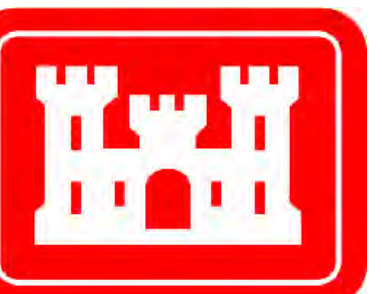
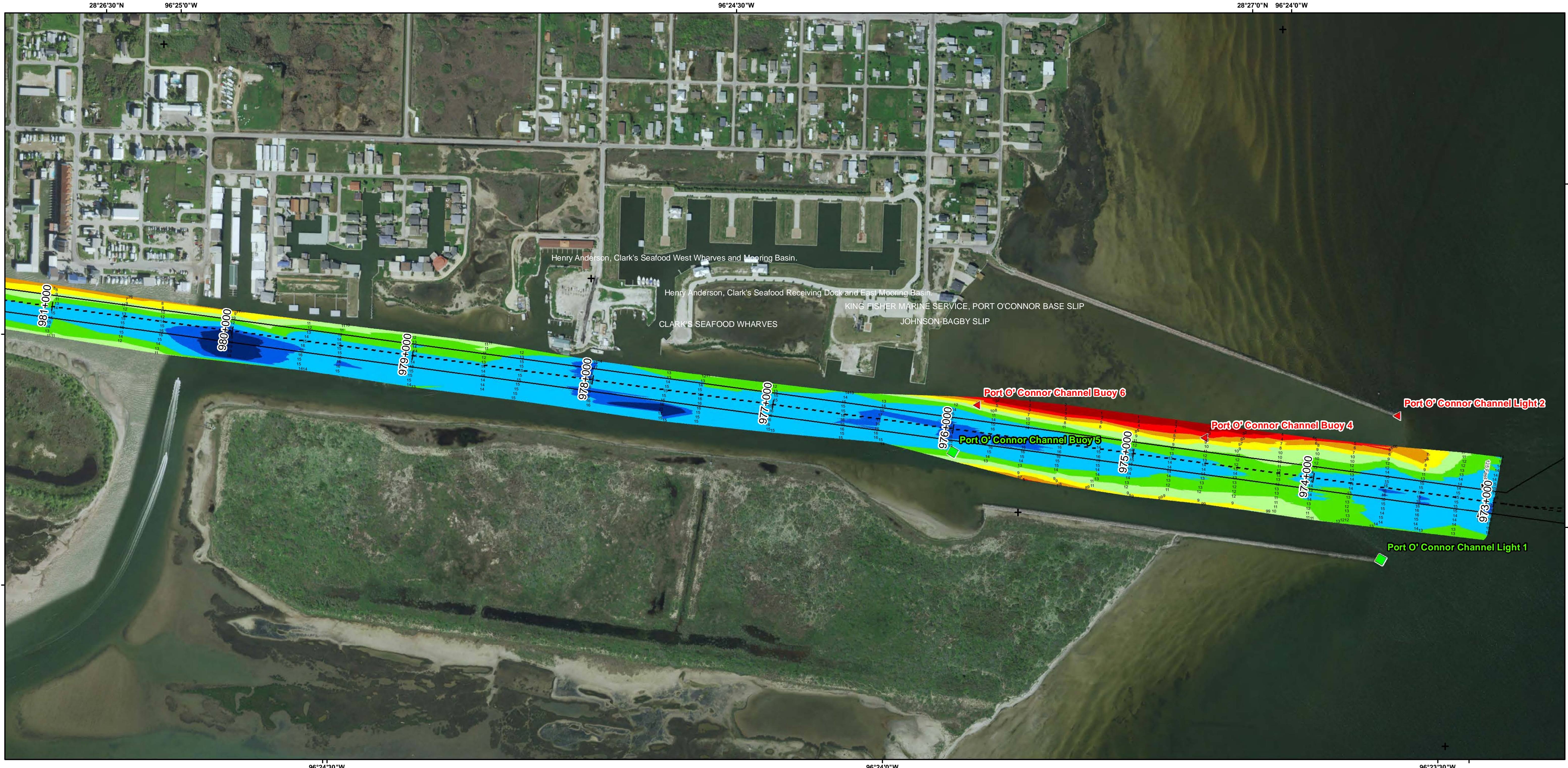
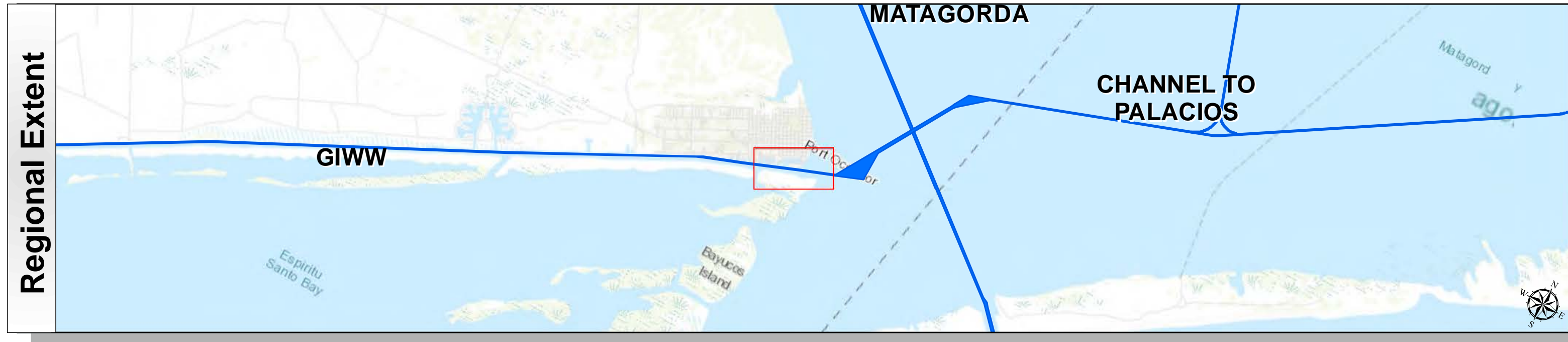


Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



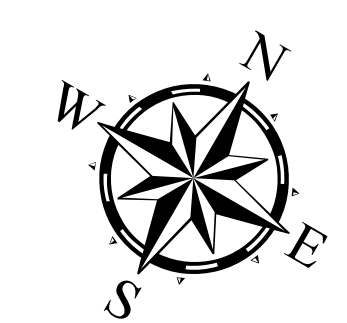
U.S. Army Corps of Engineers
Galveston District



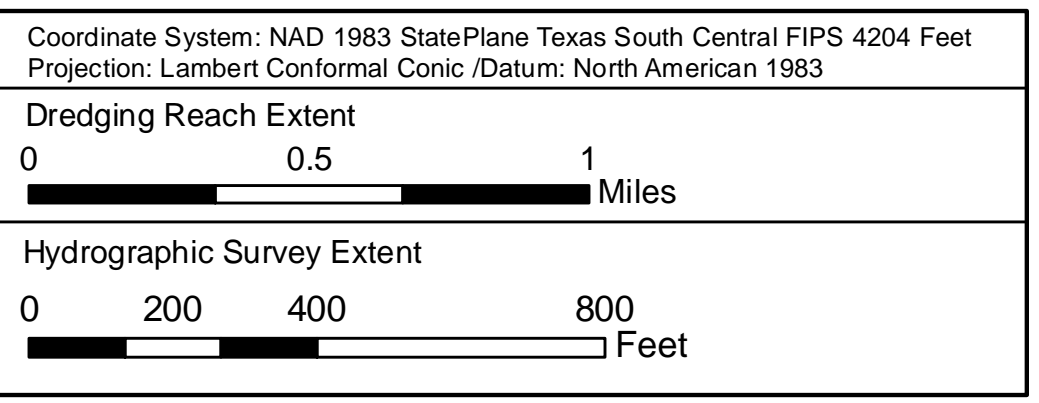
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	Color scale from >4 to <18
- - - Channel Center Line	▲ Red Side Aids	NOAA Bathymetry (DREDGING REACH EXTENT)
— Channel Station Lines	■ Green Side Aids	0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50
↔ Channel Dimensions	◆ Mooring Buoy	

NOTES:
 1. HORIZONTAL COORDINATES ARE REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE NAD83 US SURVEY FEET.
 2. ELEVATIONS ARE REFERENCED TO MEAN LOWER LOW TIDE (MLLW) DATUM.
 3. THIS PROJECT WAS DESIGNED BY THE GALVESTON DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS AND SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER1110-1-8152.

4. THE INFORMATION DEPICTED ON THIS SURVEY MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REQUIRED BY 33 CFR 209.325
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 6. NOAA BATHYMETRY CONTOURS PRODUCED FROM HISTORIC BATHYMETRIC (HYDROGRAPHIC) SURVEYS CONDUCTED BY THE NOAA NATIONAL OCEAN SERVICE/COAST SURVEY, AVAILABLE FROM THE NATIONAL GEOPHYSICAL DATA CENTER. SURVEYS VARY AS TO SOUNDING DENSITY, ACCURACY OF DEPTH, ACCURACY OF NAVIGATION, ZERO DATUM, DATE OF SURVEY AND TYPE OF INSTRUMENTATION.



