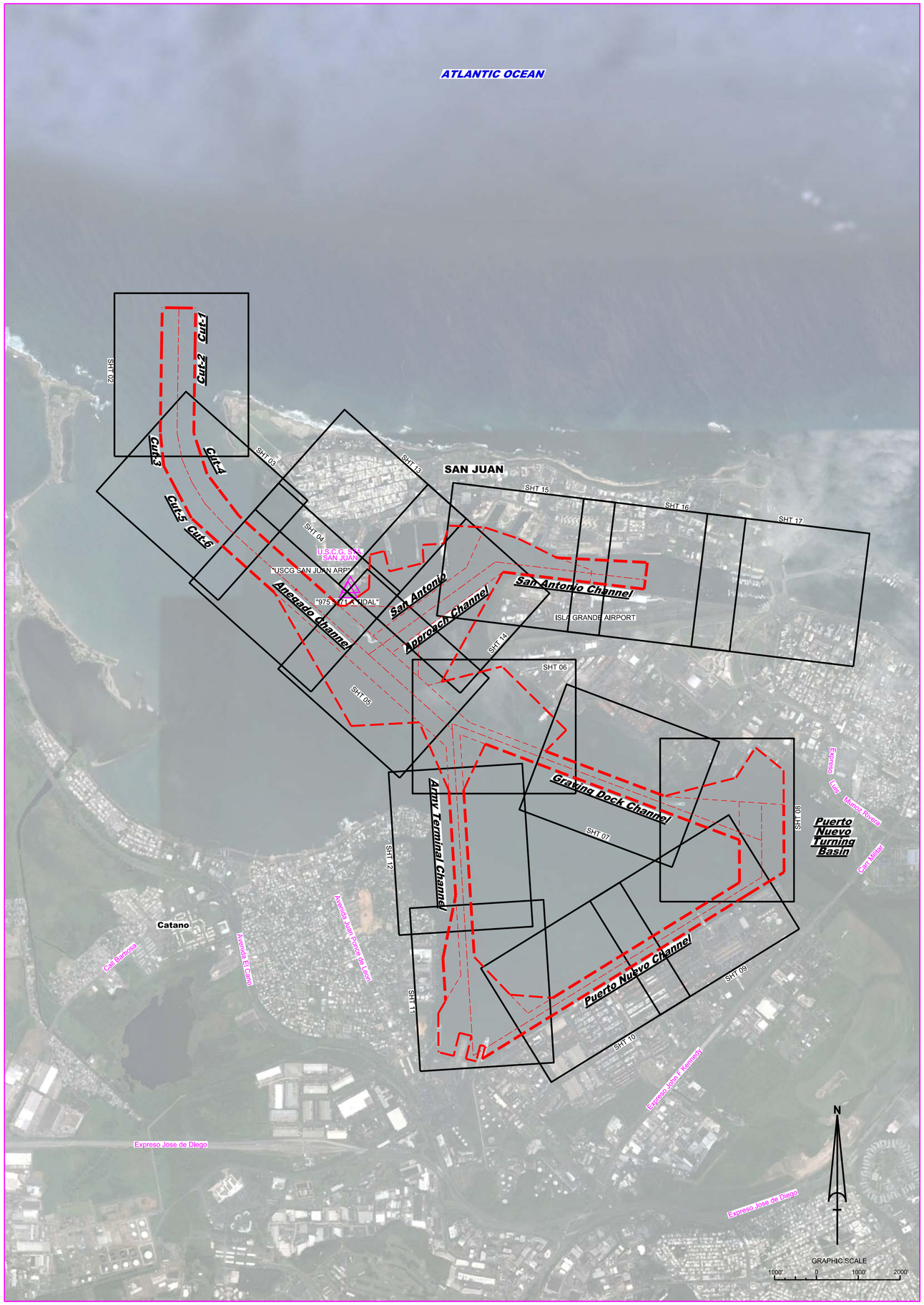
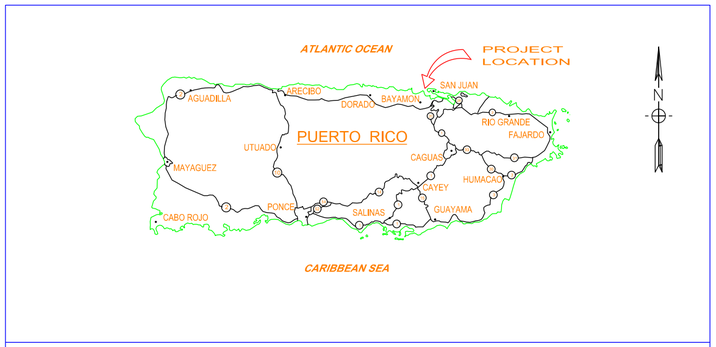




LOCATION MAP

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

SURVEY NOTES

1. REFER TO SURVEY NO. 22-112.
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 HYPACK KINEMATIC TIDE DATUM (KTD) MODEL. KTD FILE NAME IS "SANJUAN-2011APRIL06.KTD".
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 PUERTO RICO & THE VIRGIN ISLANDS, ZONE 5200, NORTH AMERICAN DATUM OF 1983 (NAD83).
6. ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
7. 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: BBFN06)

   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.
8. 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 BENCHMARK 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 TEELDYNE ODOM ECHOTRAC E20. ALL SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.

