOR ALL CUTS. (PID: TV1513)
VERTICAL MEASUREMENTS WERE MADE USING A ROSS 835 SMARTSOUNDER DUAL-FREQUENCY 28/200 KHZ SINGLE-BEAM TRANSDUCER. ALL SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.

VESSEL	DATE OF SURVEY	CUT
SB-34	05 NOV 2021	ANEGADO CHANNEL
SB-34	06 NOV 2021	ANEGADO CHANNEL, GRAVING DOCK CH.
SB-34	09 NOV 2021	SAR CUTS 1 THRU 6, GRAVING DOCK CH.
SB-34	11 NOV 2021	PUERTO NUEVO CH., PUERTO NUEVO T.B.
SB-34	12 NOV 2021	SAN ANTONIO APPROACH CHANNEL
SB-34	13 NOV 2021	ARMY TERMINAL CHANNEL, SAN ANTONIO CHANNEL, CRUISE BERTHING AREAS
SB-34	14 DEC 2021	SAN ANTONIO CHANNEL EXTENDED AREA

- AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY. ADDITIONAL NAVAIDS COLLECTED DURING SURVEY 21-162 (MAY 2021) ARE ALSO SHOWN.
- 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 USACE 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

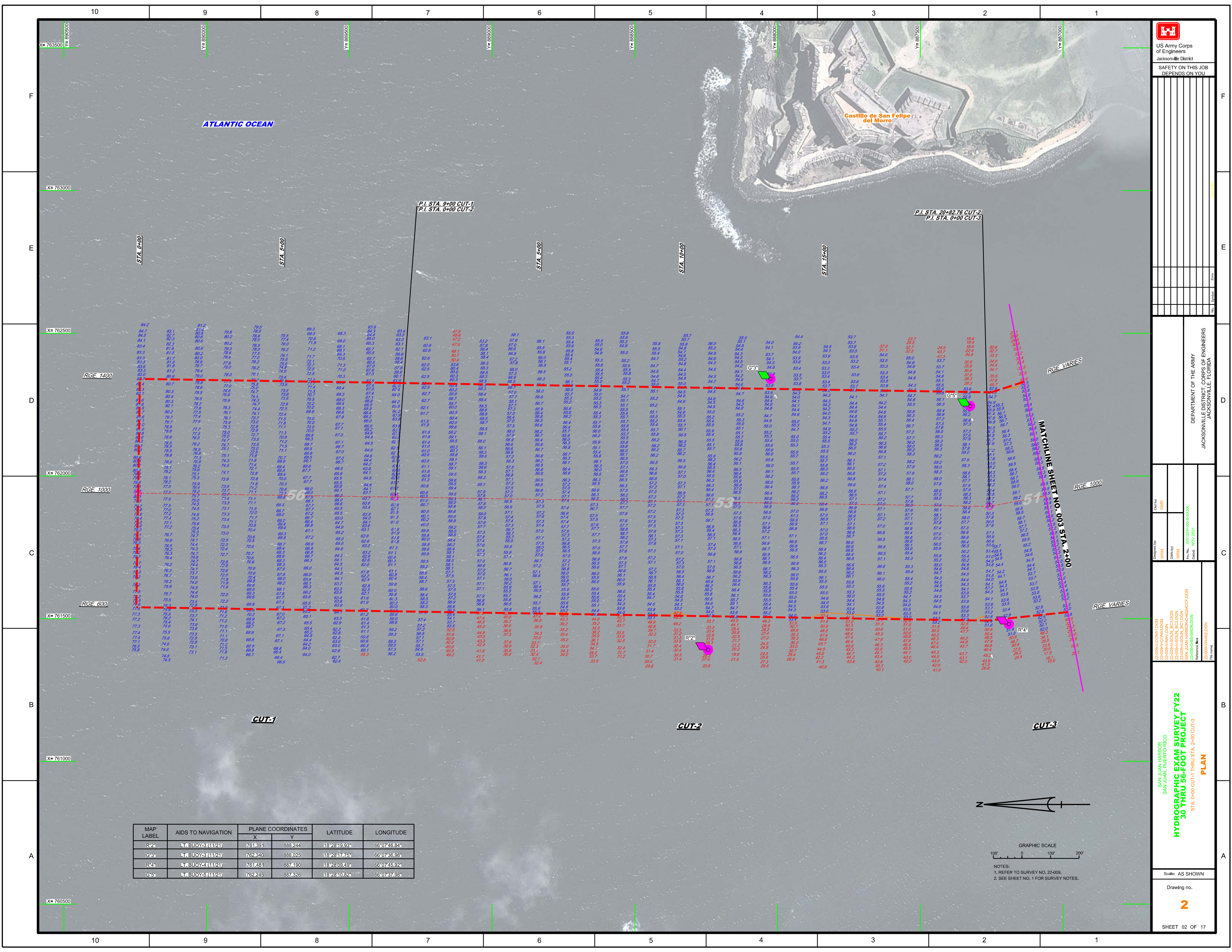
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JACKSONVILLE, FLORIDA