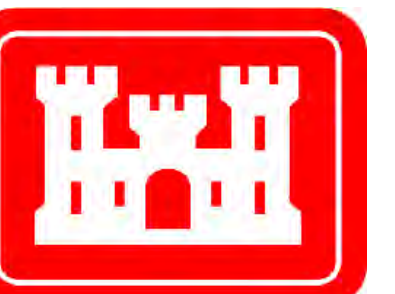
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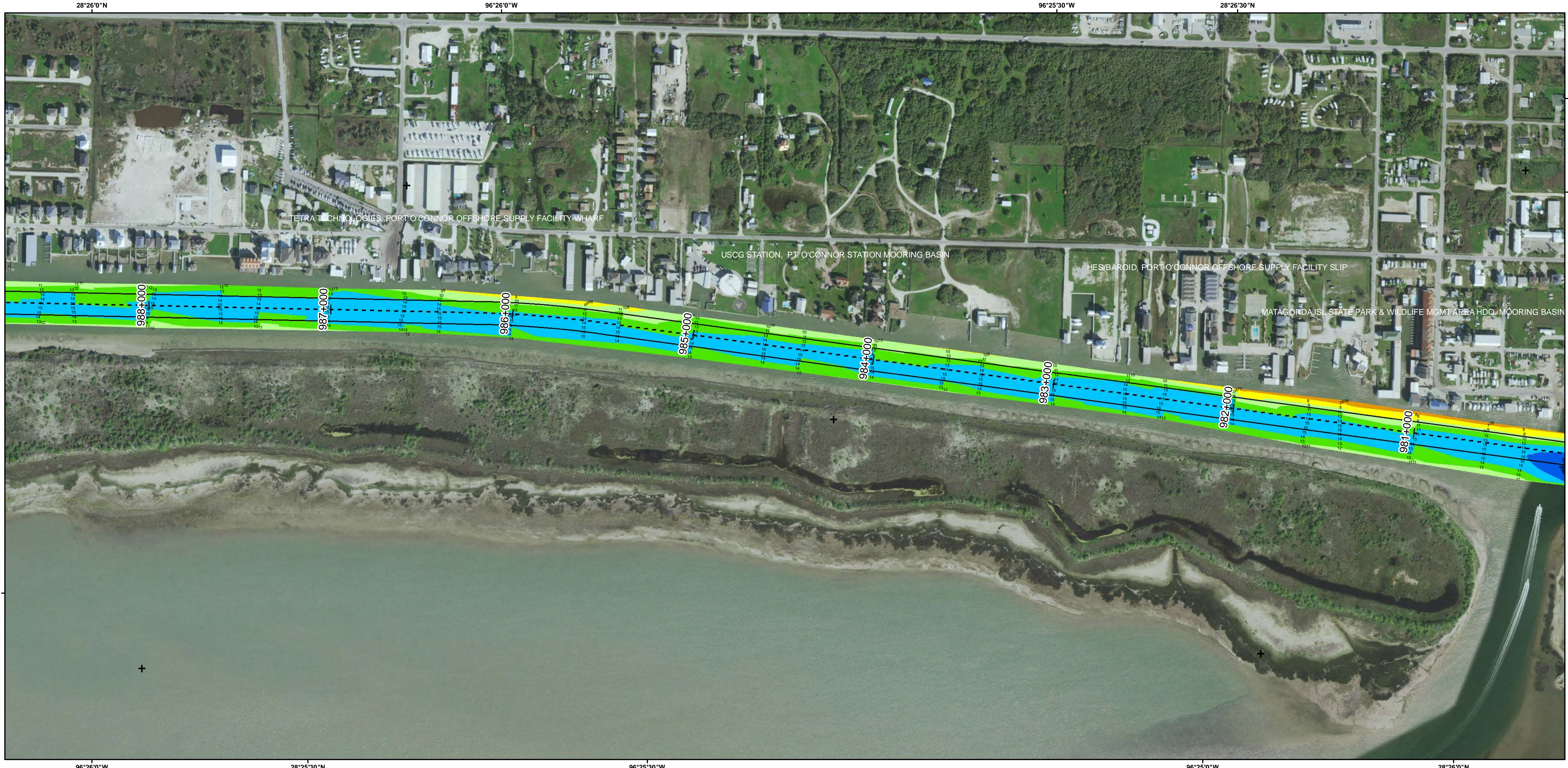
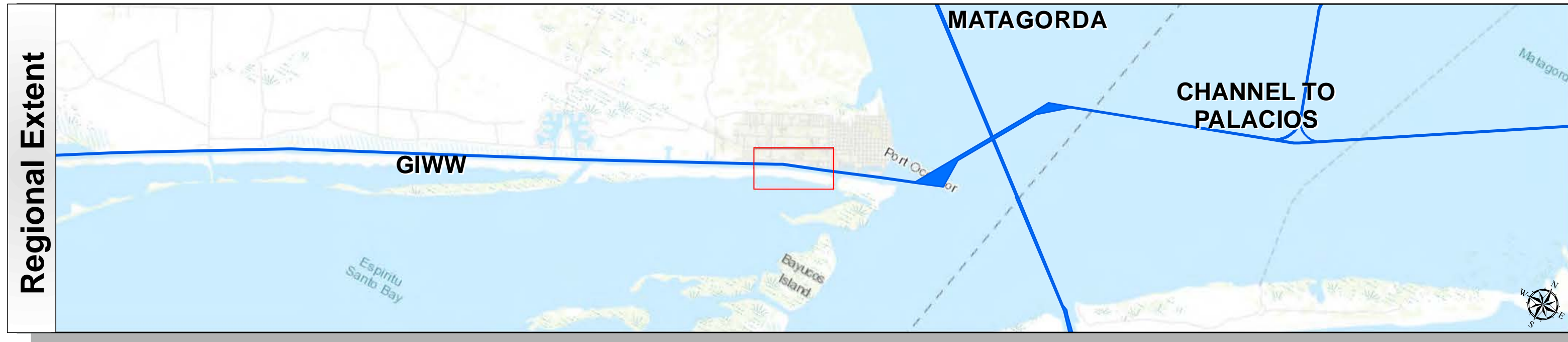
Survey Date(s): 11 April 2018	Authorized Depth: -14ft.
Page: 140 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: M3A0XPAC	Print Date: 4/12/2018
Additional Info:	

HYDROGRAPHIC SURVEY
 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 GALVESTON, TEXAS
 Port O'Connor to San Antonio Bay
Station: 972+939.05 to 1070+753.30
 GIWW
 PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



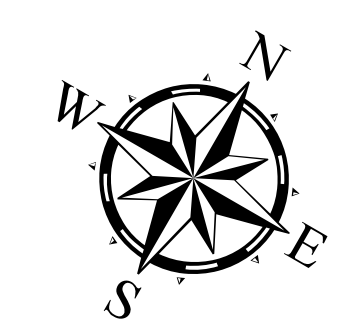
U.S. Army Corps of Engineers
Galveston District



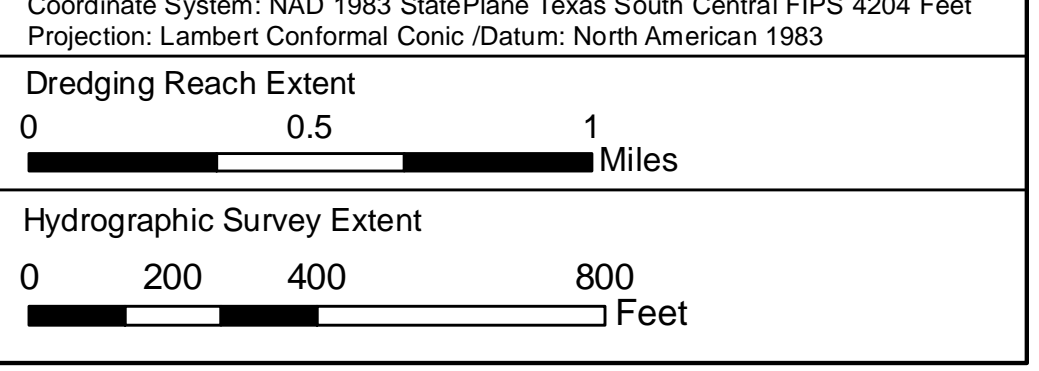
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	Color scale from 0 to 18 feet
- - - Channel Center Line	▲ Red Side Aids	NOAA Bathymetry (DREDGING REACH EXTENT)
— Channel Station Lines	■ Green Side Aids	0 - 10, 10 - 15, 15 - 20, 20 - 25, 25 - 30, 30 - 50
↔ Channel Dimensions	◆ Mooring Buoy	

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

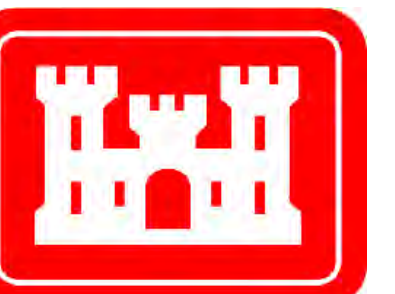


Survey Date(s): 11 April 2018	Authorized Depth: -1.4ft.
Page: 141 of 190	Side Slope Ratio: (Rise : Run)
Map:	Additional Imagery: © DigitalGlobe Inc.
Scale: 1:3,200	Print Date: 4/12/2018
Mapped by: M3AOXPAC	Additional Info:

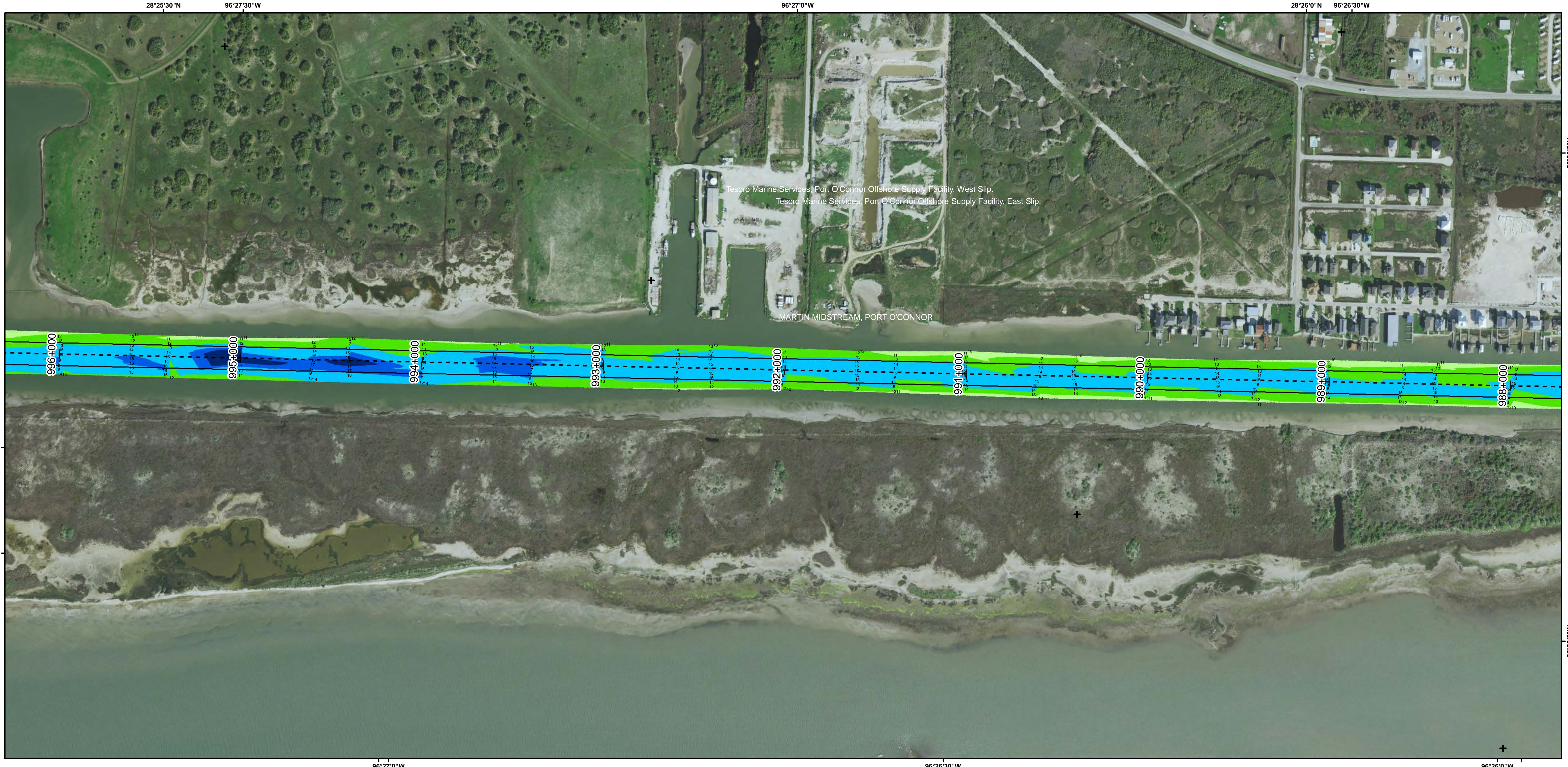
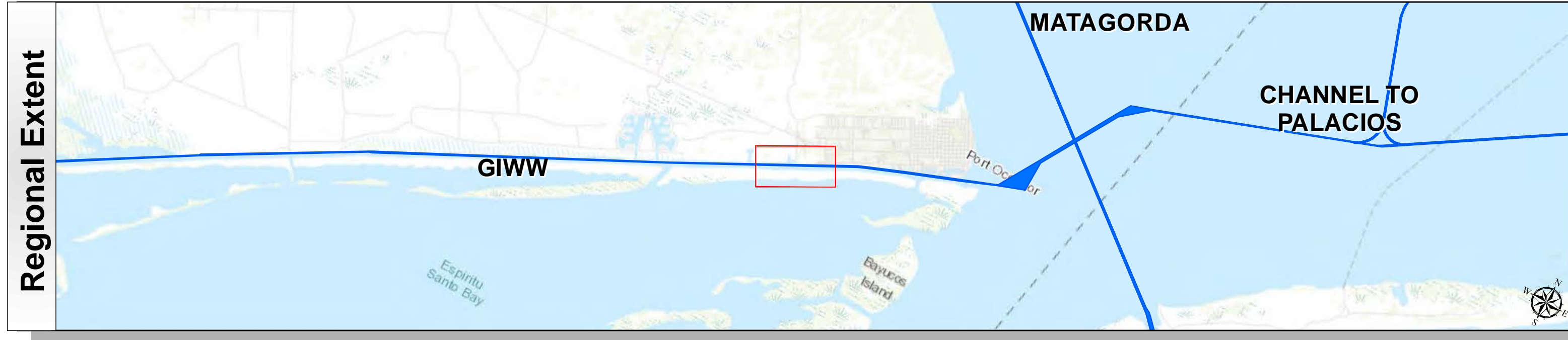
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Port O'Connor to San Antonio Bay

