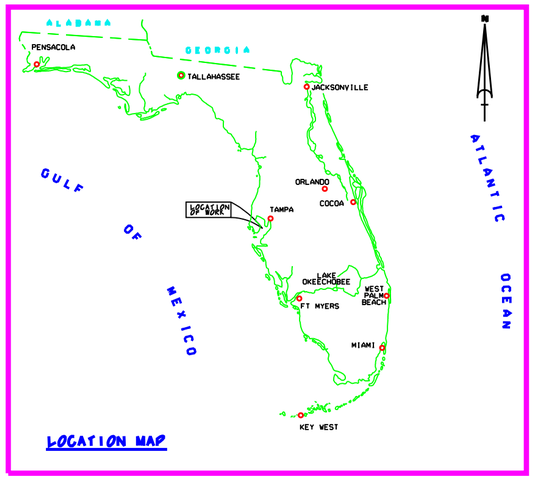
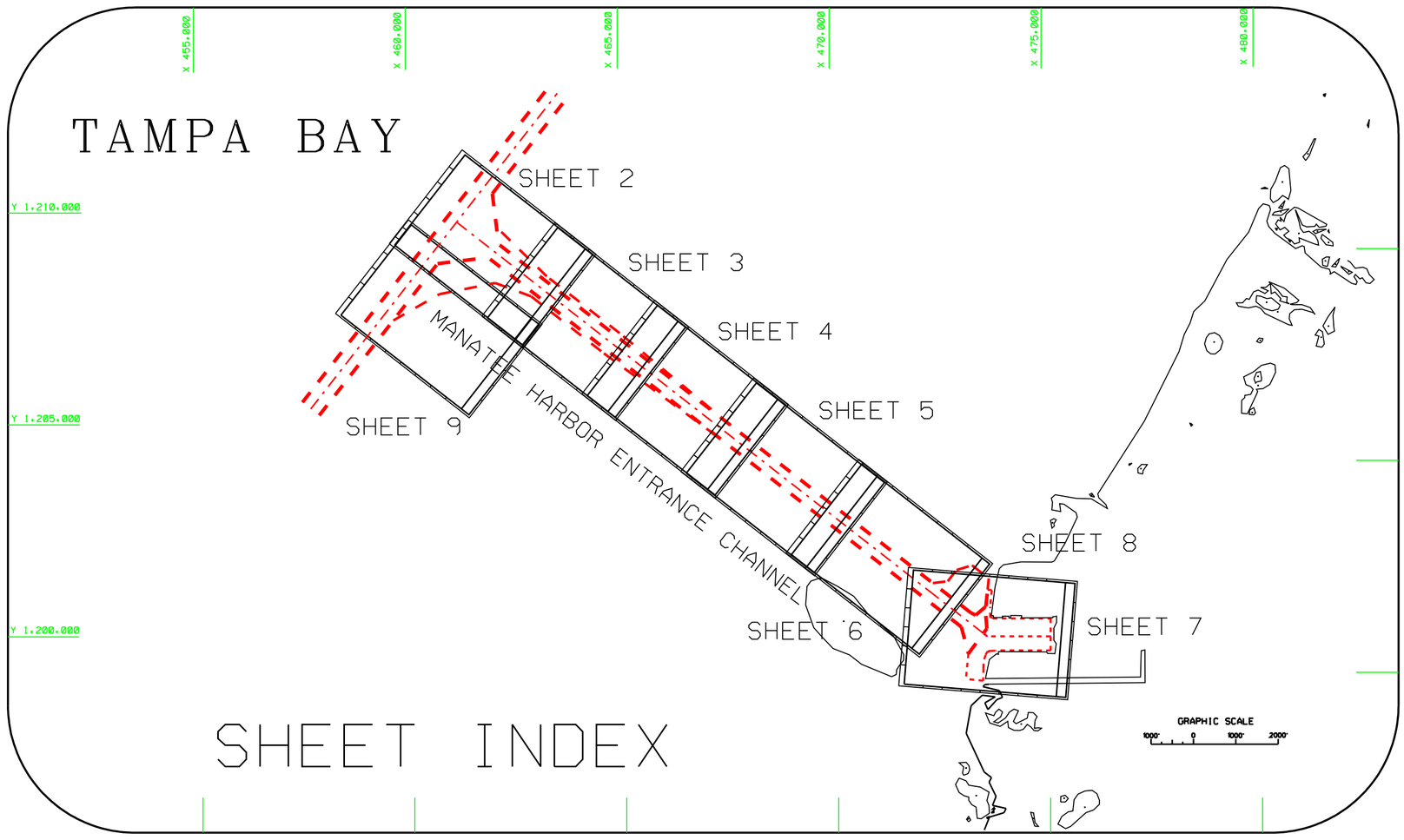
MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY





SURVEY NOTES:

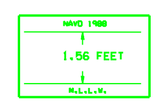
1. REFER TO SURVEY NO. 06-140.
2. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO MEAN LOWER LOW WATER (MLLW) WHICH IS 1.56 FEET BELOW NAVD 1988.
3. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (-) SIGN.
4. TIDAL REDUCTIONS WERE MADE FROM DATA OBTAINED FROM THE NOAA PORTS GAUGE LOCATED AT THE BANACAL TERMINAL AT PORT MANATEE.
5. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE WEST ZONE OF FLORIDA AND REFERENCED TO 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. SURVEY WAS PERFORMED USING DIFFERENTIAL GPS FOR POSITIONING AND UTILIZING THE USCG NAVBEACON SYSTEM AS THE REFERENCE SITE. VERTICAL MEASUREMENTS WERE MADE USING A RESON MULTI-BEAM ECHO SOUNDER A 200KHZ (HIGH FREQUENCY) HULL-MOUNTED TRANSDUCER.

