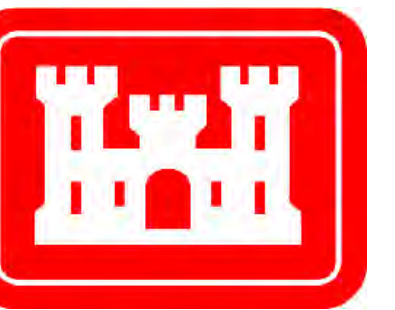
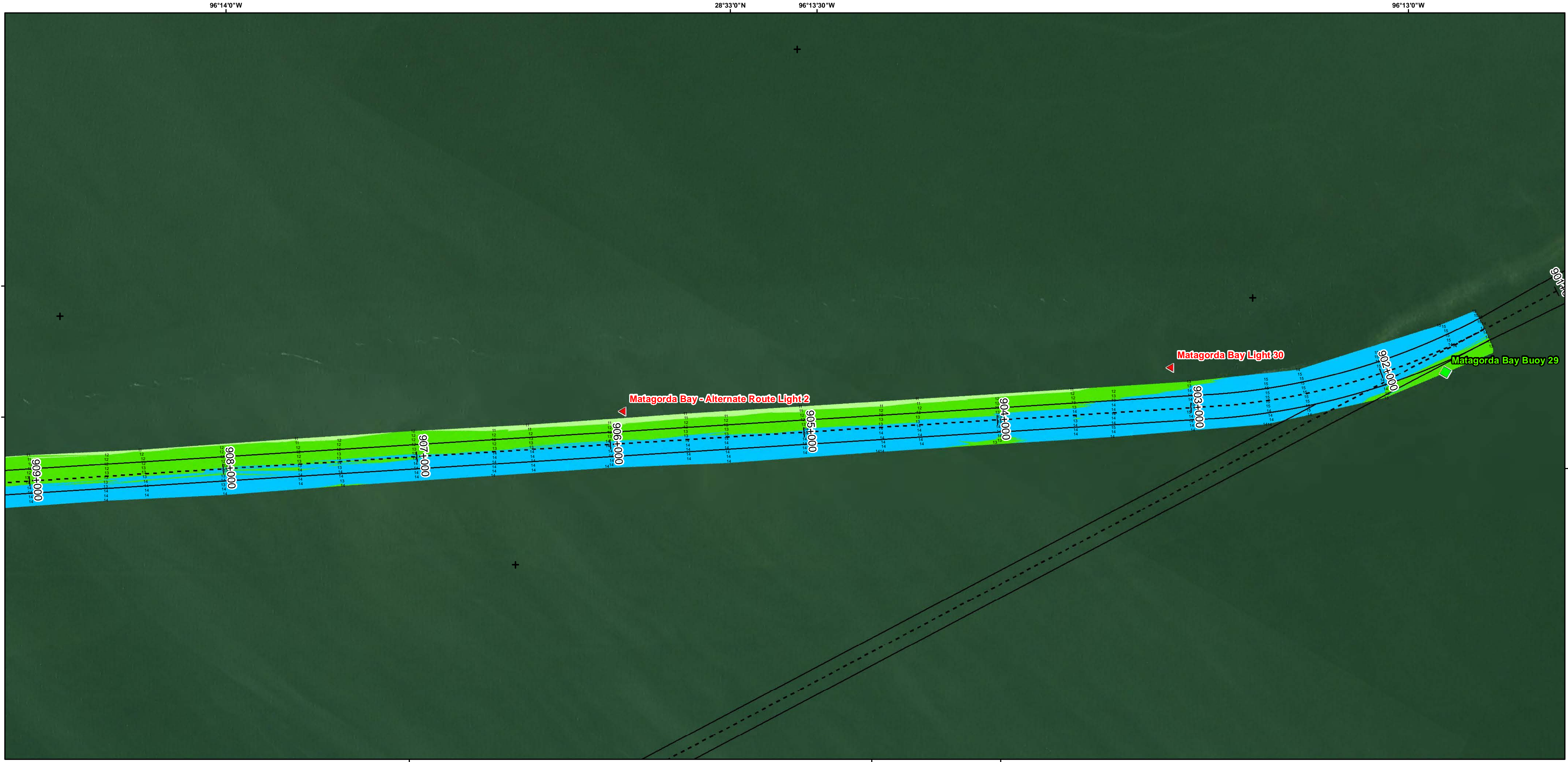