Station: 972+939.05 to 1070+753.30
GIWW
PORT O'CONNOR, TEXAS

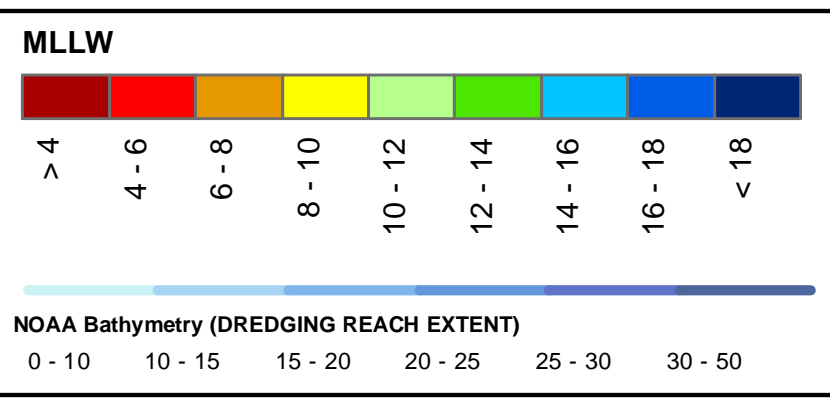
Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District



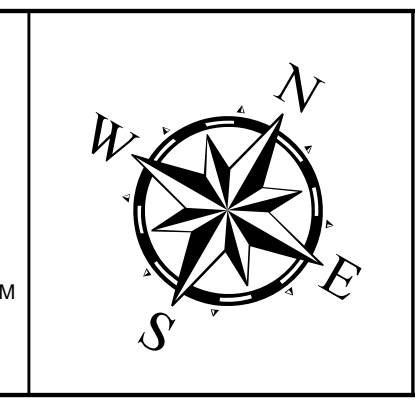
Channel Features	Aids to Navigation
— Channel Toe	★ Lights
- - - Channel Center Line	▲ Red Side Aids
— Channel Station Lines	■ Green Side Aids
↔ Channel Dimensions	◆ Mooring Buoy



NOTES:

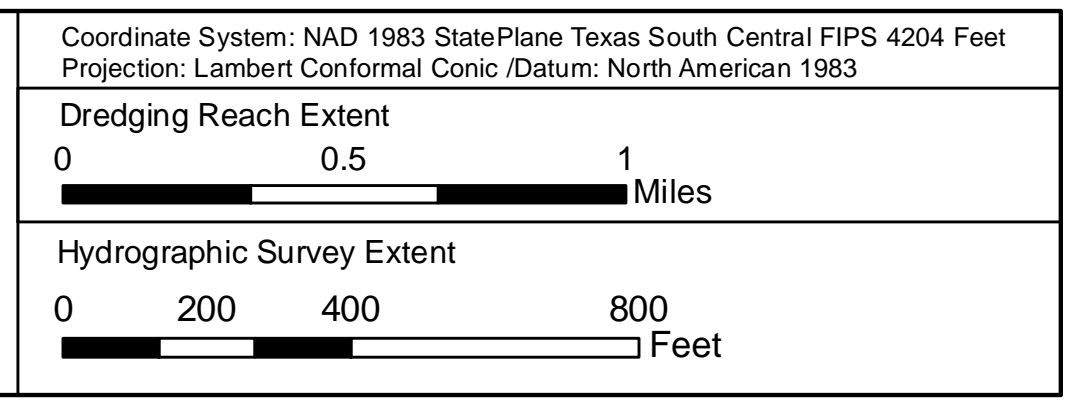
- HORIZONTAL COORDINATES ARE REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE NAD83 US SURVEY FEET.
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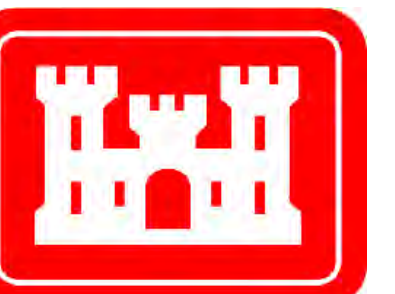


Survey Date(s): 11 April 2018	Authorized Depth: -14ft.
Page: 142 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 4/12/2018
Additional Info:	

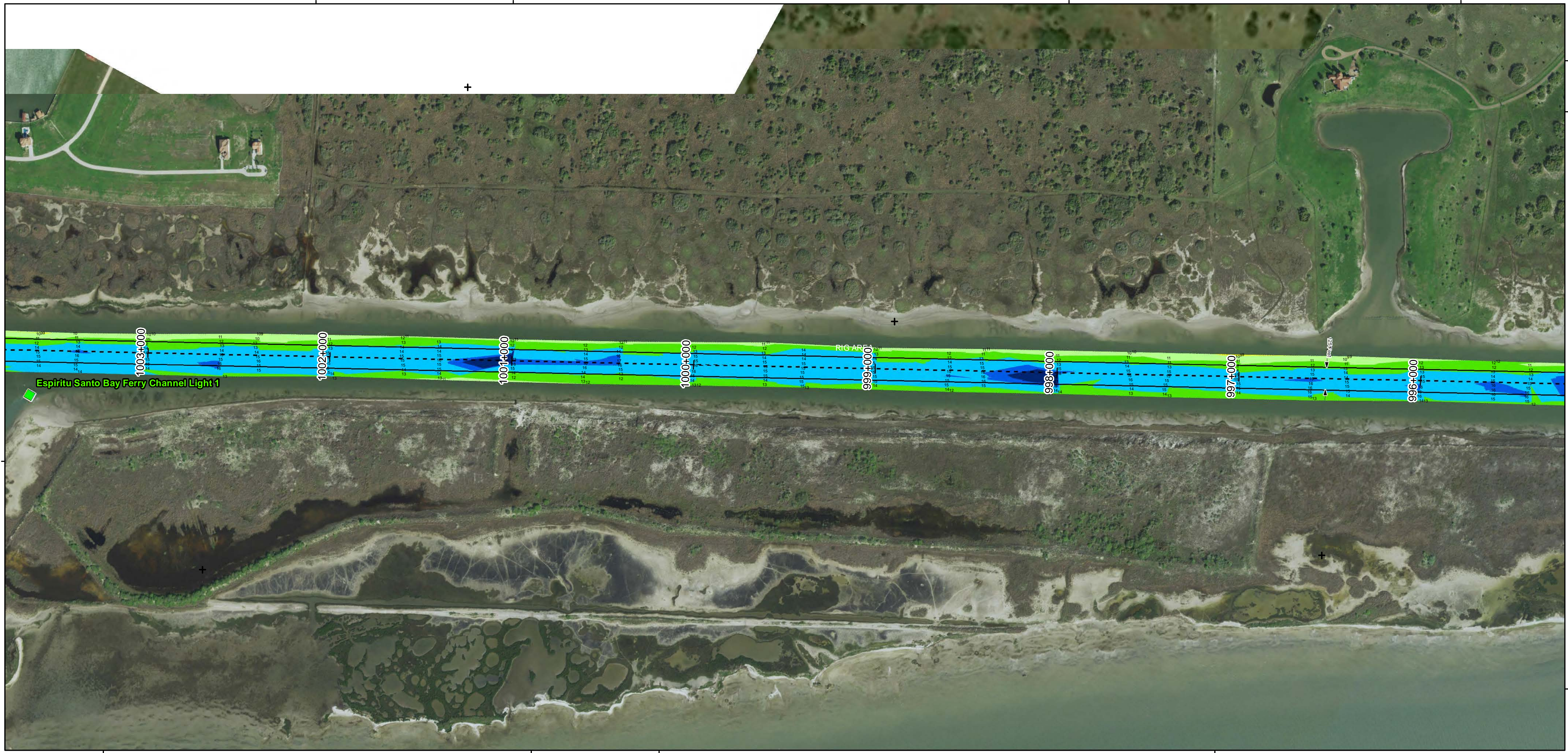
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Port O'Connor to San Antonio Bay

Station: 972+939.05 to 1070+753.30
GIWW
PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



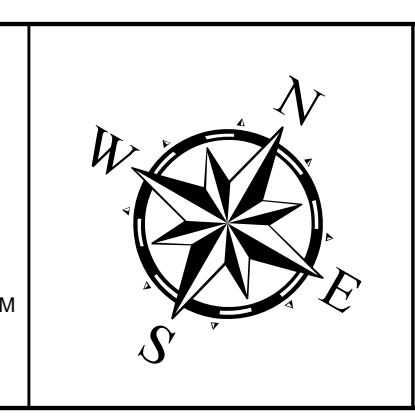
U.S. Army Corps of Engineers
Galveston District



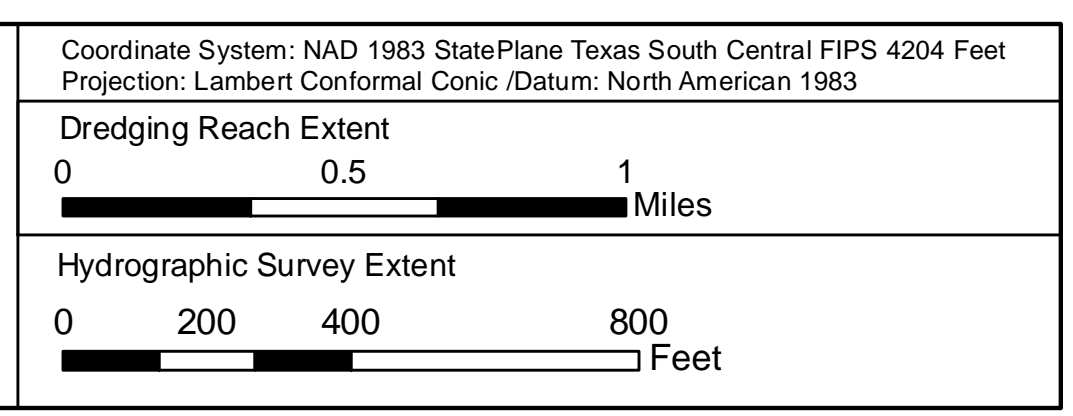
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Channel Toe	★ Lights	Color scale for depth: > 4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, < 18
Channel Center Line	▲ Red Side Aids	NOAA Bathymetry (DREDGING REACH EXTENT)
Channel Station Lines	■ Green Side Aids	0 - 10, 10 - 15, 15 - 20, 20 - 25, 25 - 30, 30 - 50
Channel Dimensions	◆ Mooring Buoy	