VESSEL	DATE OF SURVEY	CUT
FLORIDA	15-17 AUG 2006	ENT. CHANNEL, TURNING BASIN

9. AIDS TO NAVIGATION WERE COLLECTED FOR 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 AND IS NOT TO BE USED FOR NAVIGATION.
11. SURVEY ACCURACY PERFORMANCE STANDARDS, QUALITY CONTROL, AND QUALITY ASURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 1 JAN 02.

TIDE STAFF AND BENCHMARK TABULATION	BENCHMARK	ELEV NGVD
BANACAL TERMINAL	NOAA PORTS	

LEGEND	
BM	BENCHMARK
	LIGHTED BEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
	TIDE STAFF



RELATIONSHIP BETWEEN NAVD 1988 AND NOAA MEAN LOWER LOW WATER TIDAL DATUM (1983-2001 EPOCH)

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

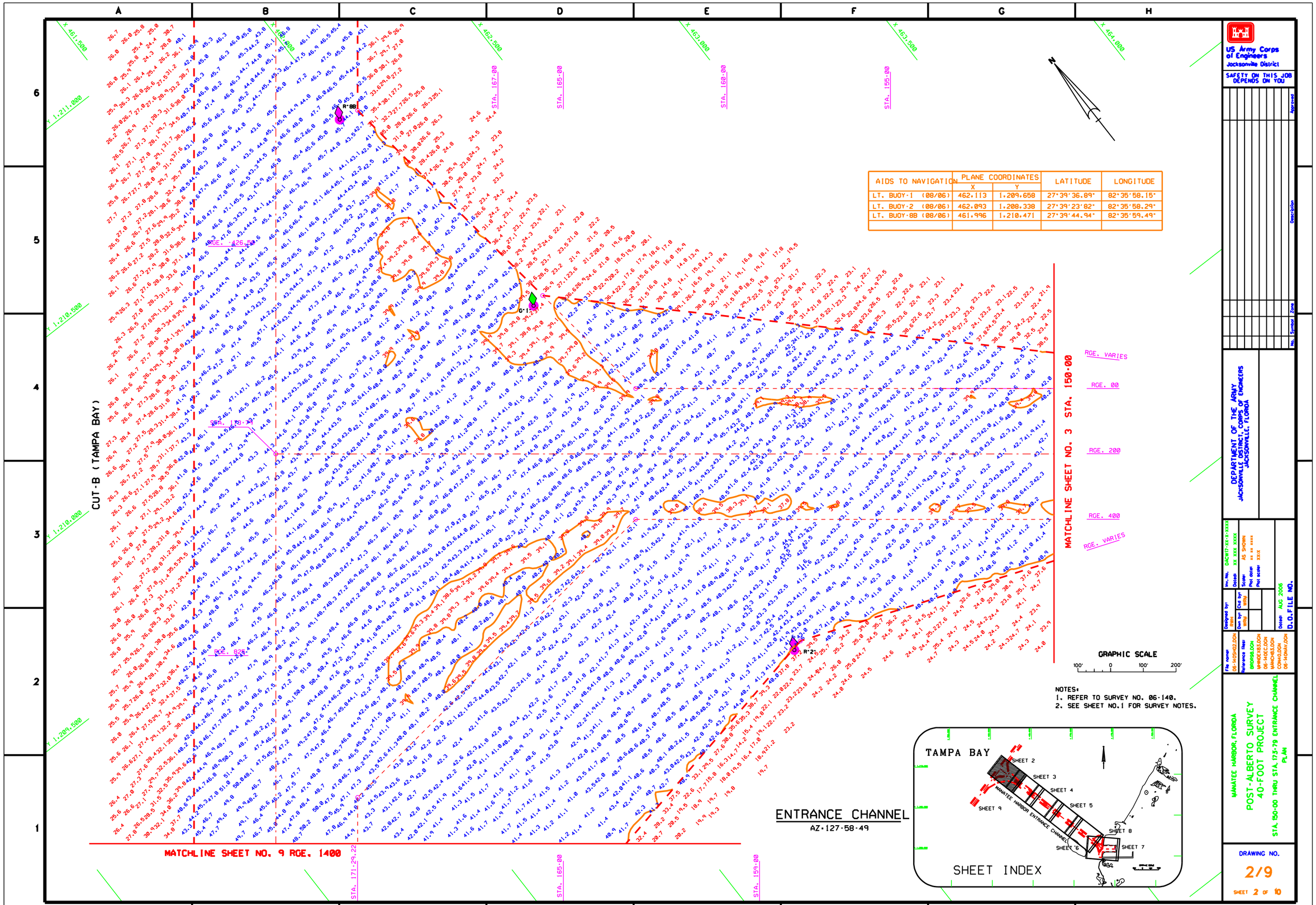
Inv. No. 06-140 Date: 17-18 AUG 2006
Date: X XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXXX

Designed by: TBW
Dwn by: TBW
Ckd by: TBW
Date: AUG 2006
D.O.FILE NO.