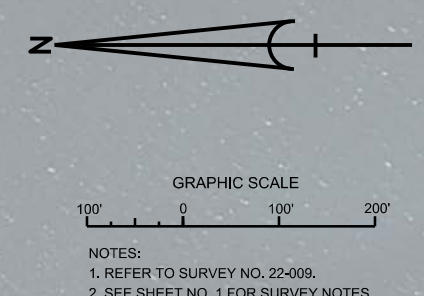
San Juan Harbor
San Juan, Puerto Rico
Hydrographic Exam Survey FY22
30 Thru 56-Foot Project
Index, Location and Vicinity
MAP

Scale: AS SHOWN
Drawing no. **1**

SHEET 01 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
R2*	LT BUOY-3 (11121)	761391	888244	18°28'19.93"	66°07'46.84"
G3*	LT BUOY-3 (11121)	762340	888025	18°28'17.75"	66°07'38.98"
R4*	LT BUOY-4 (11121)	761481	887190	18°28'09.49"	66°07'45.92"
G5*	LT BUOY-5 (11121)	762245	887326	18°28'10.82"	66°07'37.98"



10 9 8 7 6 5 4 3 2 1
F
E
D
C
B
A
X=763500
X=763000
X=762500
X=762000
X=761500
X=761000
X=760500
Y=889500
Y=889000
Y=888500
Y=888000
Y=887500
Y=887000

ATLANTIC OCEAN
Castillo de San Felipe del Morro
P.I. STA. 9+00 CUT-1
P.I. STA. 0+00 CUT-2
P.I. STA. 20+82.76 CUT-2
P.I. STA. 0+00 CUT-3
STA. 0+00
STA. 5+00
STA. 10+00
STA. 15+00
RGE. 1400
RGE. 1000
RGE. 600
RGE. VARIES
MATCHLINE SHEET NO. 003 STA. 2+00
RGE. 1000
RGE. VARIES
GRAPHIC SCALE
NOTES:
1. REFER TO SURVEY NO. 22-009.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
Scale: AS SHOWN
Drawing no. **2**
SHEET 02 OF 17

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
R*10"	LT. BUOY-10 (11/21)	764.074	883.463	18°27'32.50"	66°07'19.05"
G*11"	LT. BUOY-11 (11/21)	765.707	883.253	18°27'30.38"	66°07'02.09"

MATCHLINE SHEET NO. 13 RGE. 2100

CRUISE SHIP BASIN WEST

ANEGADO CHANNEL

ANCHORAGE AREA F

RGE 1400

RGE 1400

RGE 1000


RGE 1000

RGE 600

RGE 600

MATCHLINE SHEET NO. 005 STA. 36+00

MATCHLINE SHEET NO. 003 STA. 6+00



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JACKSONVILLE, FLORIDA

San Juan Harbor
San Juan, Puerto Rico

**HYDROGRAPHIC EXAM SURVEY FY22
30 THRU 56-FOOT PROJECT**

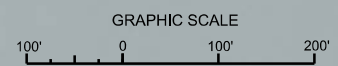
STA. 6+00 CUT-3 THRU STA. 36+00 ANEGADO CHANNEL