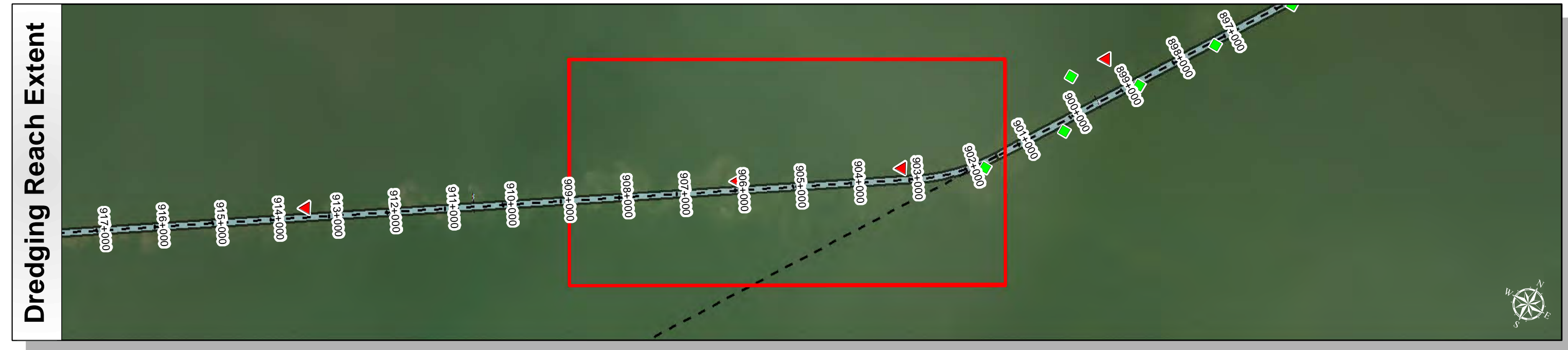
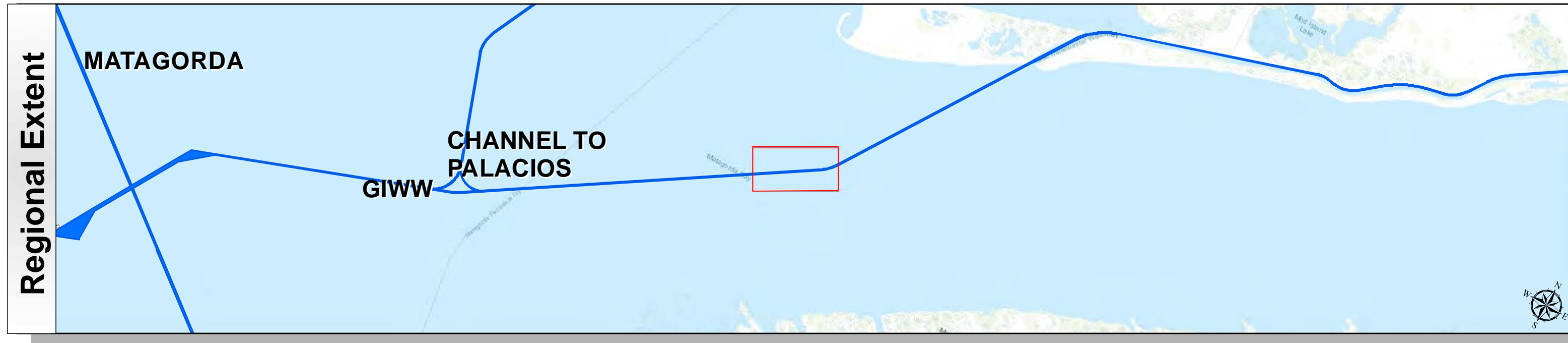