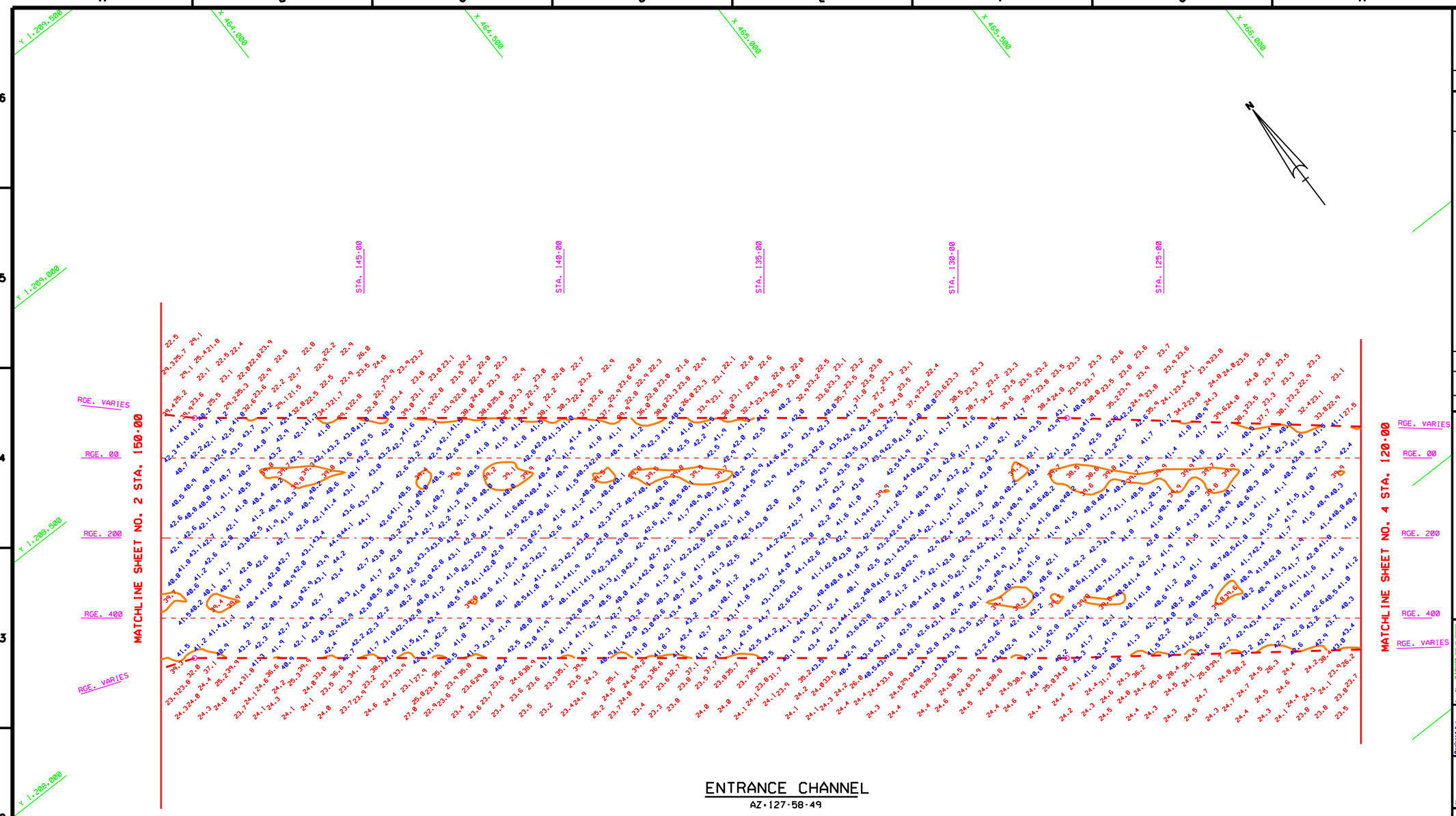
File name: 06-140SHOLOCH
Reference files: BSOUNDS.DGN, HCWFLMAP.DGN, MANHQC183.DGN

MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
ENTRANCE CHANNEL & TURNING BASIN
COVER SHEET

DRAWING NO.
1/9
SHEET 1 OF 10

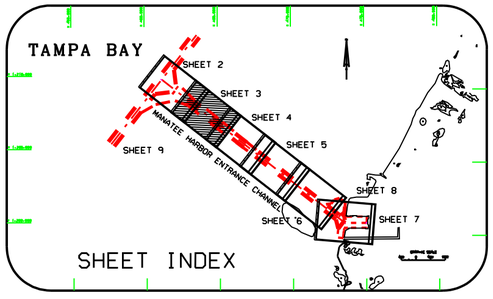


AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY-1 (08/06)	462.113	1,209.658	27°39'36.89"	82°35'58.15"
LT. BUOY-2 (08/06)	462.093	1,208.338	27°39'23.82"	82°35'58.29"
LT. BUOY-8B (08/06)	461.996	1,210.471	27°39'44.94"	82°35'59.49"



ENTRANCE CHANNEL

AZ=127-58-49



GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-140.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Date	Description	Approved