PLAN

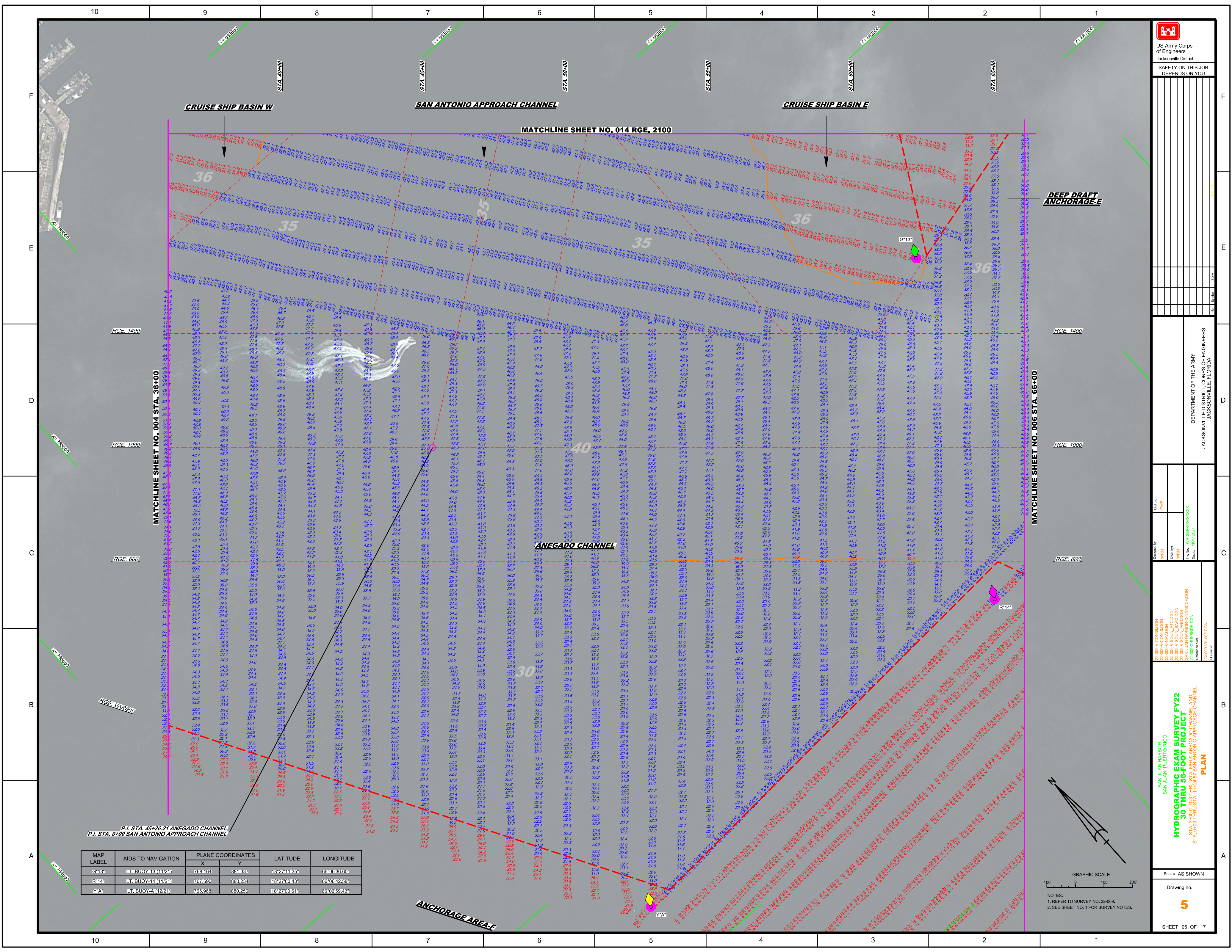
Scale: AS SHOWN

Drawing no. **4**

SHEET 04 OF 17



NOTES:
1. REFER TO SURVEY NO. 22-009.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



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Drawn by: **GHK**
Checked by: **WSP/RSK/AV/004**
Date: **NOV 2021**

22-009A-COVID.DGN
22-009A-COMB.DGN
22-009A-SOUL_ATC.DGN
22-009A-SOUL_SAM.DGN
22-009A-SAN ANTONIO APPROACH CHANNEL AND ANEGADO CHANNEL
22-009A-SB-BRD.DGN
22-009A-HR.DGN