VESSEL	DATE OF SURVEY	CUT
SB-34	24 MAY 2022	SAN ANTONIO APPROACH CH., BERTHING AREAS
SB-34	25 MAY 2022	BAR CUTS 1 THRU 6
SB-34	26 MAY 2022	SAN ANTONIO CH., BERTHING AREAS
SB-34	27 MAY 2022	ANEGADO CHANNEL
SB-34	31 MAY 2022	GRAVING DOCK CHANNEL
SB-34	06 JUN 2022	PUERTO NUEVO TURNING BASIN, PUERTO NUEVO CHANNEL
SB-34	07 JUN 2022	ARMY TERMINAL CHANNEL

9. AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.
10. 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.
11. 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
C	CAN BUOY
N	NUN BUOY
	TIDE STAFF
8	PROJECT DEPTH

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description

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

Designed by: VRM
DWN by: VRM
Chk by: GMR
Proj. No. V912EP-XX-XX-XXX
Date: JUN 2022

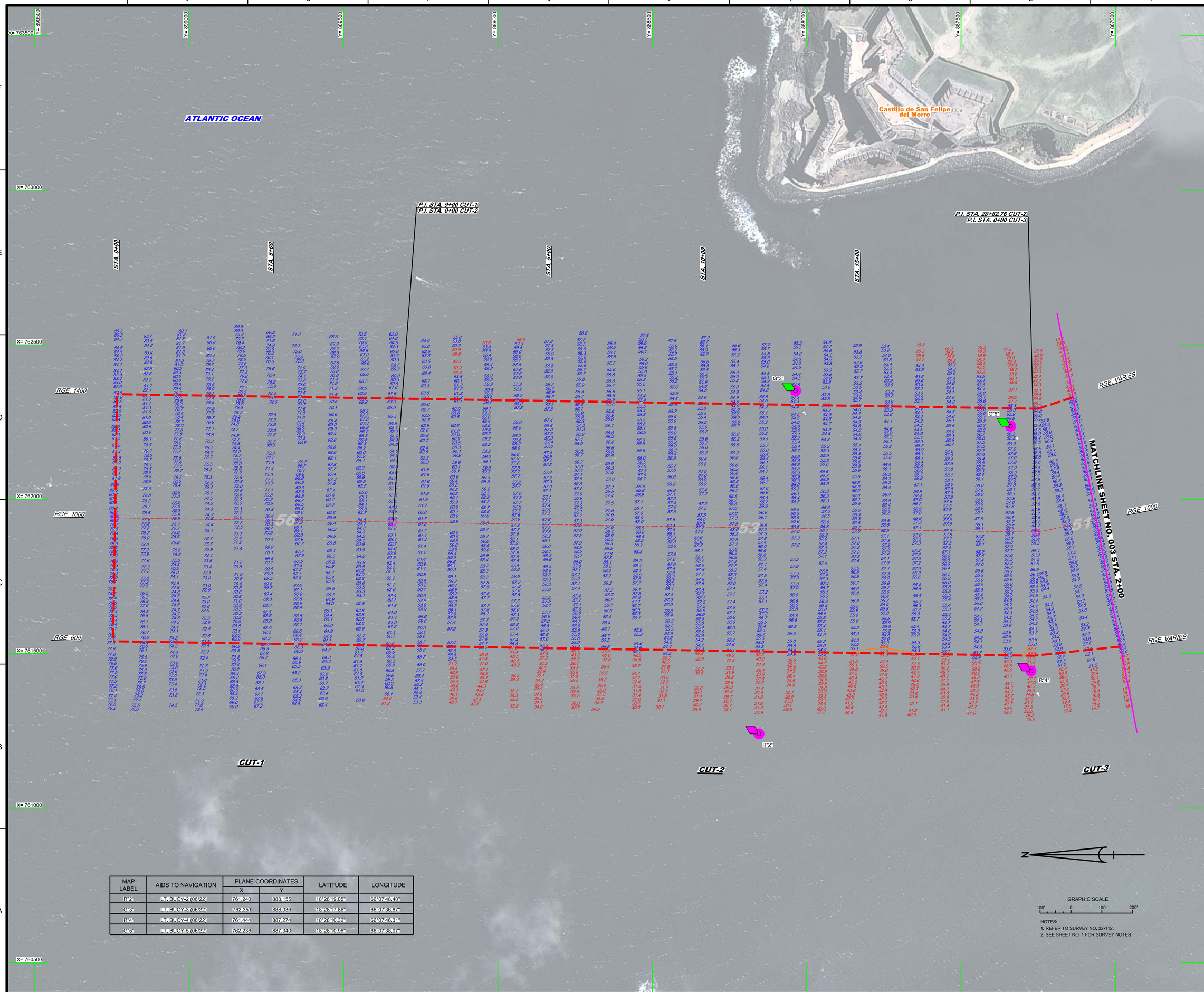
Reference files:
X:\XXXXXX-X-XXXX-X.DGN
X:\XXXXXXX-X-XXXXX-X.DGN
X:\XXXXXXX-X-XXXXX-X.DGN
X:\XXXXXXX-X-XXXXX-X.DGN
X:\XXXXXXX-X-XXXXX-X.DGN
22-003-AURDEA.DGN
SANJUANHARBOR-CNGMCF.DGN
22-112-HS-BRDR.DGN
Reference files:
22-112-HH001.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO
HYDROGRAPHIC EXAM SURVEY (JUNE) 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		
R"2"	LT. BUOY-2 (06'22)	761,240	888,155	18°28'19.05"	66°07'48.40"
G"3"	LT. BUOY-3 (06'22)	762,351	888,036	18°28'17.86"	66°07'36.87"
R"4"	LT. BUOY-4 (06'22)	761,444	887,274	18°28'10.32"	66°07'46.31"
G"5"	LT. BUOY-5 (06'22)	762,236	887,340	18°28'10.96"	66°07'38.07"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: WRM
DWN by: WRM
Ckd by: GMR
Proj. No.: V6912EP-XX-XX-XXXX
Date: JUN 2022

22-112-A-CONST.DGN
22-112-A-CONTOUR.DGN
22-112-V-CONTOUR.DGN
22-112-V-NAV.DGN
22-112-A-SOUL_BC1.DGN
22-112-V-SOUL_BC1.DGN
22-112-A-SOUL_BC1.DGN
SAN JUAN HARBOR-C-NGMCCF.DGN
22-112-A-BS-BRDR.DGN
Reference files:
22-112-VRef02.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 36-FOOT PROJECT