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

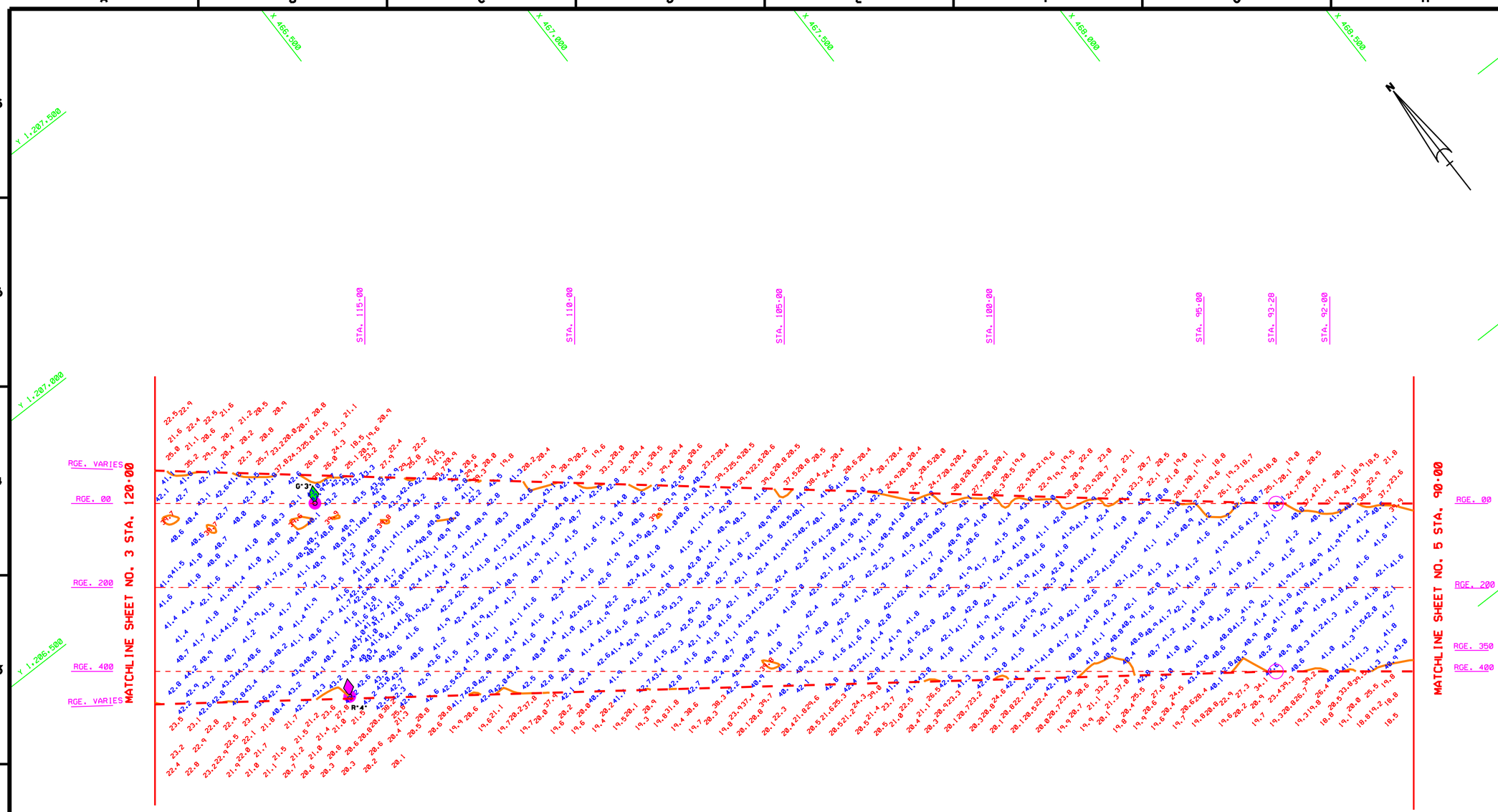
Proj. No. DACW17-XX-X-XXXX
Design XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXXX

Designed by: Plot
Dwn by: Chkd by:
Design AUG 2006
D.O.FILE NO.

File name: 06-140SHD3.DGN
Reference files: 06-140EC.DGN, 06-140SHD3.DGN, MANCHB3.DGN, MANDC183.DGN, CONA0.DGN

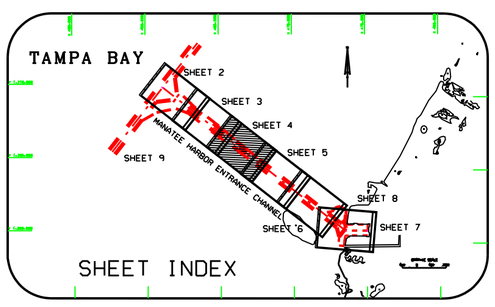
MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
STA. 120+00 THRU STA. 150+00 ENTRANCE CHANNEL
PLAN

DRAWING NO.
3/9
SHEET 3 OF 10



ENTRANCE CHANNEL

AZ=127-58-49



AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY-3 (08/06)	465,877	1,206,399	27°39'04.80"	82°35'16.11"
LT. BUOY-4 (08/06)	465,659	1,205,985	27°39'00.69"	82°35'18.51"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-140.
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	Approved