PLAN

Scale: AS SHOWN

Drawing No. **5**

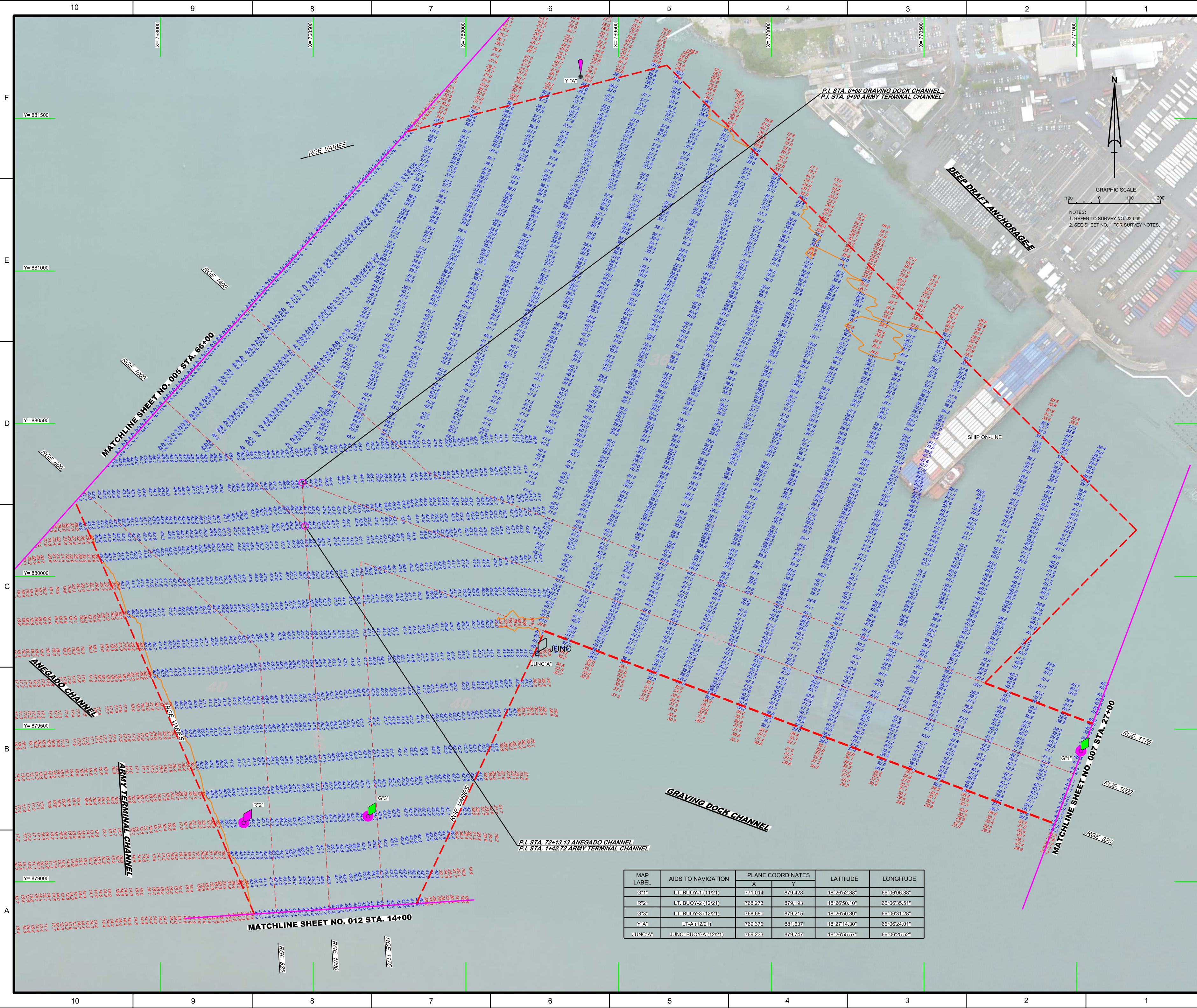
SHEET 05 OF 17

P.I. STA. 45+26.21 ANEGADO CHANNEL
P.I. STA. 0+00 SAN ANTONIO APPROACH CHANNEL

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
S-13	LT BUOY 13 (11/21)	768164	8811337	18°27'11.35"	68°08'36.80"
R-14	RT BUOY 14 (11/21)	767450	880284	18°27'00.43"	68°08'42.53"
Y-A	LT BUOY 2A (12/21)	765968	880260	18°27'00.81"	68°08'59.43"

GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 22-009.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 22-009.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