STA. 0+00 CUT-1 THRU STA. 2+00 CUT-3

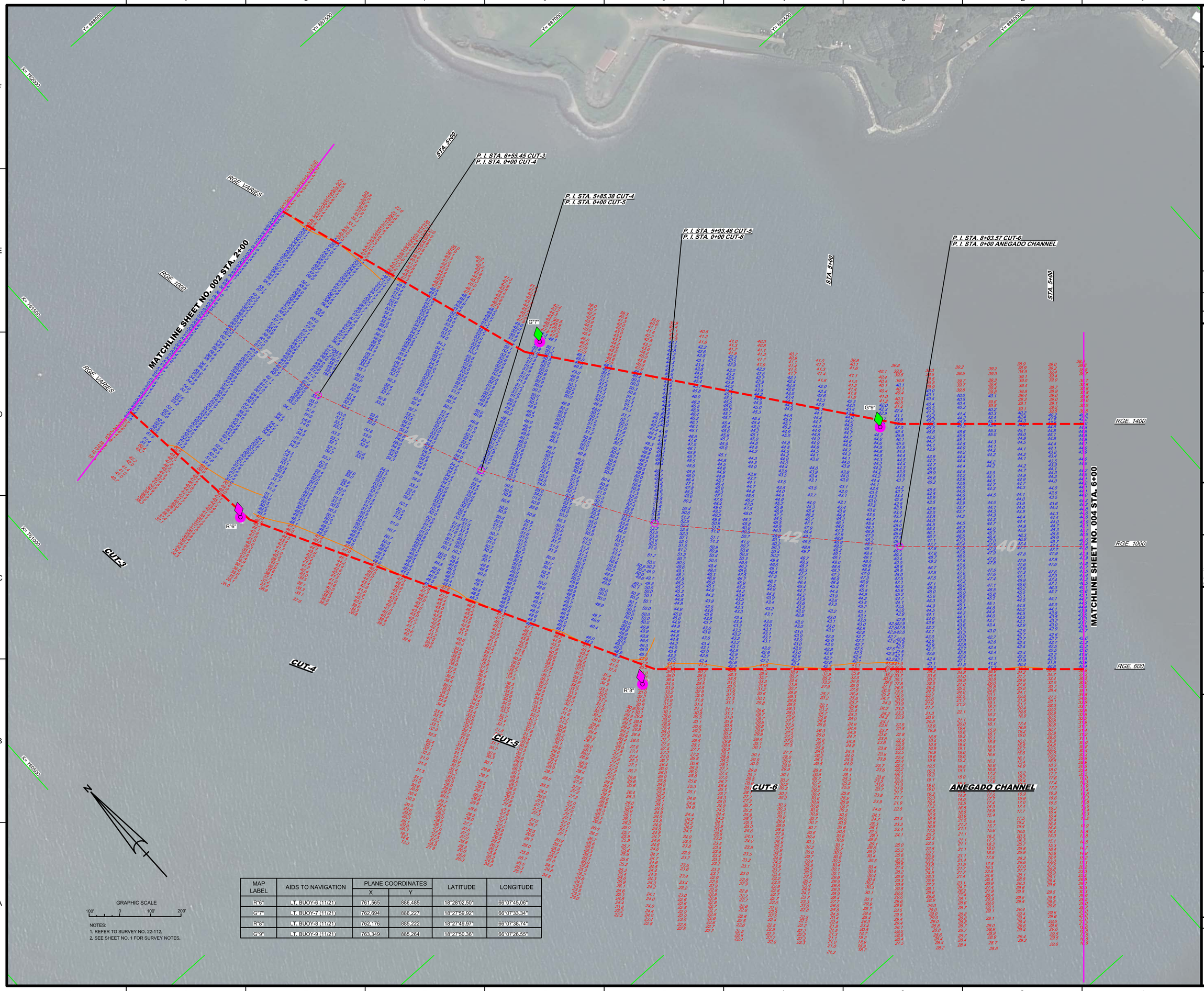
PLAN

Scale: AS SHOWN

Drawing no.

2

SHEET 02 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
R"6"	LT. BUOY-6 (11/21)	761,565	886,485	18°28'02.50"	66°07'45.06"
G"7"	LT. BUOY-7 (11/21)	762,694	886,227	18°27'59.92"	66°07'33.34"
R"8"	LT. BUOY-8 (11/21)	762,176	885,222	18°27'49.97"	66°07'38.74"
G"9"	LT. BUOY-9 (11/21)	763,349	885,264	18°27'50.36"	66°07'26.55"

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: WRM
Drawn by: WRM
Checked by: CMR
Date: JUN 2022
Rev. No. W912EP-XX-X-XXXX

22-112-V-CONA12.DGN
22-112-V-CONA2.DGN
22-112-V-CONA48.DGN
22-112-V-CONS1.DGN
22-112-V-SOUN_BC4.DGN
22-112-V-SOUN_BC5.DGN
22-112-V-SOUN_ANG.DGN
SAN JUAN HARBOR-C-NGM/CF.DGN
22-112-V-CES-SHDR.DGN
Reference files:

22-112-V-H003.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 56-FOOT PROJECT

STA. 2+00 CUT-3 THRU STA. 6+00 ANEGADO CHANNEL

PLAN

Scale: AS SHOWN

Drawing no.

3

SHEET 03 OF 17

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
R"10"	LT. BUOY-10 (06/22)	764,086	883,453	18°27'32.39"	66°07'18.92"
G"11"	LT. BUOY-11 (06/22)	765,723	883,261	18°27'30.47"	66°07'01.92"

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: WRM
Drawn by: WRM
Checked by: GMR
Rev. No. V9912EP-XX-X-VXXX
Date: JUN 2022

22-112-V-CONSLOG.DGN
22-112-V-CONSLOG2.DGN
22-112-V-NAV.DGN
22-112-V-SOUN_BLKHLOG.DGN
22-112-V-SOUN_ANEGADO.DGN
22-112-V-SOUN_ANEGLOG.DGN
SAN JUAN HARBOR-C-NGMCF.DGN
22-112-V-SHS-BRDR.DGN
Reference files:
22-112-V-H004.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 50-FOOT PROJECT