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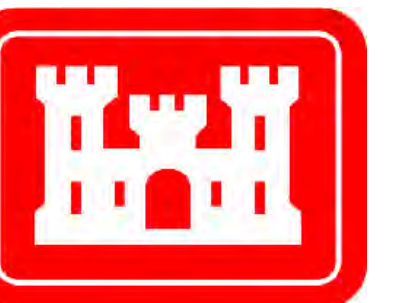
Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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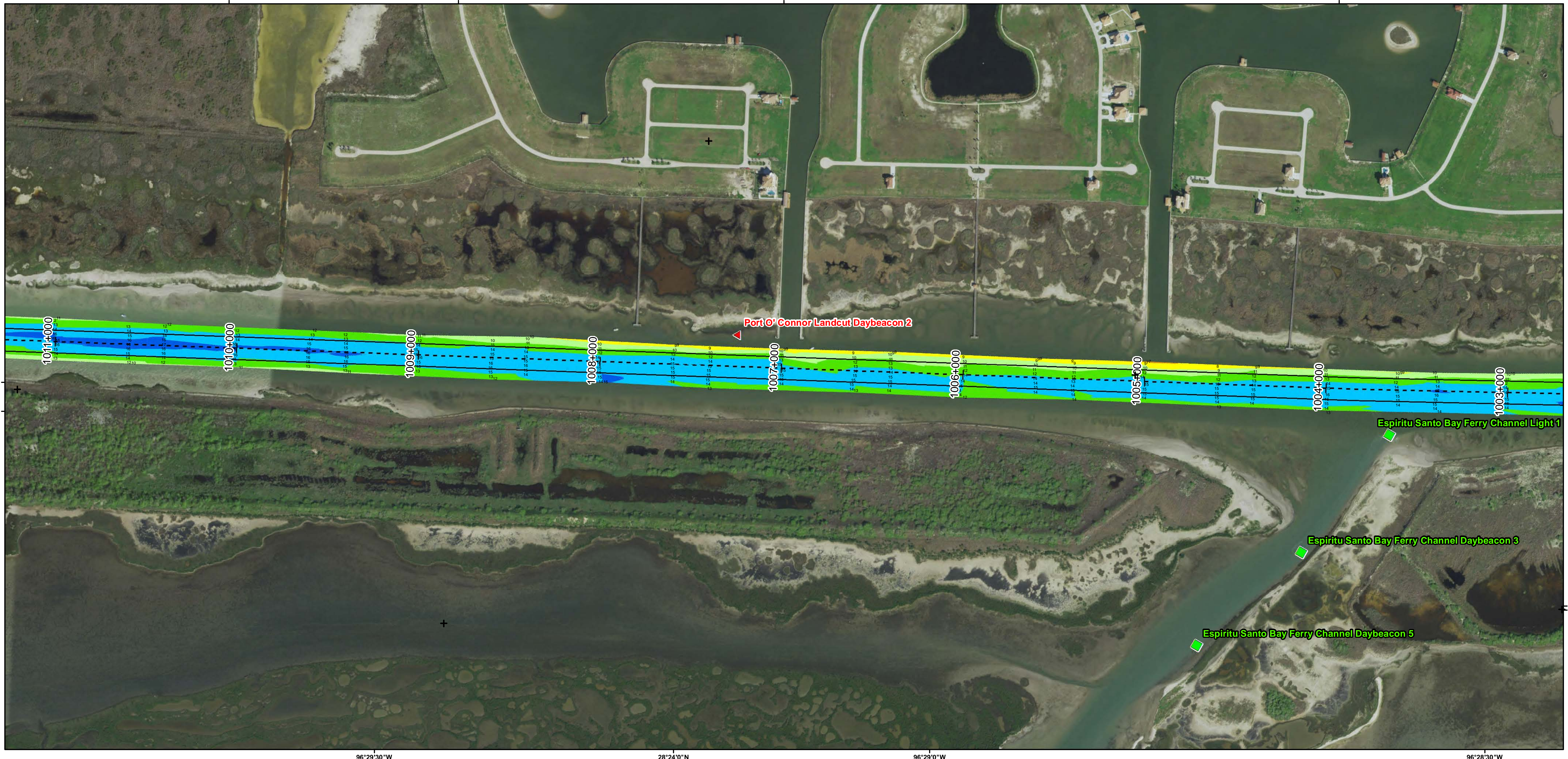
Survey Date(s): 11 April 2018	Authorized Depth: -1.4ft.
Page: 143 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 4/12/2018
Additional Info:	

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CORPS OF ENGINEERS
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Port O'Connor to San Antonio Bay
Station: 972+939.05 to 1070+753.30
GIWW
PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District



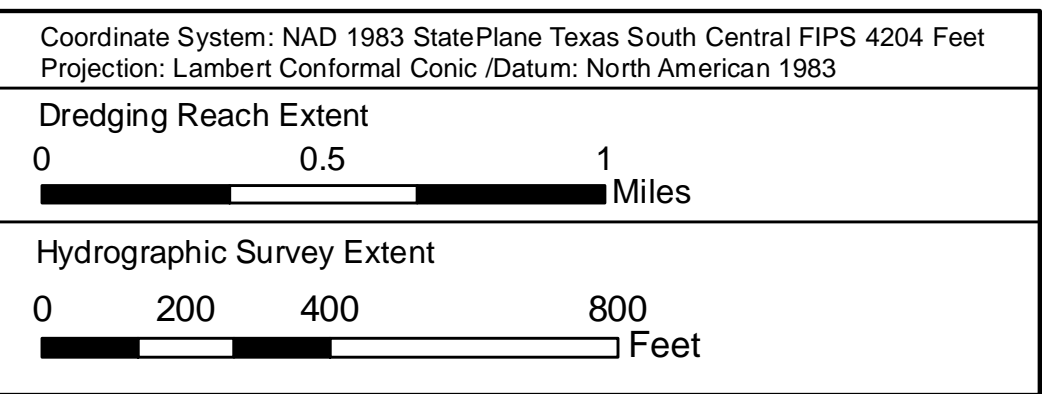
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— Channel Toe	★ Lights	Color scale for MLLW: > 4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, < 18
- - - Channel Center Line	▲ Red Side Aids	NOAA Bathymetry (DREDGING REACH EXTENT)
— Channel Station Lines	■ Green Side Aids	0 - 10, 10 - 15, 15 - 20, 20 - 25, 25 - 30, 30 - 50
↔ Channel Dimensions	◆ Mooring Buoy	

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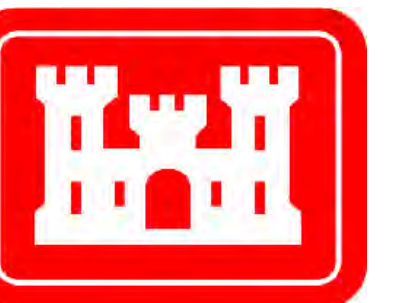
Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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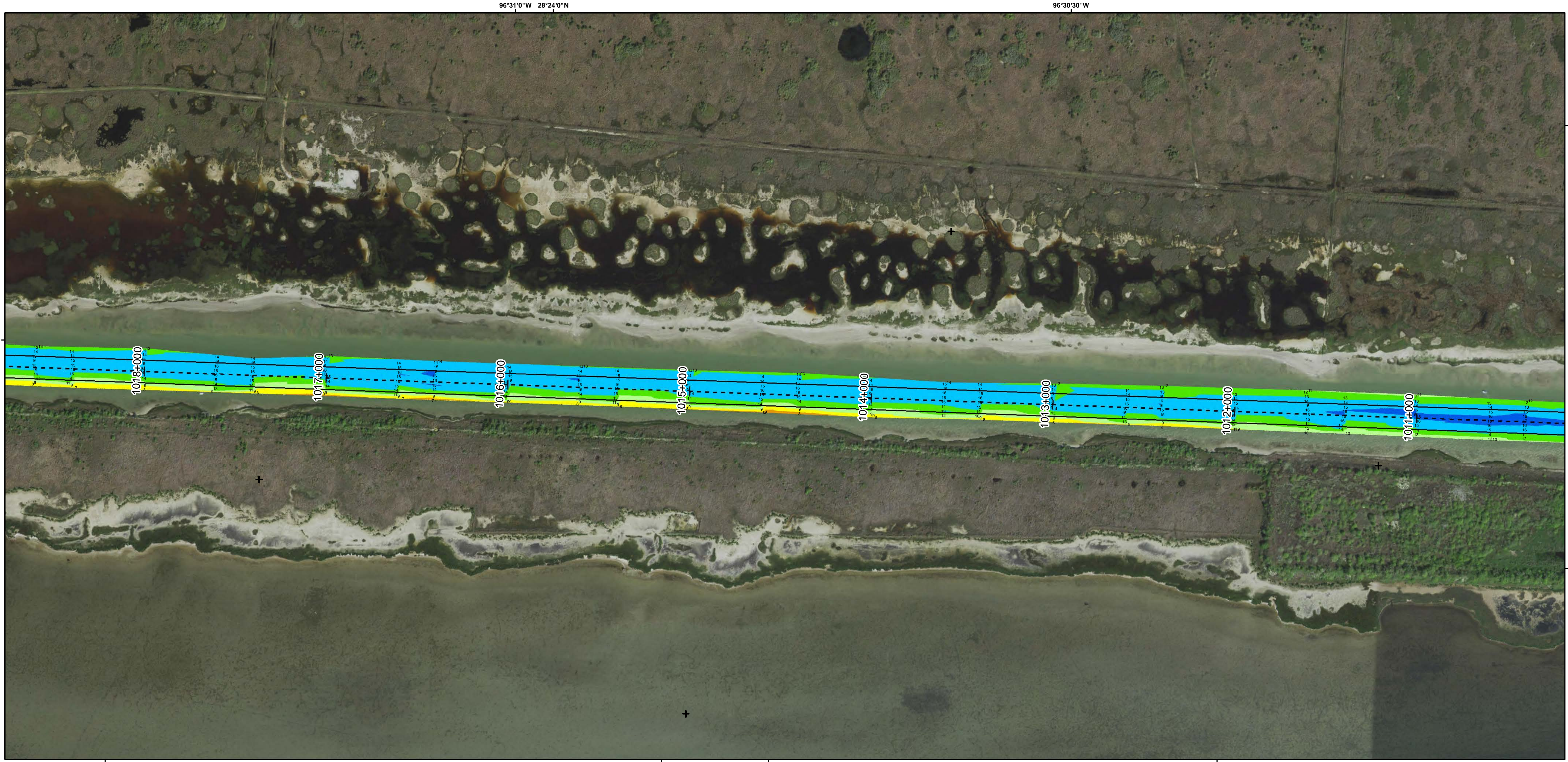
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Page: 144 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
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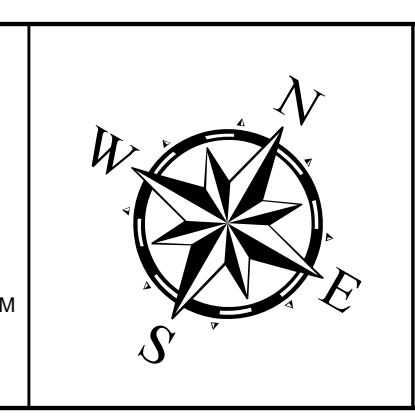
U.S. Army Corps of Engineers
Galveston District