RGE VARIES

MATCHLINE SHEET NO. 005 STA. 66+00

ANEGADO CHANNEL

ARMY TERMINAL CHANNEL

GRAVING DOCK CHANNEL

DEP. DRAFT ANCHORAGE

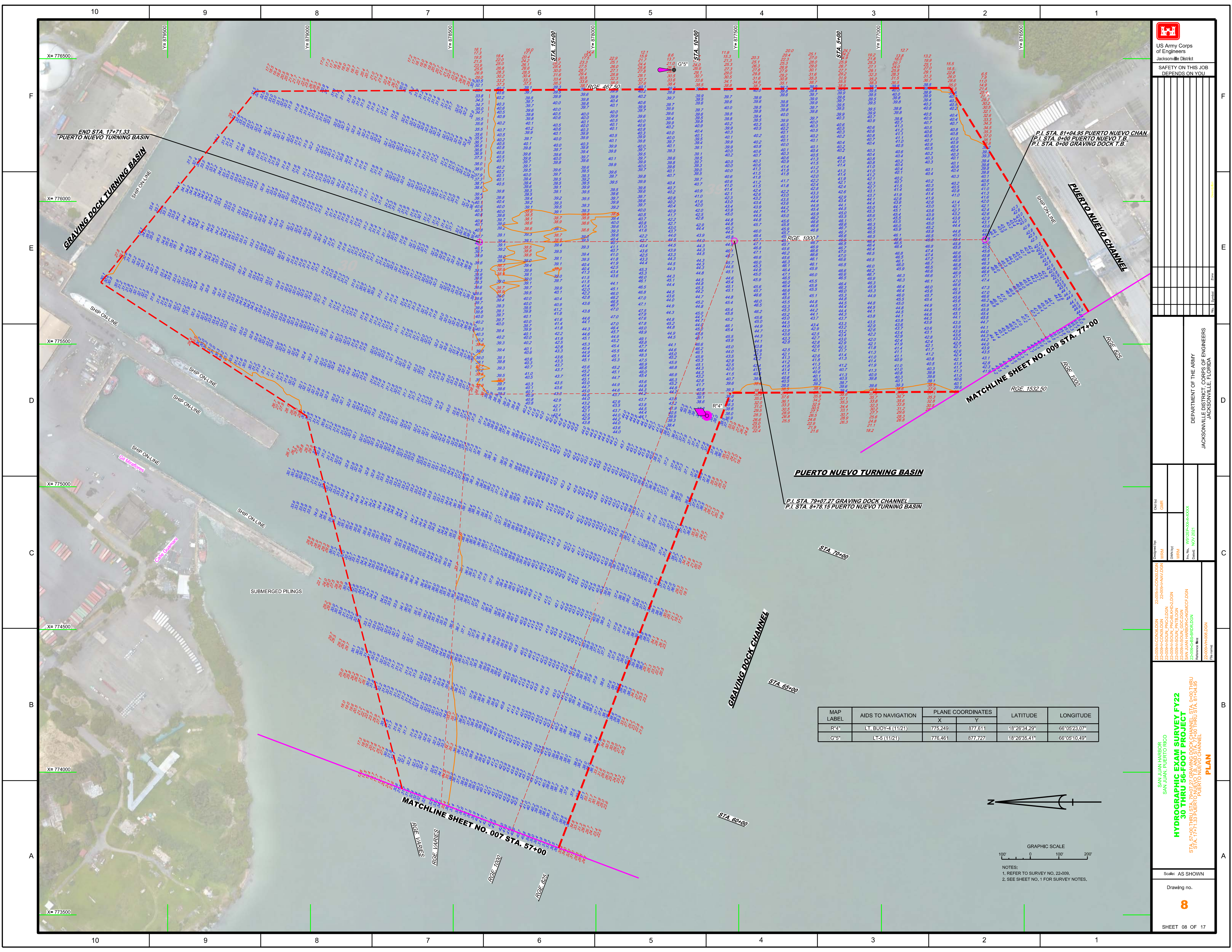
SHIP-ON-LINE

MATCHLINE SHEET NO. 007 STA. 27+00

MATCHLINE SHEET NO. 012 STA. 14+00

P.I. STA. 72+13.13 ANEGADO CHANNEL
P.I. STA. 1+42.72 ARMY TERMINAL CHANNEL

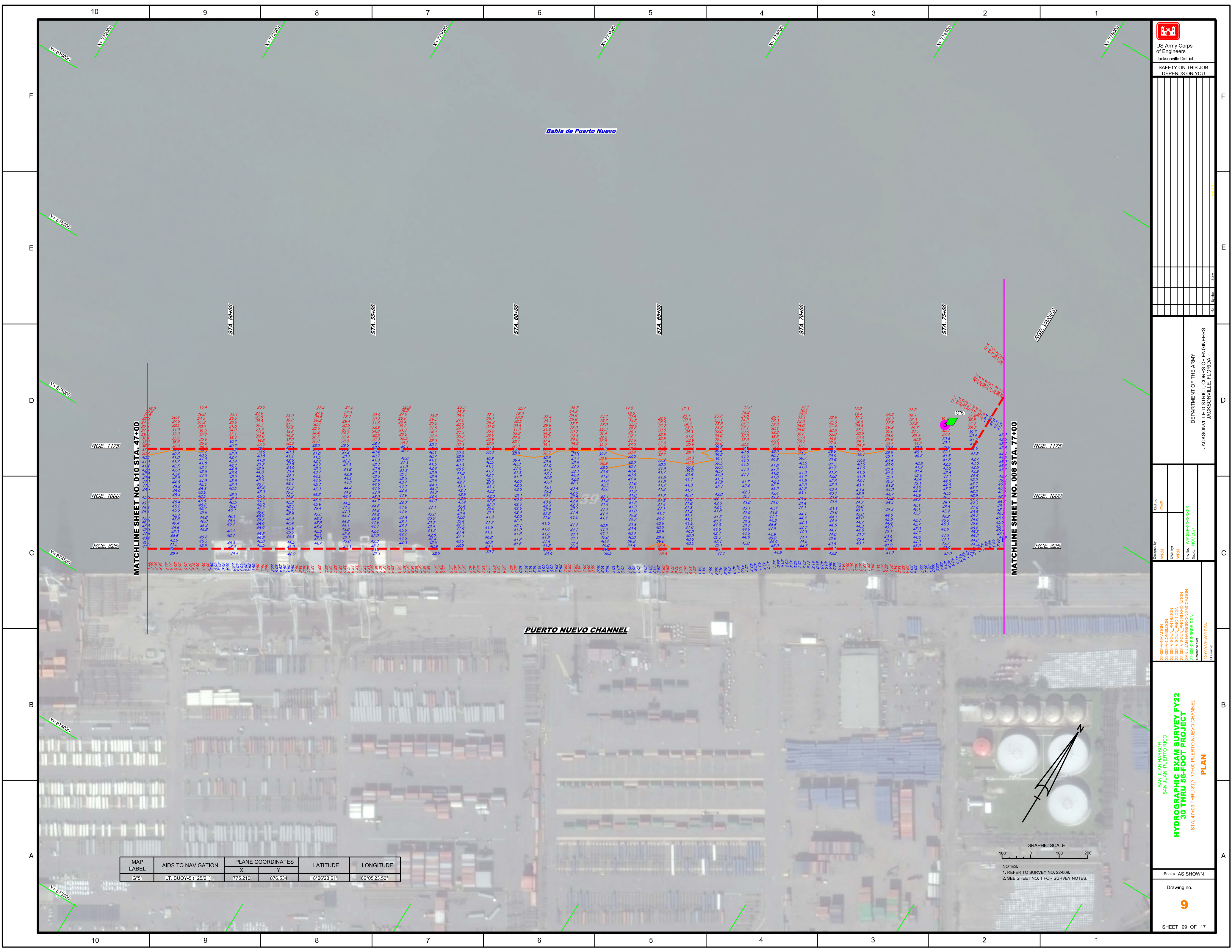
RGE 825
RGE 1000
RGE 1175



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
R*4	LT. BUOY-4 (11/21)	775.249	877.611	18°26'34.29"	66°05'23.07"
G*5	LT-5 (11/21)	776.461	877.727	18°26'35.41"	66°05'10.49"



NOTES:
1. REFER TO SURVEY NO. 22-008.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



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 JACKSONVILLE, FLORIDA

Designed by: **WRM**
 Checked by: **GHR**
 Date: **NOV 2021**

22-0009-HAN.DGN
 22-0009-SOUL_PATL.DGN
 22-0009-SOUL_PNC1.DGN
 22-0009-SOUL_PNC2.DGN
 22-0009-SOUL_PNC3.DGN
 22-0009-SOUL_PNC4.DGN
 22-0009-SOUL_PNC5.DGN
 22-0009-SOUL_PNC6.DGN
 22-0009-SOUL_PNC7.DGN
 22-0009-SOUL_PNC8.DGN
 22-0009-SOUL_PNC9.DGN
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 22-0009-SOUL_PNC100.DGN