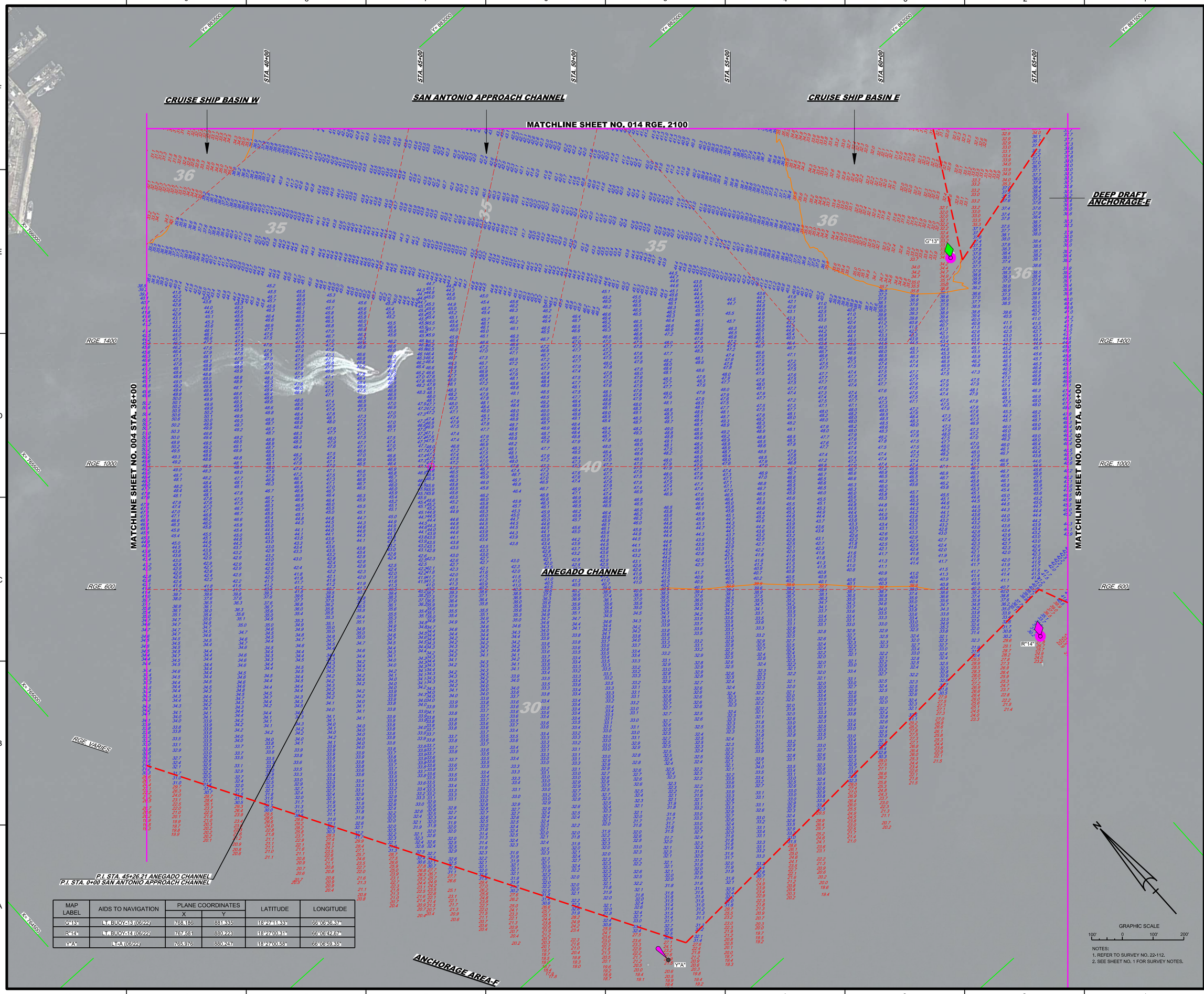
STA. 6+00 CUT-3 THRU STA. 36+00 ANEGADO CHANNEL

PLAN

Scale: AS SHOWN

Drawing no.
4

SHEET 04 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
G"13"	LT. BUOY-13 (06/22)	768,186	881,335	18°27'11.33"	66°06'36.37"
R"14"	LT. BUOY-14 (06/22)	767,581	880,223	18°27'00.81"	66°06'42.67"
Y"A"	LT-A (06/22)	765,976	880,247	18°27'00.58"	66°06'59.35"

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: VIRM
DWN by: VIRM
Chd by: CMR
Rev. No. V9123EP-XX-X-XXXX
Date: JUN 2022

22-112-V-ANW.DGN
22-112-V-CONS.DGN
22-112-V-CONS-N.DGN
22-112-V-CONULDGN
22-112-V-SOUN_ATC.DGN
22-112-V-SOUN_ANEG.DGN
22-112-V-SOUN_ANEG.DGN
SAN JUAN HARBOR-C-NGM.CF.DGN
22-112-V-SHB
22-112-V-SHB-ENDR.DGN
Reference files:
22-112-V-H005.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 36-FOOT PROJECT