Channel Features	Aids to Navigation	MLLW
Channel Toe	★ Lights	≥ 4
Channel Center Line	▲ Red Side Aids	4 - 6
Channel Station Lines	■ Green Side Aids	6 - 8
Channel Dimensions	◆ Mooring Buoy	8 - 10
		10 - 12
		12 - 14
		14 - 16
		16 - 18
		< 18
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

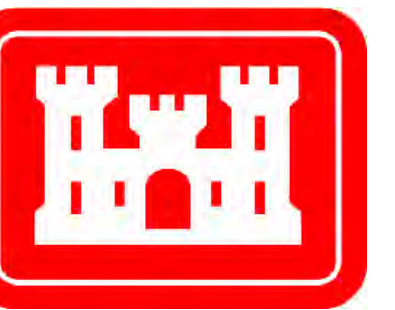
Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet Projection: Lambert Conformal Conic /Datum: North American 1983
Dredging Reach Extent 0 0.5 1 Miles
Hydrographic Survey Extent 0 200 400 800 Feet

Survey Date(s): 11 April 2018	Authorized Depth: -14ft.
Page: 145 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 4/12/2018
Additional Info:	

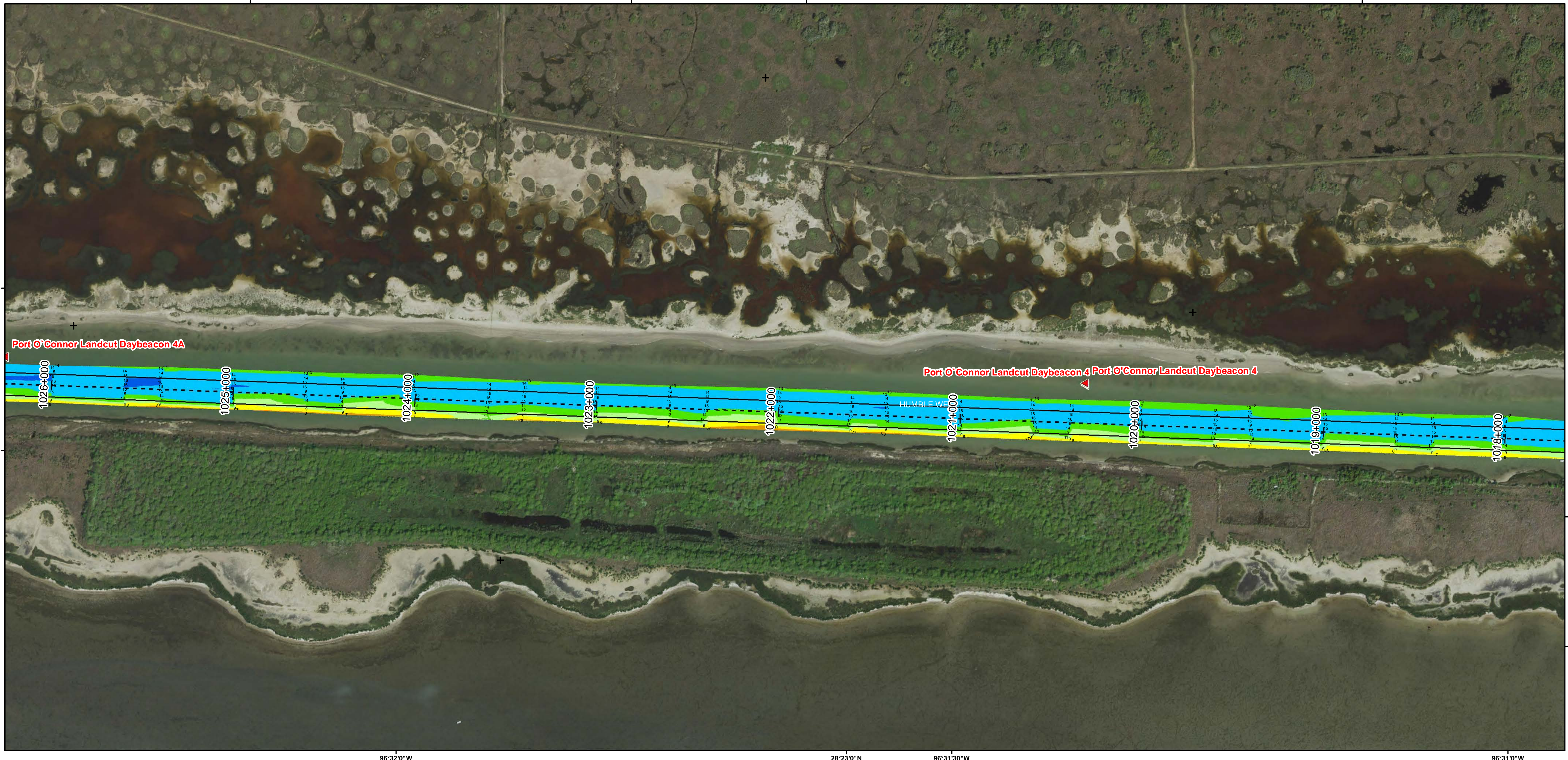
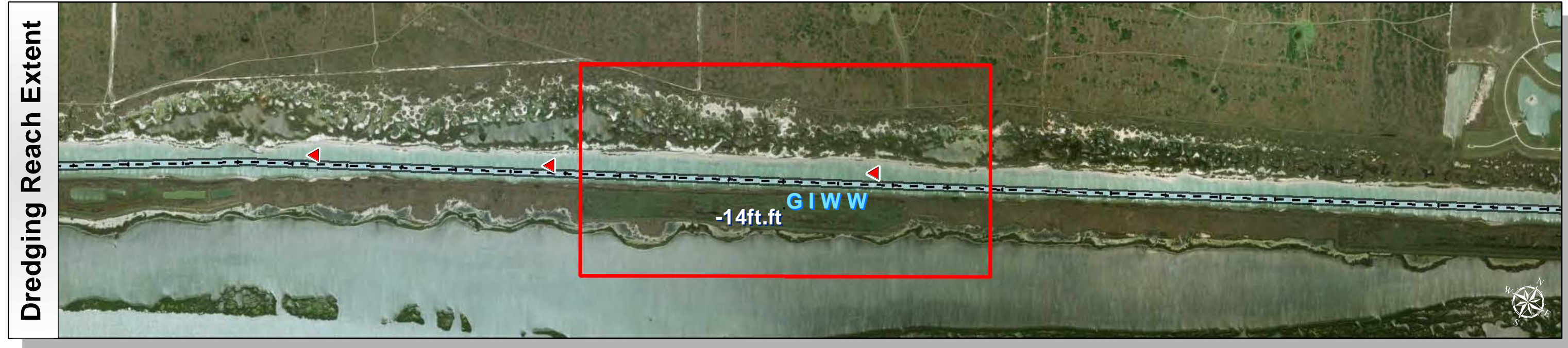
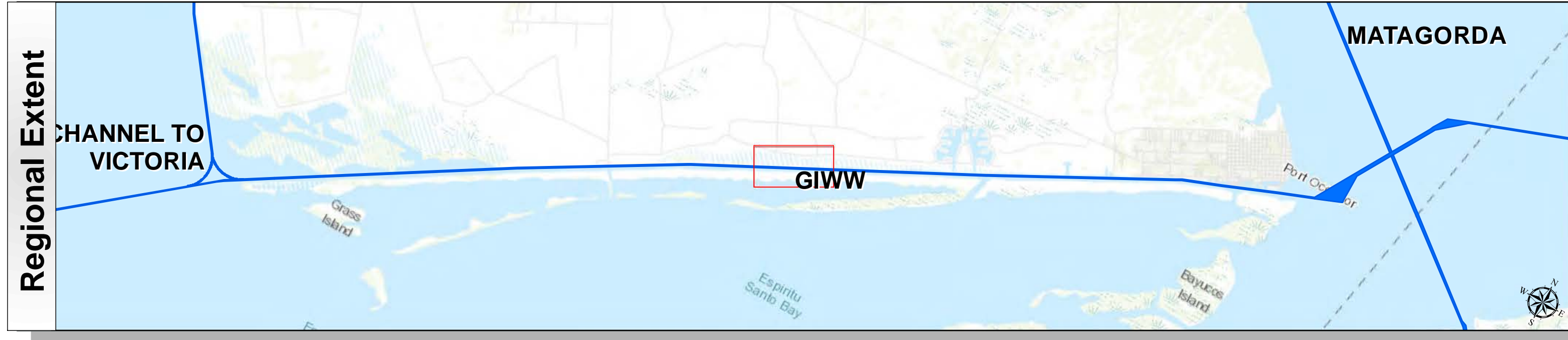
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Port O'Connor to San Antonio Bay

Station: 972+939.05 to 1070+753.30
GIWW
PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District



Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	≥ 4
- - - Channel Center Line	▲ Red Side Aids	4 - 6
— Channel Station Lines	■ Green Side Aids	6 - 8
↔ Channel Dimensions	◆ Mooring Buoy	8 - 10
		10 - 12
		12 - 14
		14 - 16
		16 - 18
		< 18
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

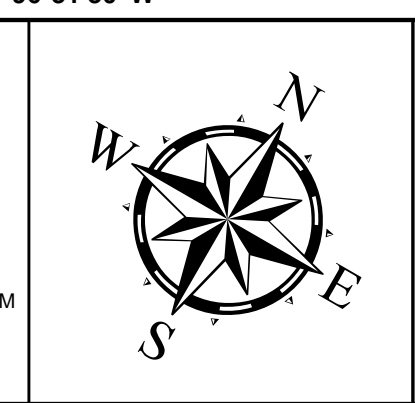
NOTES:

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6. NOAA BATHYMETRY CONTOURS PRODUCED FROM HISTORIC BATHYMETRIC (HYDROGRAPHIC) SURVEYS CONDUCTED BY THE NOAA NATIONAL OCEAN SERVICE/COAST SURVEY, AVAILABLE FROM THE NATIONAL GEOPHYSICAL DATA CENTER. SURVEYS VARY AS TO SOUNDING DENSITY, ACCURACY OF DEPTH, ACCURACY OF NAVIGATION, ZERO DATUM, DATE OF SURVEY AND TYPE OF INSTRUMENTATION.