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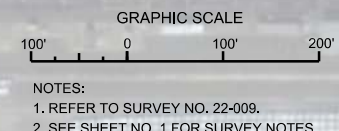
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 STA. 47+00 THRU STA. 77+00 PUERTO NUEVO CHANNEL

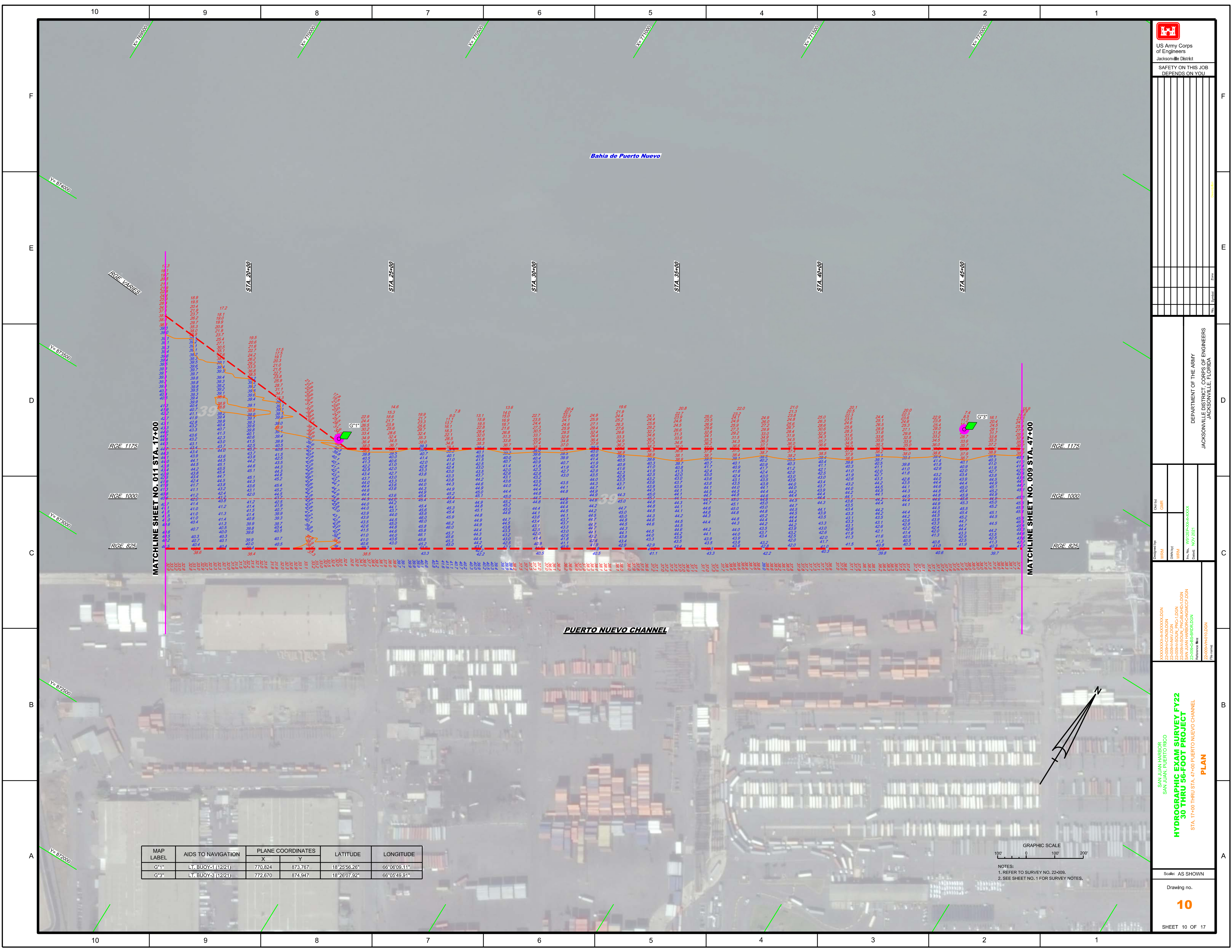
Scale: AS SHOWN

Drawing no. **9**

SHEET 09 OF 17

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G*5	LT. BUOY-5 (125/21)	775.210	876.534	18°26'23.61"	66°05'23.50"





MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G*1	LT. BUOY-1 (1221)	770,824	873,767	18°25'56.26"	66°06'09.11"
G*3	LT. BUOY-3 (1221)	772,670	874,947	18°26'07.92"	66°05'49.91"