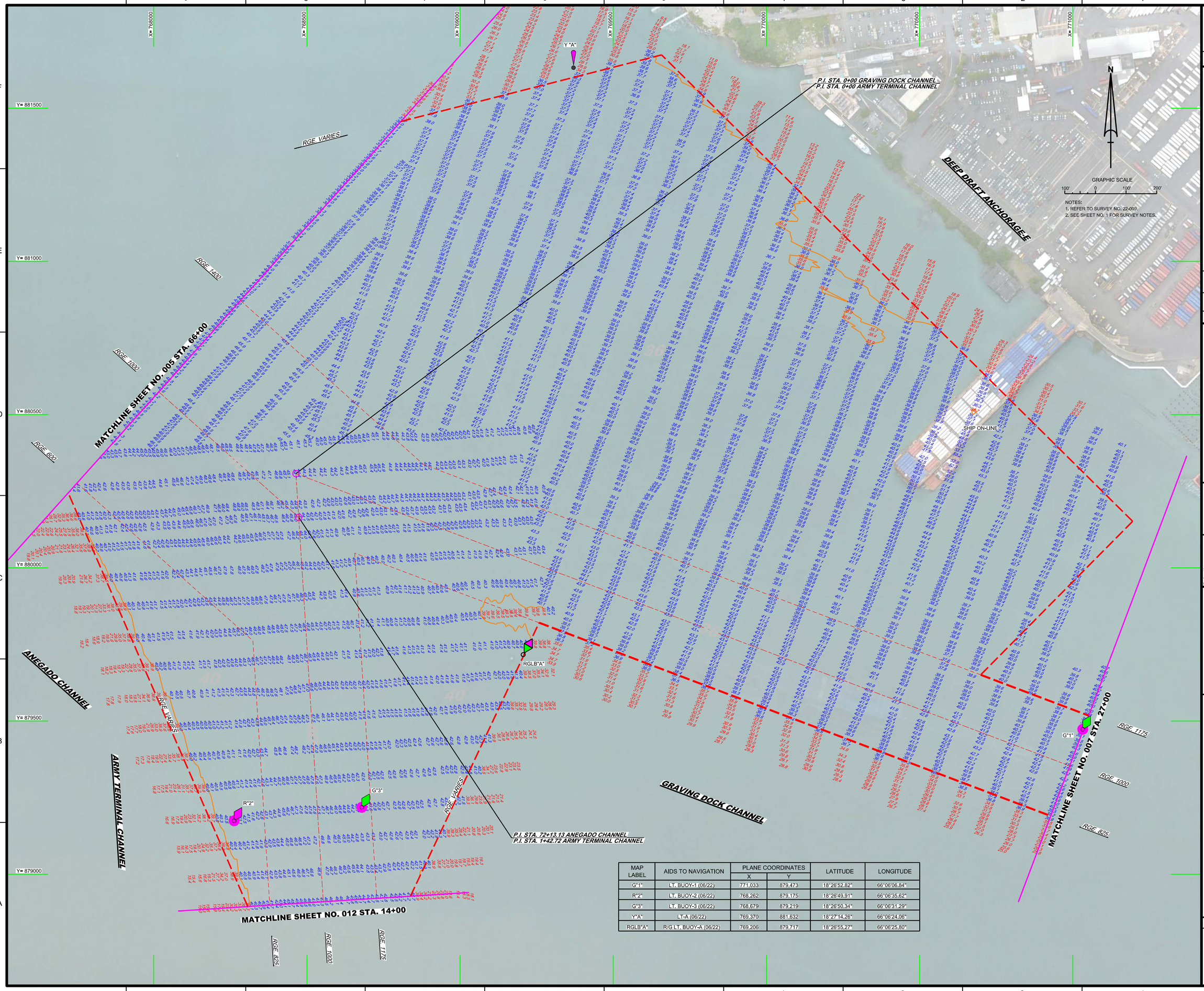
STA. 0+00 THRU STA. 17+25.37 SAN ANTONIO APPROACH CHANNEL
STA. 0+00 THRU STA. 17+25.37 ANEGADO CHANNEL
STA. 36+00 THRU STA. 66+00 ANCHORAGE AREA

PLAN

Scale: AS SHOWN

Drawing no.
5

SHEET 05 OF 17



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

MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G"1"	LT. BUOY-1 (06/22)	771,033	879,473	18°26'52.82"	66°06'06.84"
R"2"	LT. BUOY-2 (06/22)	768,262	879,175	18°26'49.91"	66°06'35.62"
G"3"	LT. BUOY-3 (06/22)	768,679	879,219	18°26'50.34"	66°06'31.29"
Y"A"	LT-A (06/22)	769,370	881,632	18°27'14.26"	66°06'24.06"
RGLB"A"	R/G LT. BUOY-A (06/22)	769,206	879,717	18°26'55.27"	66°06'25.80"

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: VIRM
DWN by: VIRM
Chk by: CMR
Rev. No.: V01/2EP-XX-X-XXXX
Date: JUN 2022

22-009-LCC-CONS.DGN
22-009-V-CONS.DGN
22-009-LCC-NAV.DGN
22-009-V-NAV.DGN
22-009-V-SOUN_ATC.DGN
22-009-V-SOUN_PRO.DGN
22-009-V-SOUN_ANG.DGN
SAN JUAN HARBOR-C-NG-MCF.DGN
22-112-CES-SHORE.DGN
Reference files:
22-009-VHD06.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 36-FOOT PROJECT