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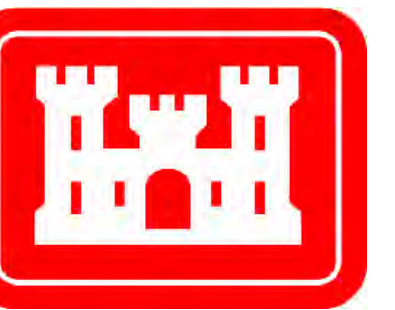
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Dredging Reach Extent 0 0.5 1 Miles
Hydrographic Survey Extent 0 200 400 800 Feet

Survey Date(s): 11 April 2018	Authorized Depth: -14ft.
Page: 146 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: M3A0XPAC	Print Date: 4/12/2018
Additional Info:	

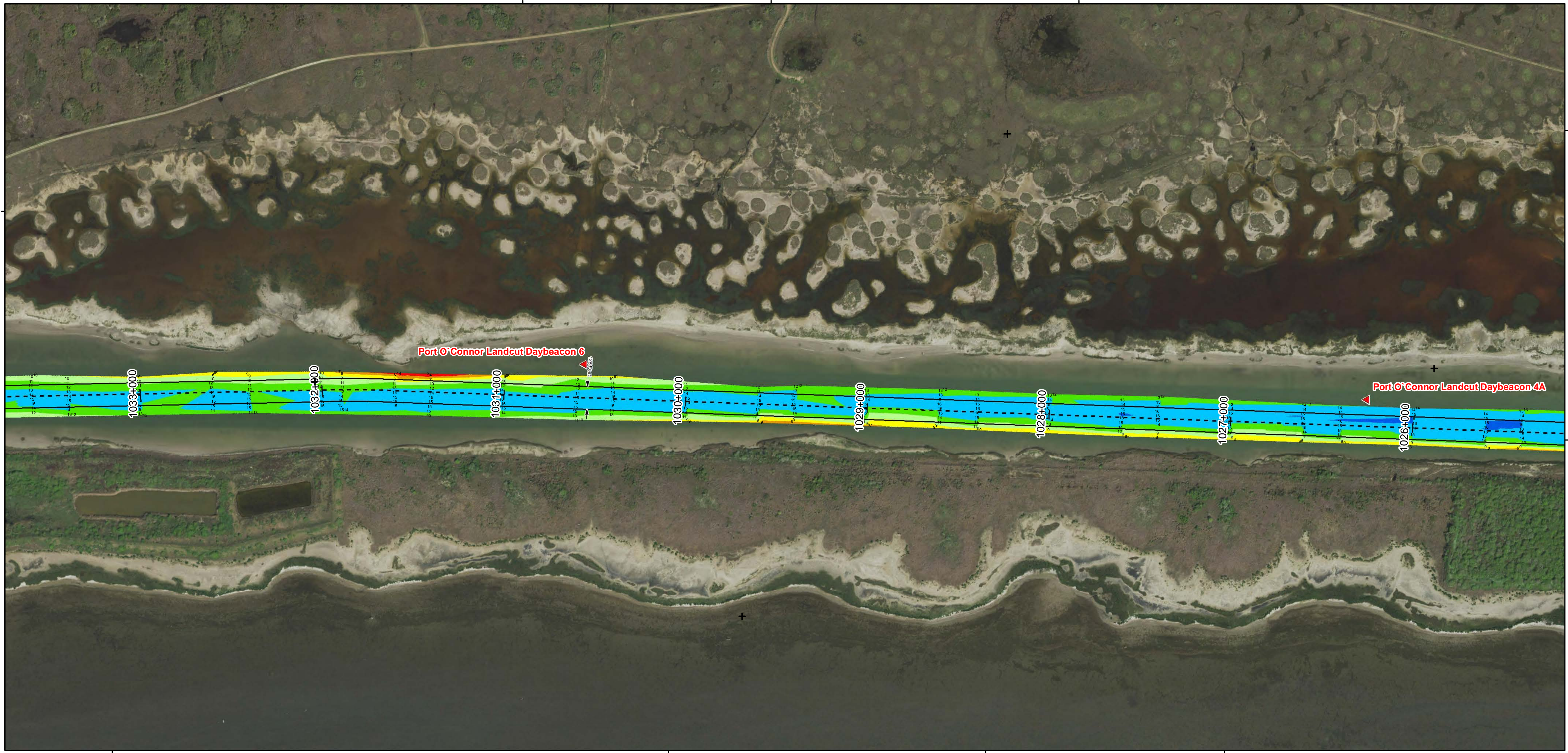
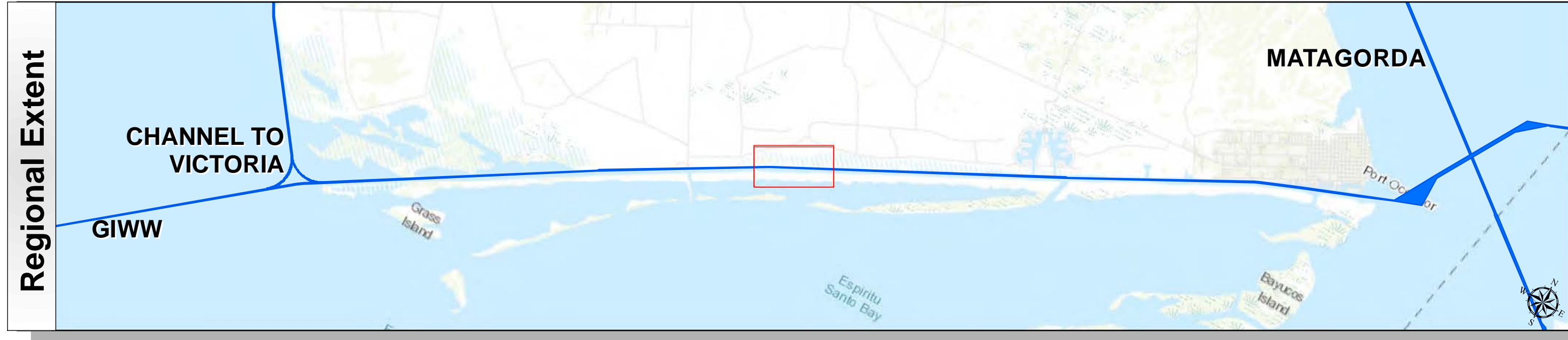
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Port O'Connor to San Antonio Bay

Station: 972+939.05 to 1070+753.30
GIWW
PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District



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Page: 147 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: M3A0XPAC	Print Date: 4/12/2018
Additional Info:	

Channel Features	Aids to Navigation	MLLW
<ul style="list-style-type: none"> Channel Toe Channel Center Line Channel Station Lines Channel Dimensions 	<ul style="list-style-type: none"> Lights Red Side Aids Green Side Aids Mooring Buoy 	<p>NOAA Bathymetry (DREDGING REACH EXTENT)</p> <p>0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50</p>

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Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic /Datum: North American 1983

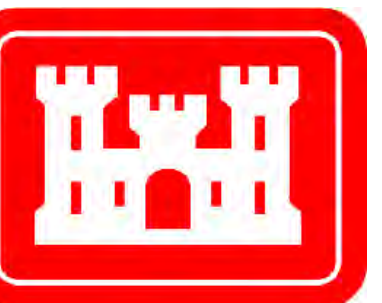
Dredging Reach Extent

Hydrographic Survey Extent

HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Port O'Connor to San Antonio Bay

Station: 972+939.05 to 1070+753.30
GIWW
PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District



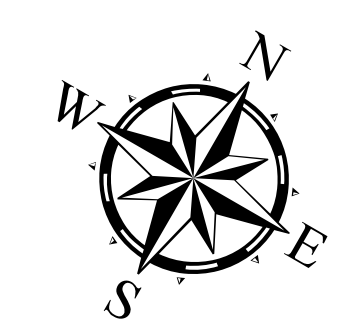
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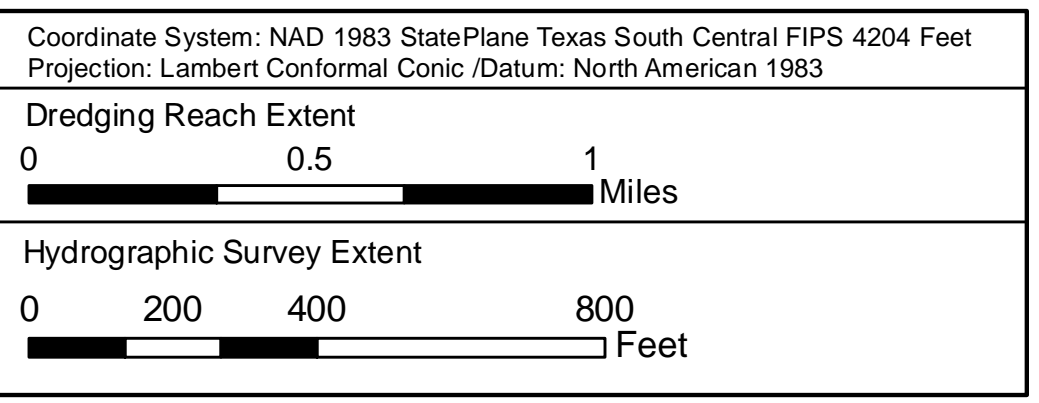
Channel Features	Aids to Navigation	MLLW
Channel Toe	★ Lights	≥ 4
Channel Center Line	▲ Red Side Aids	4 - 6
Channel Station Lines	■ Green Side Aids	6 - 8
Channel Dimensions	◆ Mooring Buoy	8 - 10
		10 - 12
		12 - 14
		14 - 16
		16 - 18
		< 18
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

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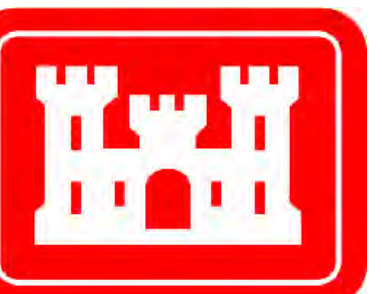
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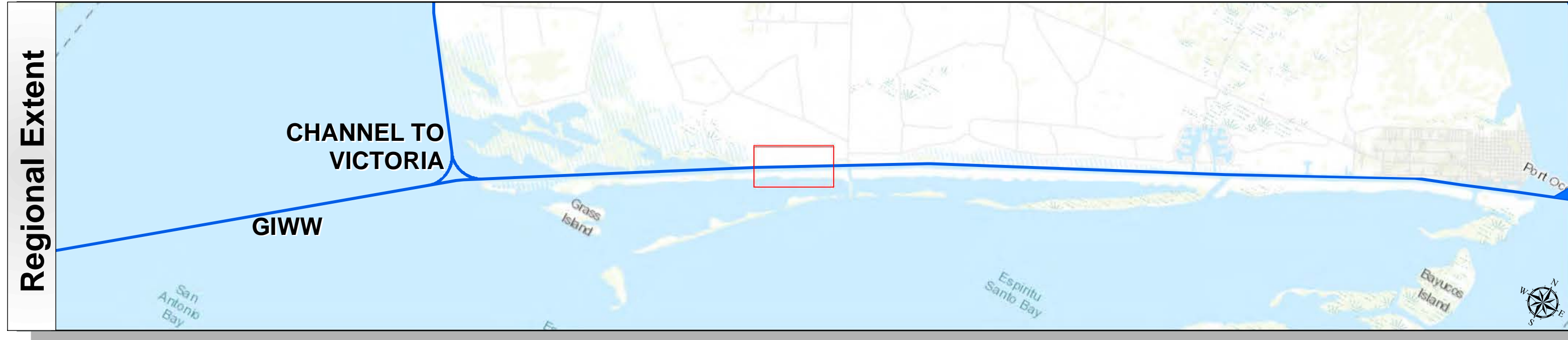
Survey Date(s): 11 April 2018	Authorized Depth: -1.4ft.
Page: 148 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 4/12/2018
Additional Info:	

HYDROGRAPHIC SURVEY
 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 GALVESTON, TEXAS
 Port O'Connor to San Antonio Bay
Station: 972+939.05 to 1070+753.30
GIWW
 PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District



Survey Date(s): 11 April 2018	Authorized Depth: -14ft.
Page: 149 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 4/12/2018
Additional Info:	

Channel Features

- Channel Toe
- Channel Center Line
- Channel Station Lines
- Channel Dimensions

Aids to Navigation

- Lights
- Red Side Aids
- Green Side Aids
- Mooring Buoy

MLLW

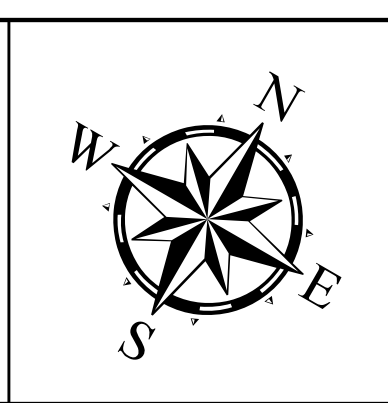
> 4	4 - 6	6 - 8	8 - 10	10 - 12	12 - 14	14 - 16	16 - 18	< 18
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NOAA Bathymetry (DREDGING REACH EXTENT)