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

Inv. No. DACW17-04-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XX:X

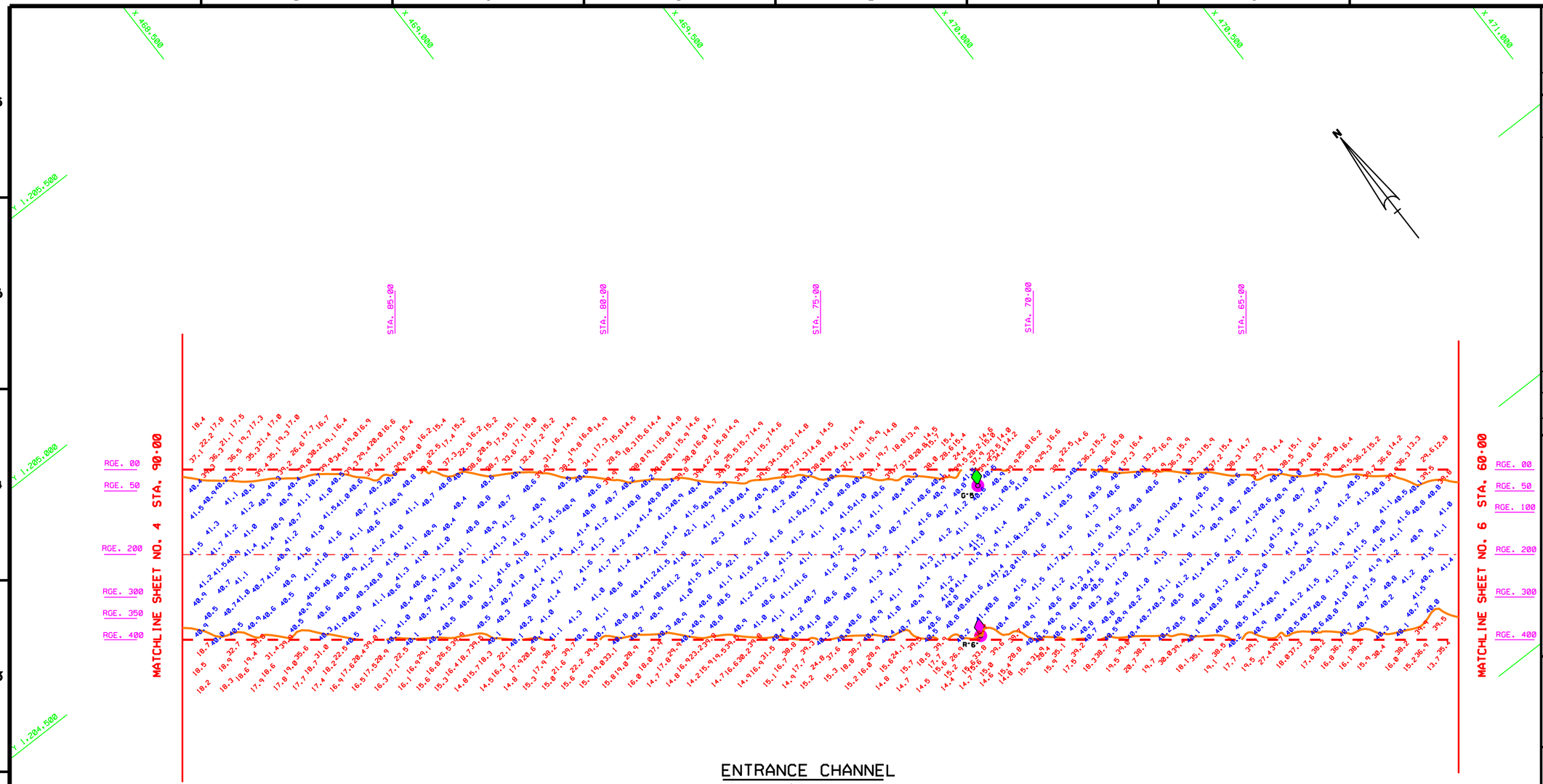
Designed by: TMH
Dwn by: SMW
Ckd by: SMW
Date: AUG 2006
D.O. FILE NO.

File name: 06-140SHO4.DGN
Reference files: BSOPS0.DGN MANHOE18S.DGN MANCHR3.DGN 06-140CC.DGN COMM.DGN 06-140MANV.DGN

MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
STA. 90+00 THRU STA. 120+00 ENTRANCE CHANNEL
PLAN

DRAWING NO.
4/9

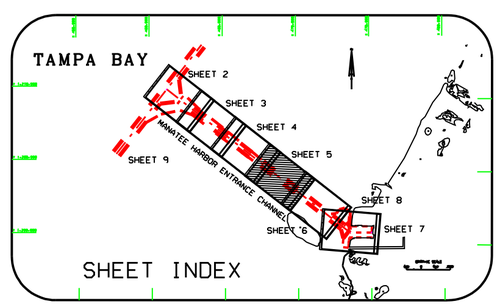
SHEET 4 OF 10



ENTRANCE CHANNEL

AZ·127-58-49

AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY·5 (08/06)	469,391	1,203,607	27°38'37.31"	82°34'36.89"
LT. BUOY·6 (08/06)	469,179	1,203,324	27°38'34.50"	82°34'39.23"



GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-140.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Date	Description	Approved

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

Inv. No. DACW17-98-C-0033
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXX

Designed by: Fish
Dwn by: BRW
Ckd by: BRW

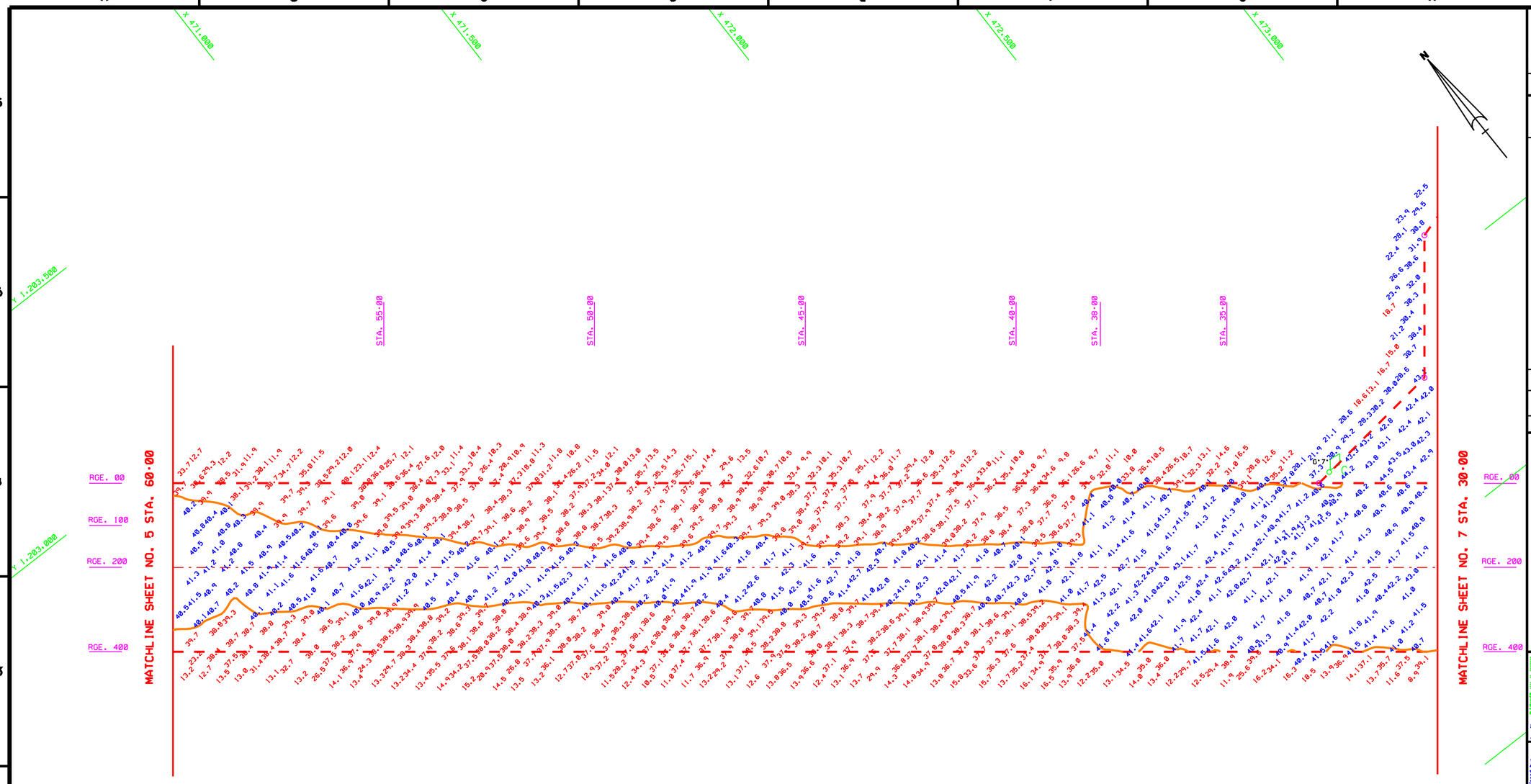
Dated: AUG 2006
D.O. FILE NO.

File name: 06-140SHEET5.DGN
Reference files: GRIDMAP.DGN
MANCHES.DGN
06-140C.DGN
COAST.DGN
06-140MAP.DGN

MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
STA. 60+00 THRU STA. 90+00 ENTRANCE CHANNEL
PLAN

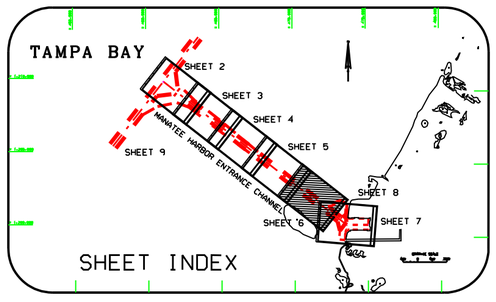
DRAWING NO.
5/9

SHEET 5 OF 10



ENTRANCE CHANNEL

AZ-127-58-49



AID TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
CAN BUOY-7 (08/06)	472.483	1.201.274	27°38'14.35"	82°34'02.38"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-140.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Date	Description	Approved

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

Designed by: TRH
Dwn by: SMW
Ckd by: SMW
Dwg No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXX

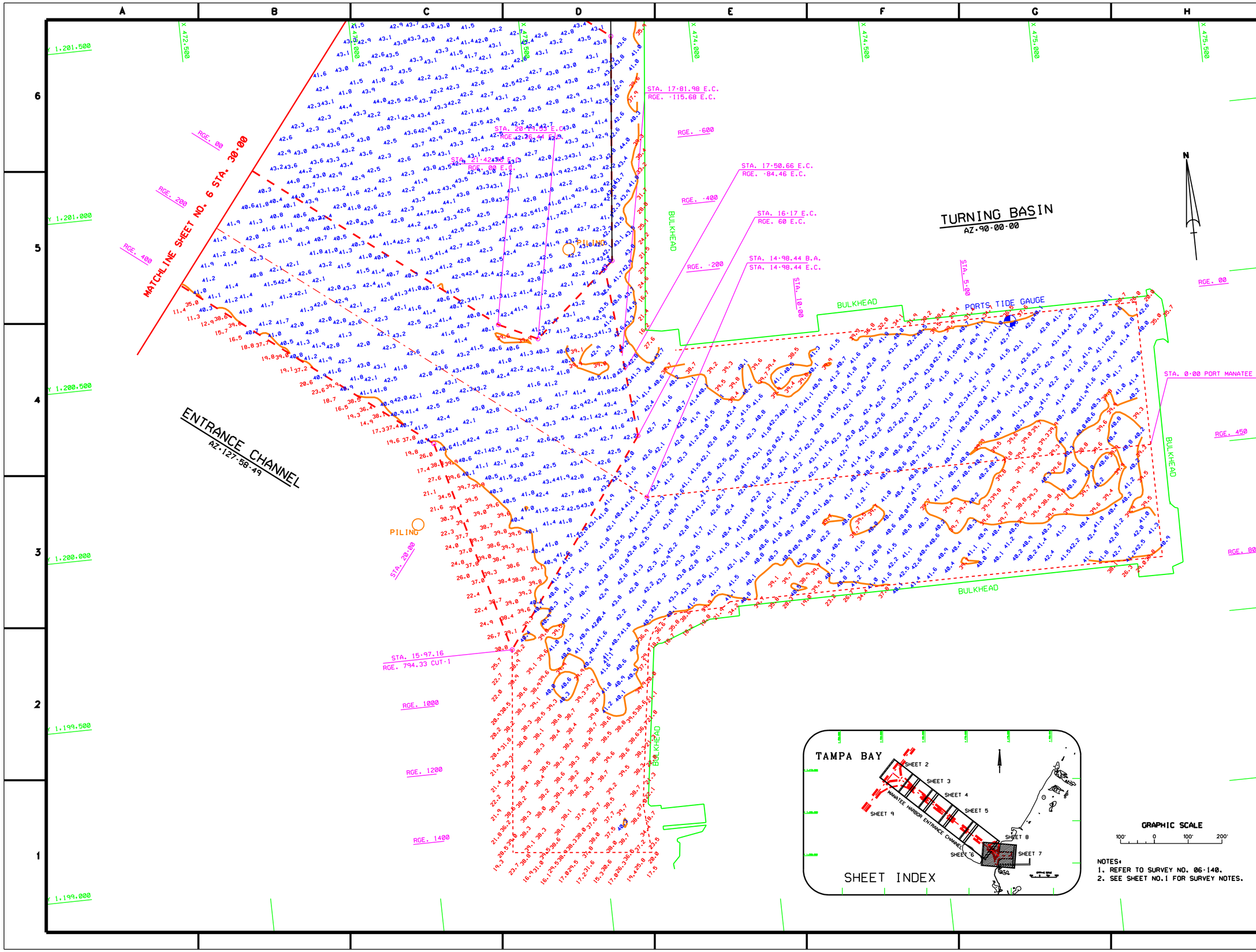
Dated: AUG 2006
D.O.FILE NO.

File name: 06-140SHEE.DGN
Reference files: 8SORGB.DGN MANCHB.DGN M-HOZ-XB.DGN M-VER-XB.DGN 06-140ALT.DGN 06-140RTE.DGN CONHD.DGN 06-140NAV.DGN

MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
STA.30+00 THRU STA.60+00 ENTRANCE CHANNEL
PLAN

DRAWING NO.
6/9

SHEET 6 OF 10



NOTES:
1. REFER TO SURVEY NO. 06-140.
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	Approved

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

Rev. No. DACW17-XX-X-XXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXX

Designed by: TMH
Dwn by: TMH
Ckd by: TMH

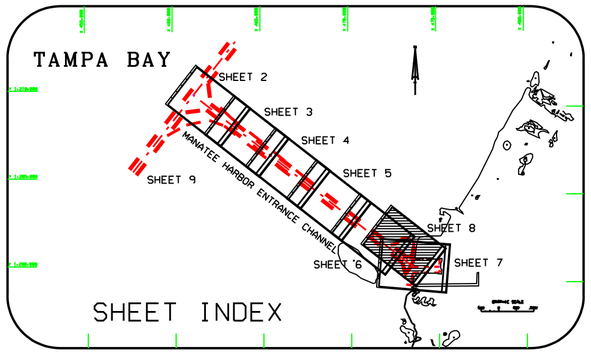
Date: AUG 2006
D.O. FILE NO.