STA. 66+00 ANEGADO CHANNEL THRU

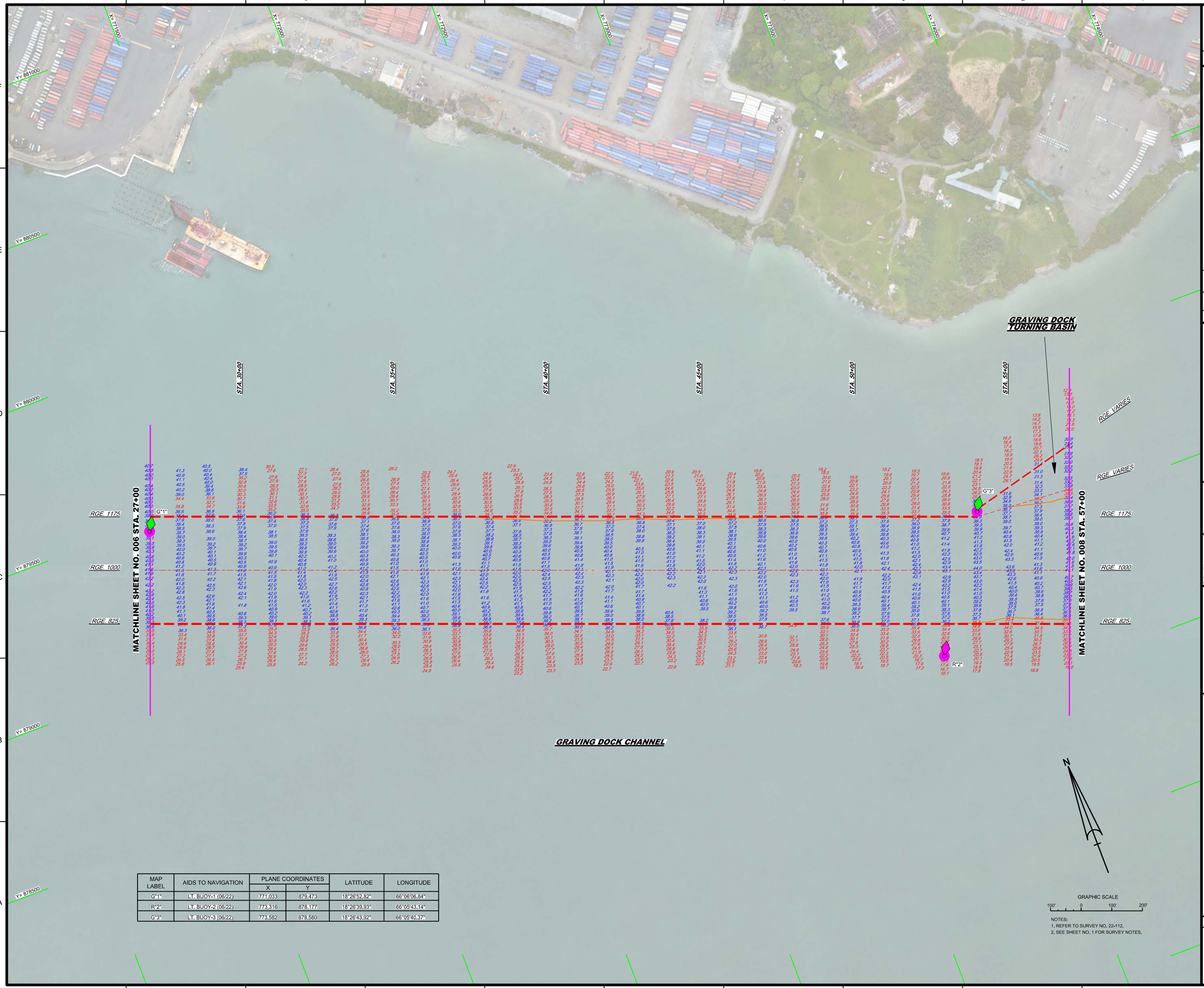
PLAN

Scale: AS SHOWN

Drawing no.

6

SHEET 06 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G"1"	LT. BUOY-1 (06/22)	771,033	879,473	18°26'52.82"	66°06'06.84"
R"2"	LT. BUOY-2 (06/22)	773,316	878,177	18°26'39.93"	66°05'43.14"
G"3"	LT. BUOY-3 (06/22)	773,582	878,580	18°26'43.92"	66°05'40.37"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Chkd by: GMR
DWN by: MRM
Designed by: MRM
File No. V6912EP-XX-XX-XXX
Date: JUN 2022

22-112-A-CON36.DGN
22-112-A-SOUN.DGN
22-112-A-SOUN_GDC.DGN
SAN JUAN HARBOR-C-NGMCCF.DGN
22-112-C-BS-BRGR.DGN
Reference files
22-112-VHD07.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 56-FOOT PROJECT