0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50
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Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic /Datum: North American 1983

Dredging Reach Extent

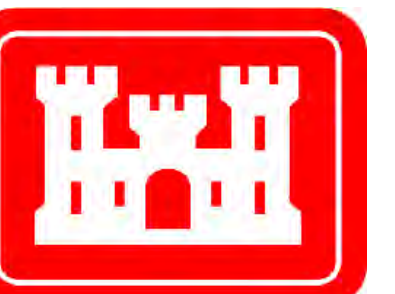
Hydrographic Survey Extent

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
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Port O'Connor to San Antonio Bay

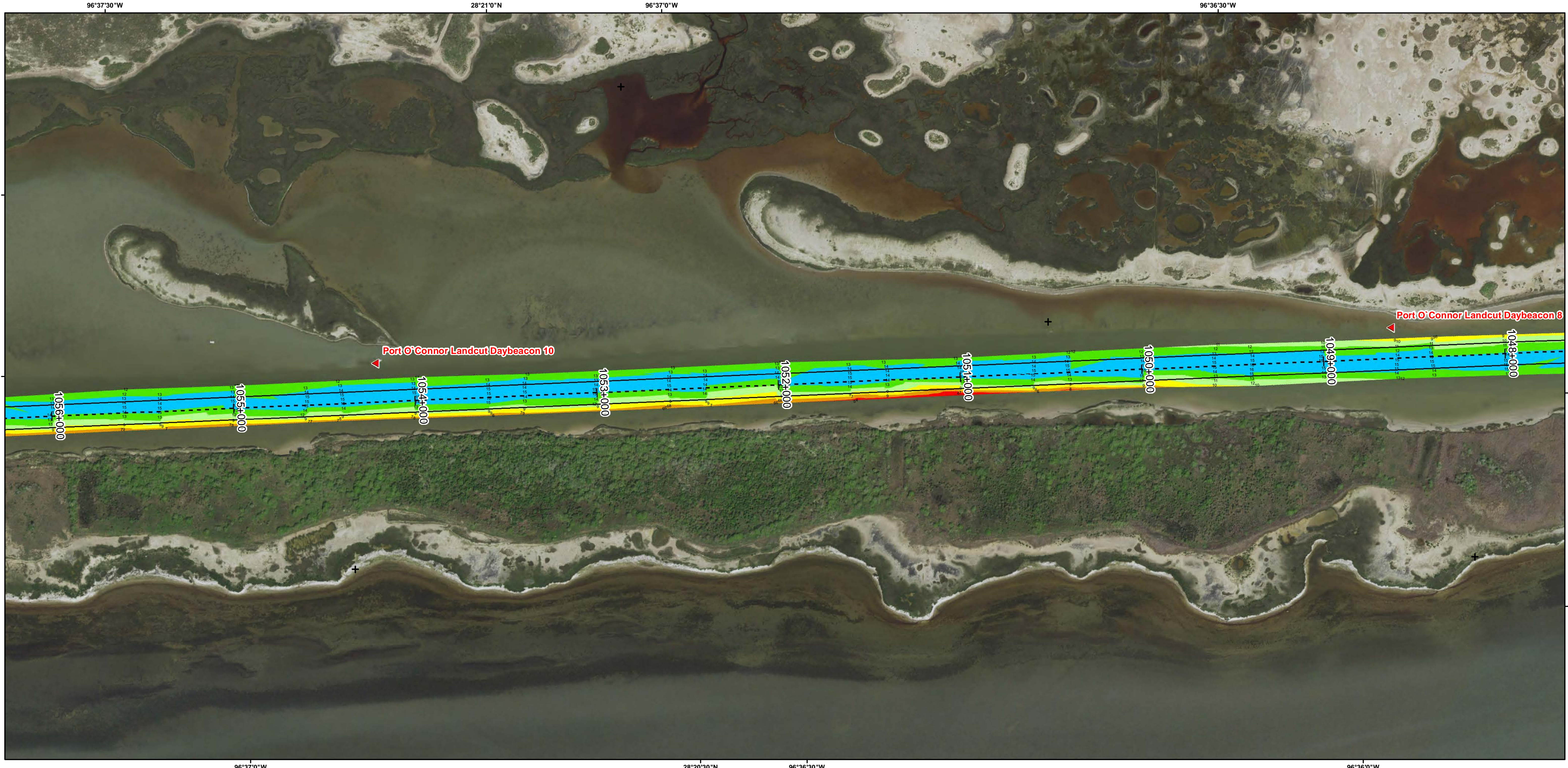
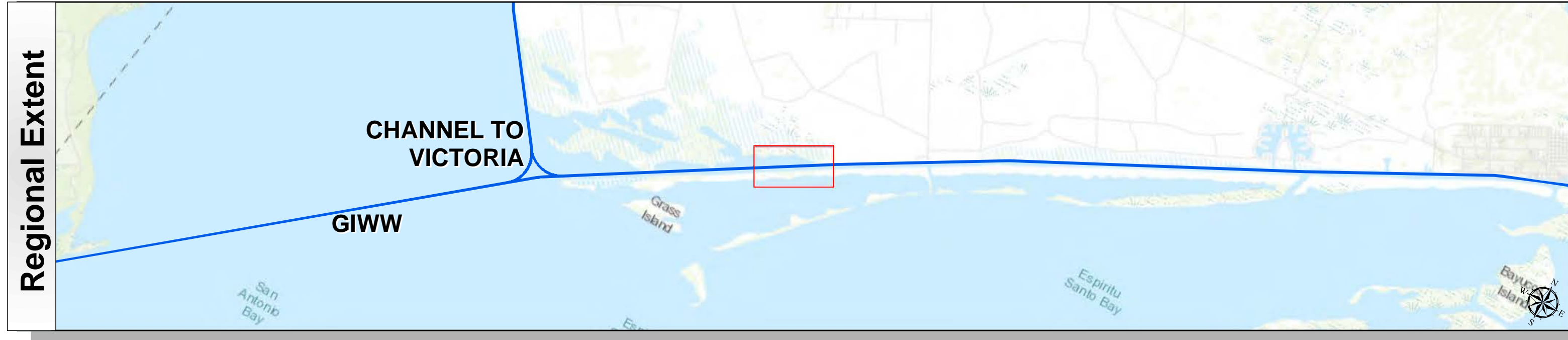
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GIWW
PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District

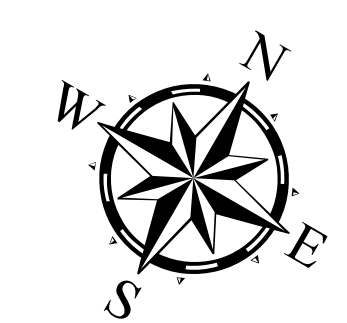


Channel Features	Aids to Navigation	MLLW
Channel Toe	★ Lights	▲ 4
Channel Center Line	▲ Red Side Aids	■ 4 - 6
Channel Station Lines	■ Green Side Aids	■ 6 - 8
Channel Dimensions	◆ Mooring Buoy	■ 8 - 10
		■ 10 - 12
		■ 12 - 14
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		■ < 18
		■ NOAA Bathymetry (DREDGING REACH EXTENT)
		■ 0 - 10
		■ 10 - 15
		■ 15 - 20
		■ 20 - 25
		■ 25 - 30
		■ 30 - 50

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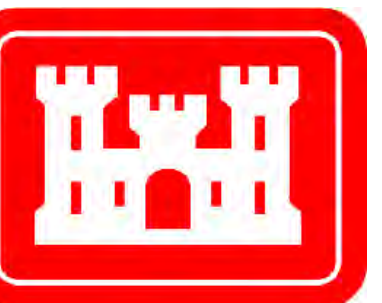
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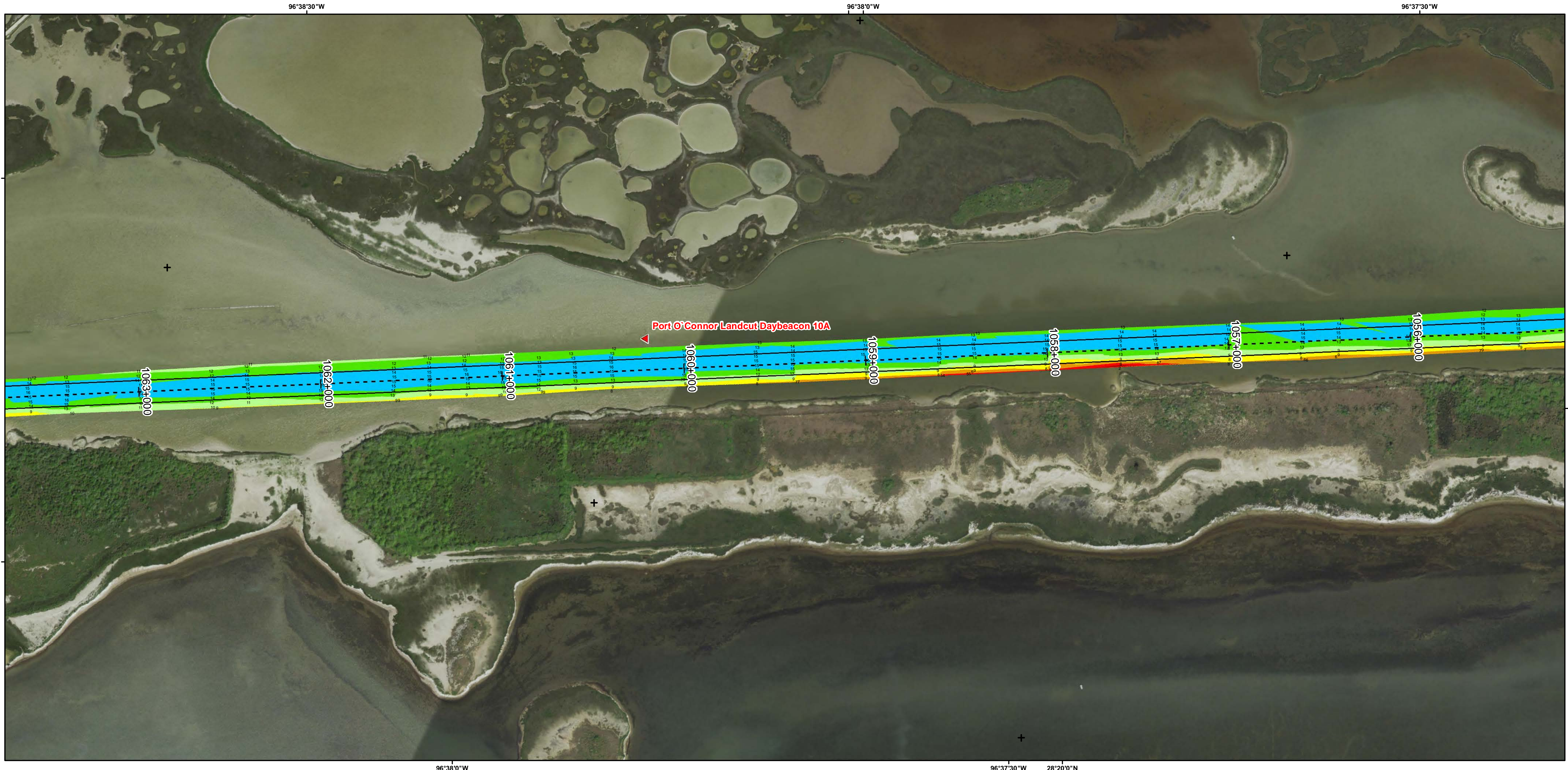
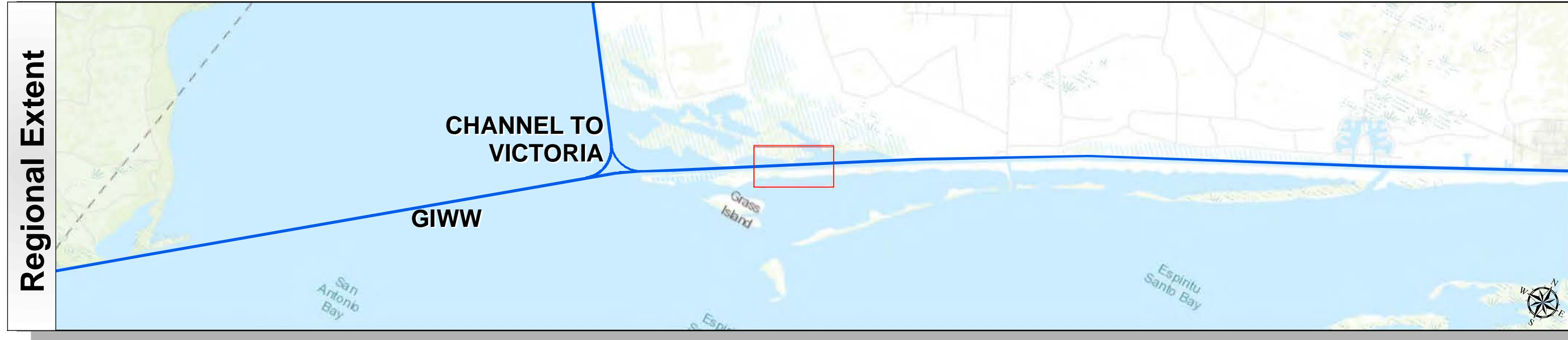
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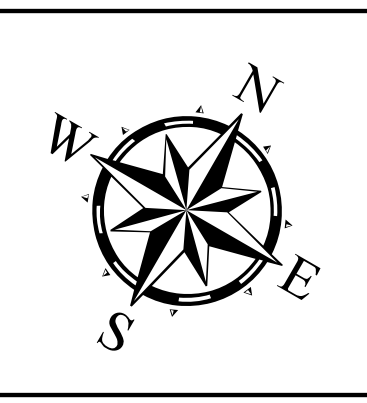
U.S. Army Corps of Engineers
Galveston District