File name: 06-140SHT7.DGN
Reference files: BSDRSB.DGN MANGES.DGN 06-140CL.DGN 06-140CC.DGN 06-140VB.DGN 06-140BERTH.DGN 06-140BERTH1.DGN CONTOUR.DGN CORE2.DGN

MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
STA. 0+00 TURNING BASIN THRU STA. 30+00
ENTRANCE CHANNEL
PLAN

DRAWING NO.
7/9

SHEET 7 OF 10



AID TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
CAN BUOY-7 (08/06)	472,483	1,201,274	27°38'14.35"	82°34'02.38"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-140.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Date	Description	Approved

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

Dwg. No. DACW17-XX-X-XXXX
Dates: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXXX

Designed by: PROJ
Dwn by: PROJ
Ckd by: PROJ

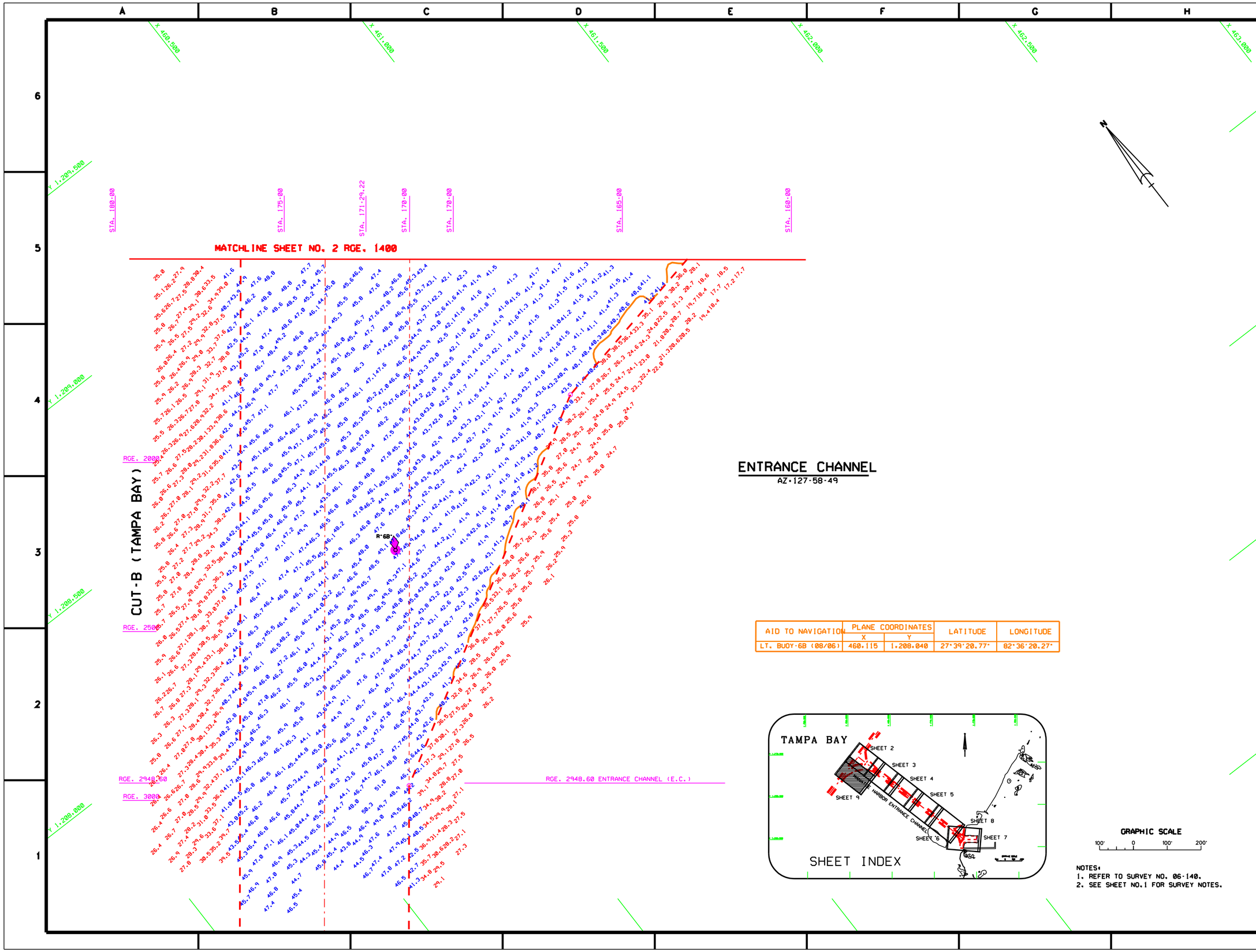
Dates: AUG 2006
D.O.FILE NO. XXX-XX.XXX

File name: 06-140SHEET8.DGN
Reference files: BROOKS.DGN, MANCHES.DGN, 06-140NTB.DGN, CONGO.DGN, MANGE.XS3.DGN, 06-140MAP.DGN

MANATEE HARBOR, FLORIDA
POST-ALBERTO SURVEY
40-FOOT PROJECT
PROPOSED TURNING BASIN
PLAN

DRAWING NO.
8/9

SHEET 8 OF 10



AID TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-6B (08/06)	460.115	1,208.040	27°39'20.77"	82°36'20.27"

NOTES:
1. REFER TO SURVEY NO. 06-140.
2. SEE SHEET NO.1 FOR SURVEY NOTES.