STA. 27+00 THRU STA. 57+00 GRAVING DOCK CHANNEL

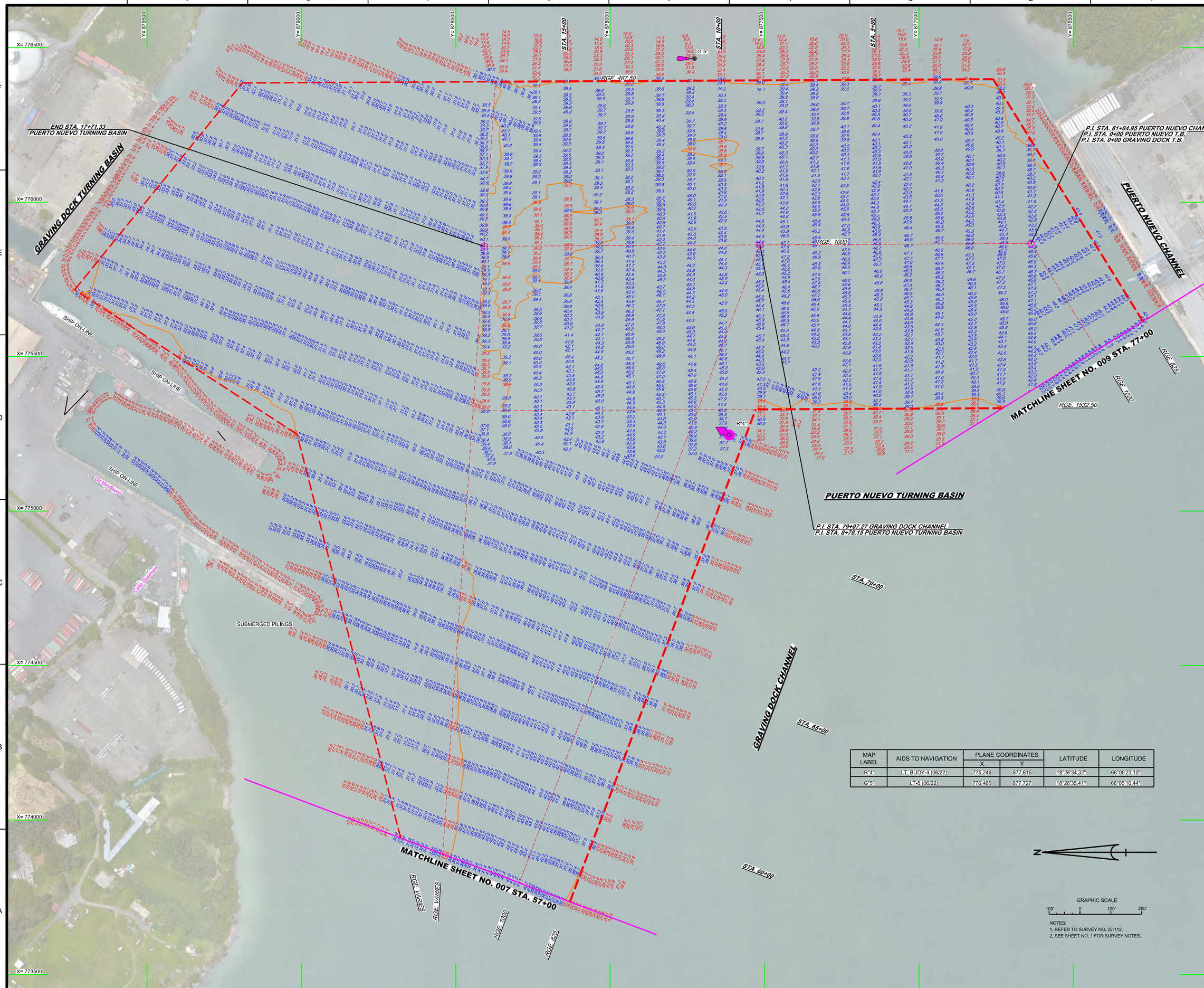
PLAN

Scale: AS SHOWN

Drawing no.

7

SHEET 07 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
R"4"	LT. BUOY-4 (06/22)	775,246	877,615	18°26'34.32"	66°05'23.10"
G"5"	LT-5 (06/22)	776,465	877,727	18°26'35.41"	66°05'10.44"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: VIRM
DWN by: VIRM
Chk by: CMR
Rev. No. V9123EP-XX-X-VXXX
Date: JUN 2022

22-112-LC-CNS0.DGN
22-112-LC-CNS1.DGN
22-112-LC-CNS2.DGN
22-112-VSOUN_PNC-2.DGN
22-112-VSOUN_BLKHD.DGN
22-112-VSOUN_PIER.DGN
22-112-VSOUN_GTC.DGN
SAN JUAN HARBOR-CNGMCF.DGN
22-112-SHS-BNDR.DGN
Reference files:

22-112-VHO08.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 55-FOOT PROJECT

STA. 57+00 THRU STA. 77+00 GRAVING DOCK CHANNEL
STA. 17+71.33 PUERTO NUEVO TURNING BASIN, STA. 0+00 THRU STA. 81+04.95
PUERTO NUEVO CHANNEL

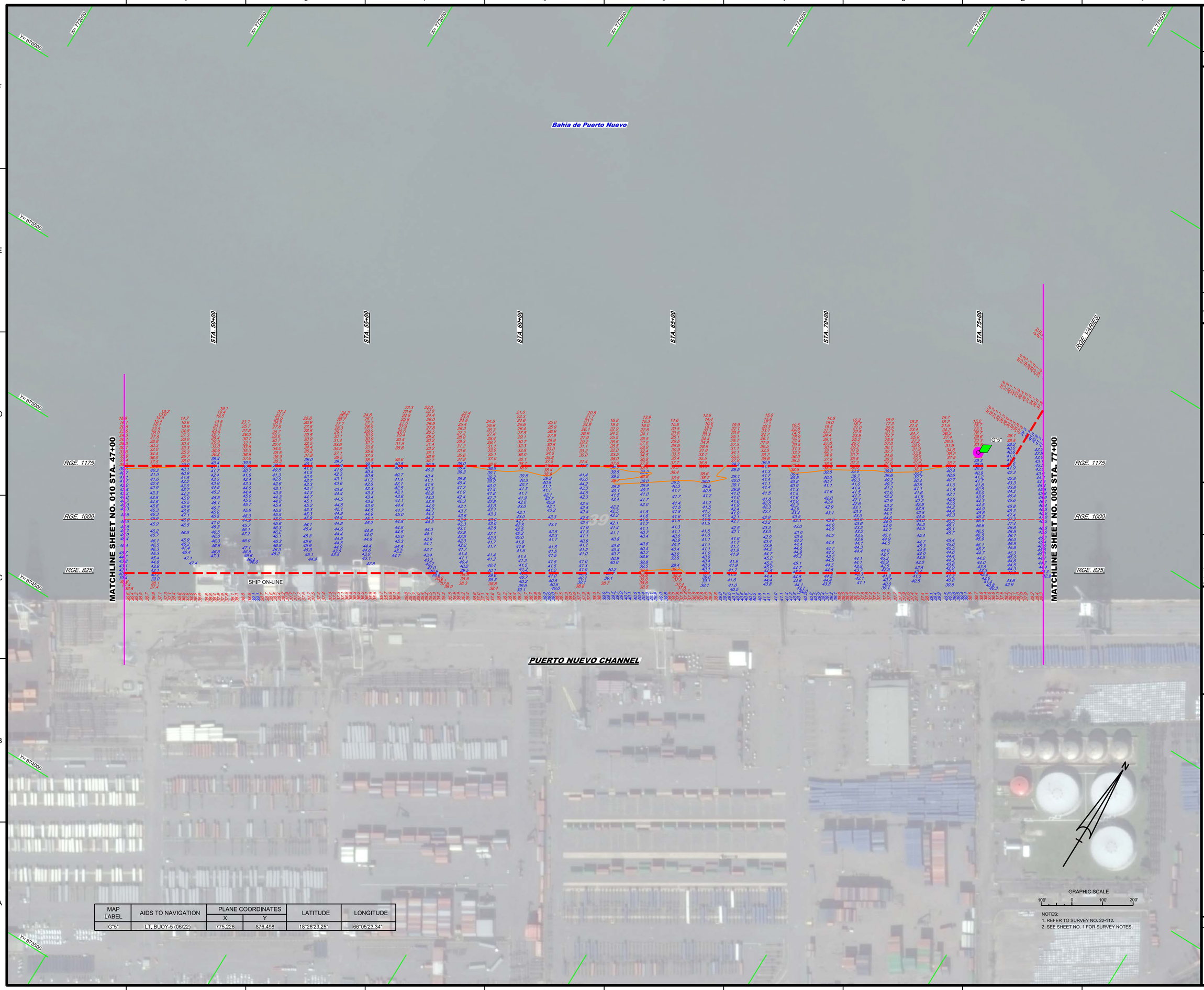
PLAN

Scale: AS SHOWN

Drawing no.