Channel Features	Aids to Navigation	MLLW
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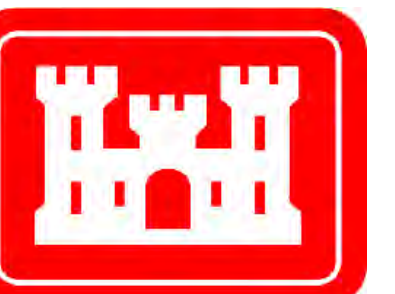
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Dredging Reach Extent	0 0.5 1 Miles
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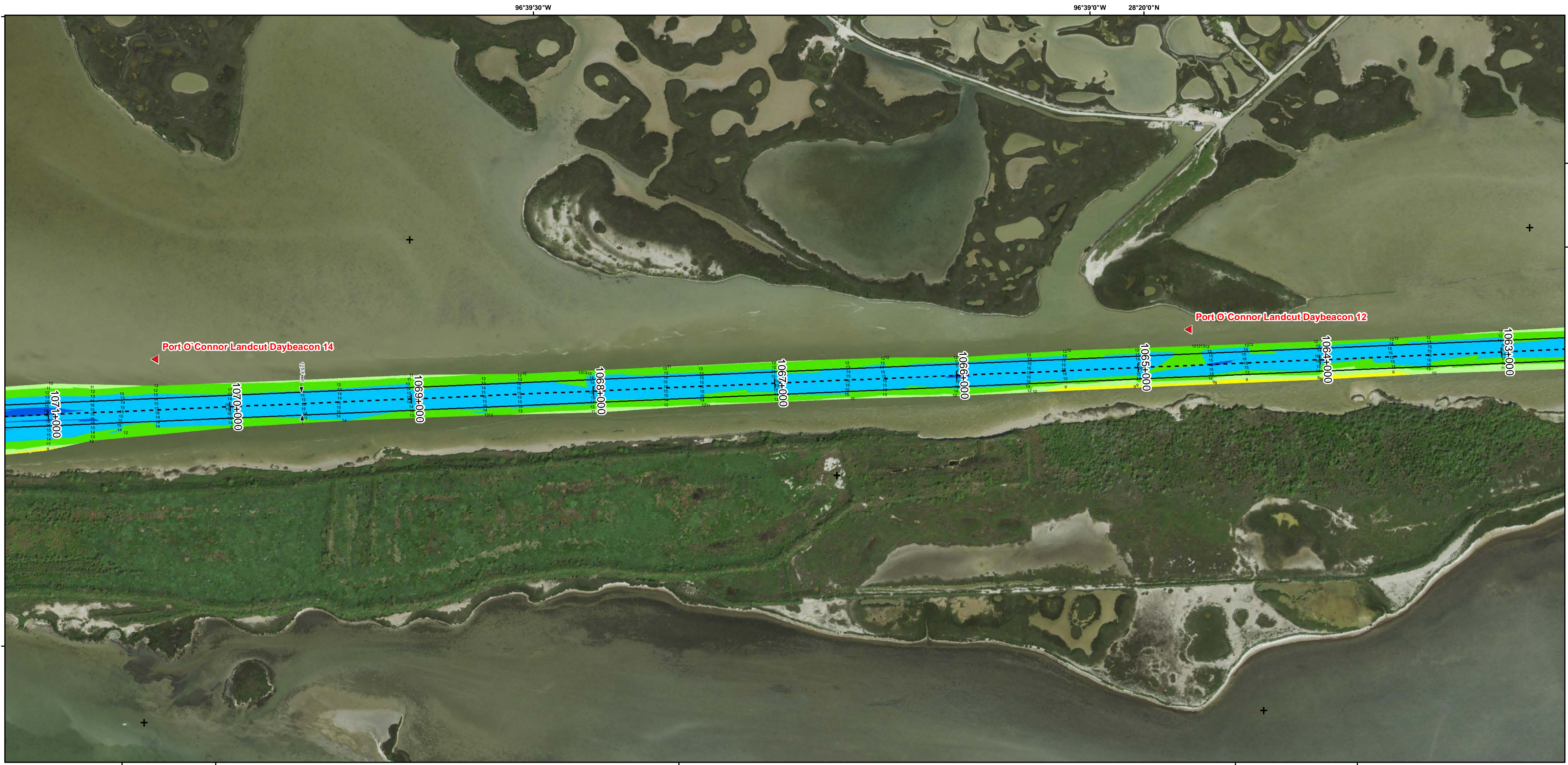
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Map:	Additional Imagery: © DigitalGlobe Inc.
Scale: 1:3,200	Print Date: 4/12/2018
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 GALVESTON, TEXAS
 Port O'Connor to San Antonio Bay
Station: 972+939.05 to 1070+753.30
 GIWW
 PORT O'CONNOR, TEXAS

Gulf Intracoastal Waterway: Port O'Connor to San Antonio Bay



U.S. Army Corps of Engineers
Galveston District

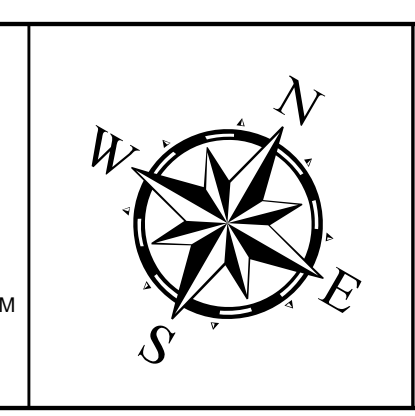


Survey Date(s): 11 April 2018	Authorized Depth: -14ft.
Page: 152 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,200	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 4/12/2018
Additional Info:	

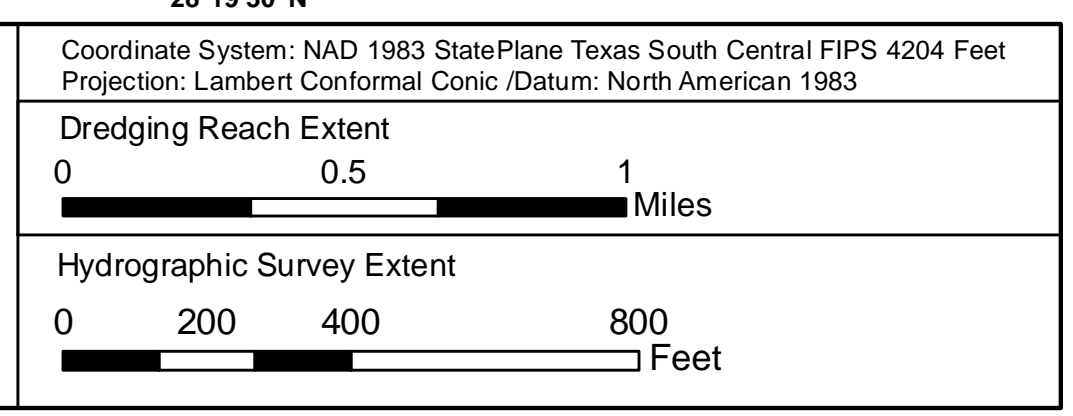
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	▲ 4
- - - Channel Center Line	▲ Red Side Aids	■ 4 - 6
— Channel Station Lines	■ Green Side Aids	■ 6 - 8
↔ Channel Dimensions	◆ Mooring Buoy	■ 8 - 10
		■ 10 - 12
		■ 12 - 14
		■ 14 - 16
		■ 16 - 18
		■ < 18
		■ NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50

NOTES:

- HORIZONTAL COORDINATES ARE REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE NAD83 US SURVEY FEET.
- ELEVATIONS ARE REFERENCED TO MEAN LOWER LOW TIDE (MLLW) DATUM.
- THIS PROJECT WAS DESIGNED BY THE GALVESTON DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS AND SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER1110-1815Z.
- THE INFORMATION DEPICTED ON THIS SURVEY MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REQUIRED BY 33 CFR 209.325
- FOR THE MOST UP TO DATE INFORMATION PLEASE CHECK OUR WEBSITE AT: [HTTP://WWW.SWG.USACE.ARMY.MIL/MISSIONS/NAVIGATION/HYDROGRAPHIC-SURVEYS/](http://www.swg.usace.army.mil/missions/navigation/hydrographic-surveys/)
- NOAA BATHYMETRY CONTOURS PRODUCED FROM HISTORIC BATHYMETRIC (HYDROGRAPHIC) SURVEYS CONDUCTED BY THE NOAA NATIONAL OCEAN SERVICE/COAST SURVEY, AVAILABLE FROM THE NATIONAL GEOPHYSICAL DATA CENTER. SURVEYS VARY AS TO SOUNDING DENSITY, ACCURACY OF DEPTH, ACCURACY OF NAVIGATION, ZERO DATUM, DATE OF SURVEY AND TYPE OF INSTRUMENTATION.



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HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Port O'Connor to San Antonio Bay

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