8

SHEET 08 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G"5"	LT. BUOY-5 (06/22)	775,226	876,498	18°26'23.25"	66°05'23.34"

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description

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

Designed by: WRM
Dwn by: WRM
Ckd by: GMR
Fm. No. V8312EP-XX-XX-XXX
Date: JUN 2022

22-112-X-NAV.DGN
22-112-X-CONB.DGN
22-112-X-SOUN_PNTB.DGN
22-112-X-SOUN_ALL.DGN
22-112-X-SOUN_BLKHD.DGN
SAN JUAN HARBOR-C-NGMCCF.DGN
22-112-X-BR-BRDR.DGN
Reference files
22-112-X-H09.DGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 36-FOOT PROJECT

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

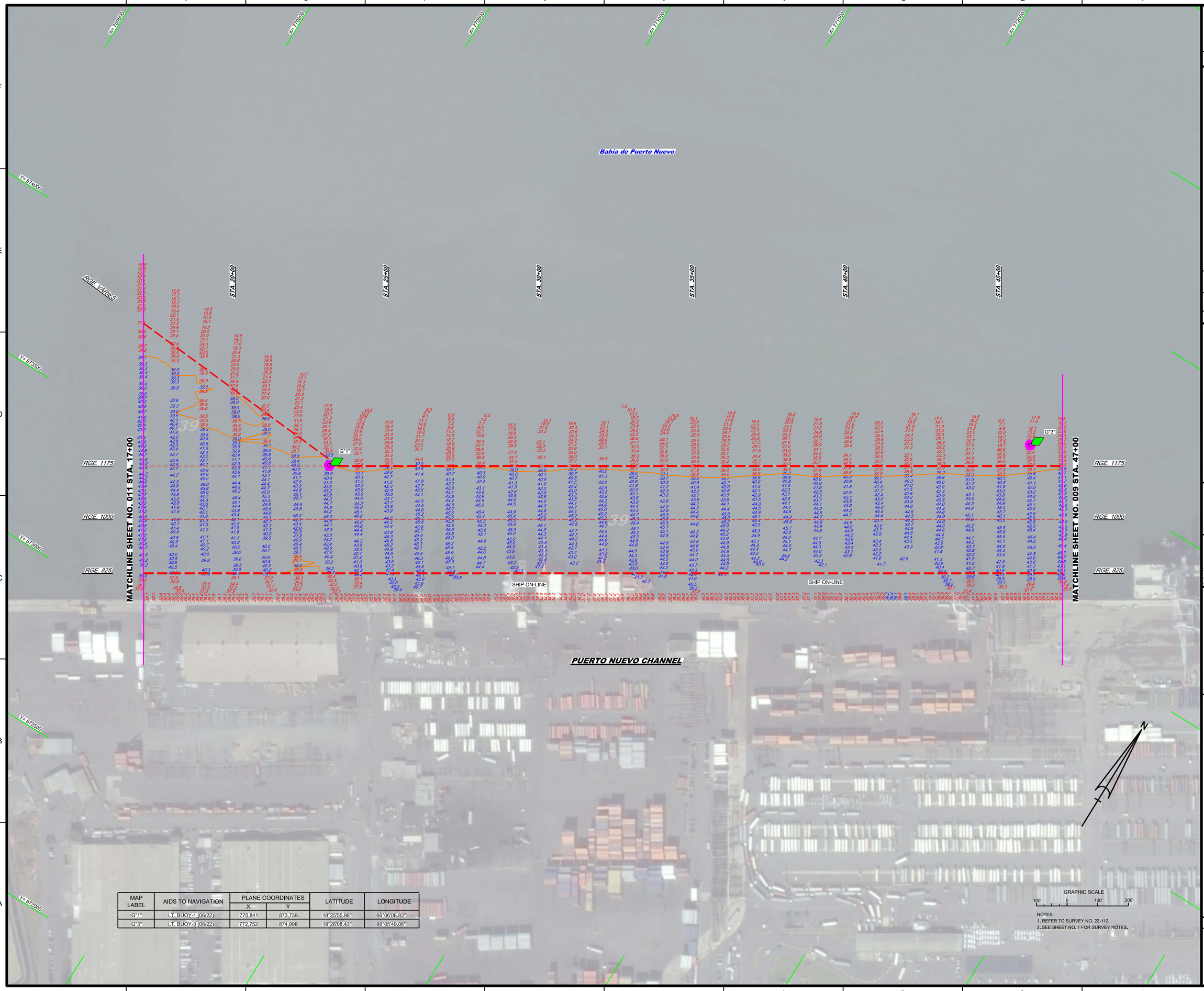
PLAN

Scale: AS SHOWN

Drawing no.

9

SHEET 09 OF 17



MAP LABEL	AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
		X	Y		
G"1"	LT. BUOY-1 (06/22)	770,841	873,739	18°25'55.98"	66°06'08.93"
G"3"	LT. BUOY-3 (06/22)	772,752	874,998	18°26'08.43"	66°05'49.06"

NOTES:
1. REFER TO SURVEY NO. 22-112.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: WRM
DWN by: WRM
Ckd by: GMR
Proj. No.: V93T2EP-XX-XX-XXXX
Date: JUN 2022

XXXXXXXXXX-XXXXXXX.DGN
22-112-A-CONB.DGN
22-112-A-NAV.DGN
22-112-A-SOUTH JETTY.DGN
22-112-A-SOUTH BLKHD.DGN
SAN JUAN HARBOR-C-NGMCCF.DGN
22-112-C-BS-BRDR.DGN
Reference files
22-112-VH-01LDGN
File name:

SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

HYDROGRAPHIC EXAM SURVEY (JUNE) FY22
30 THRU 56-FOOT PROJECT

STA. 17+00 THRU STA. 47+00 PUERTO NUEVO CHANNEL

PLAN

Scale: AS SHOWN

Drawing no.

10

SHEET 10 OF 17