Gulf Intracoastal Waterway: Natural Bay Bottom



U.S. Army Corps of Engineers
Galveston District



Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 130 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
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
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

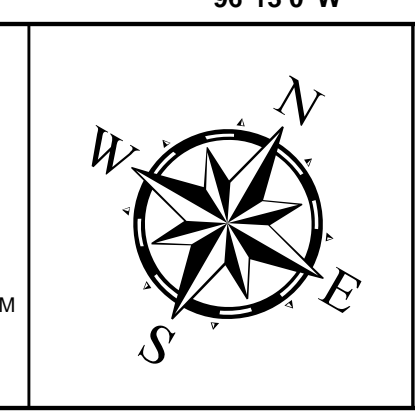
NOTES:

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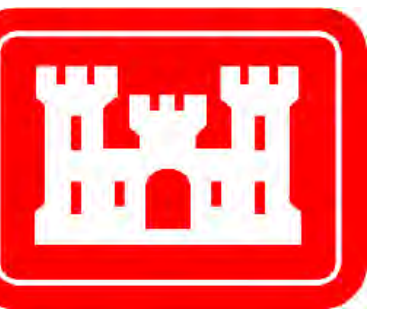
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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 0 187.5 375 750 Feet

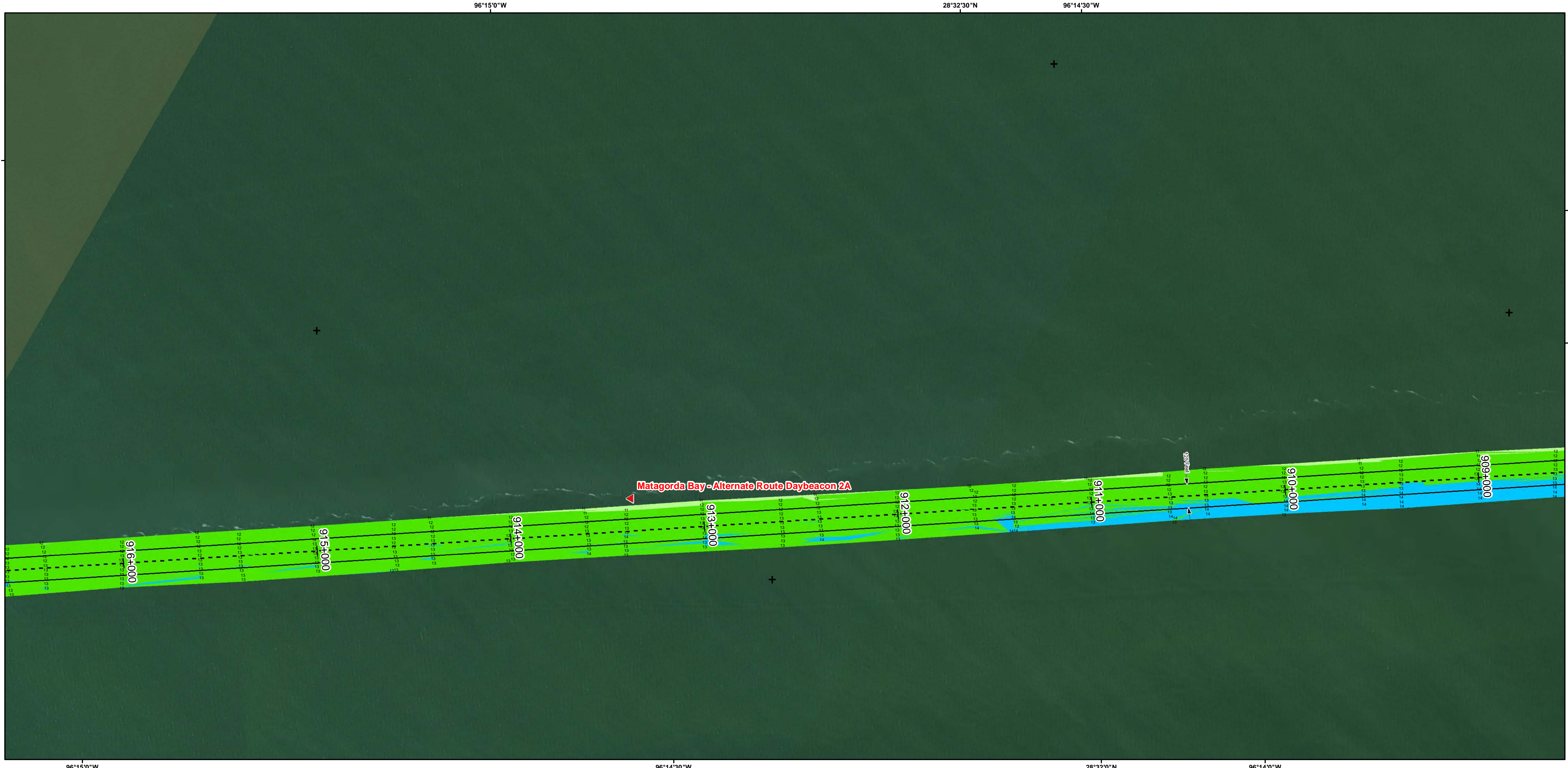
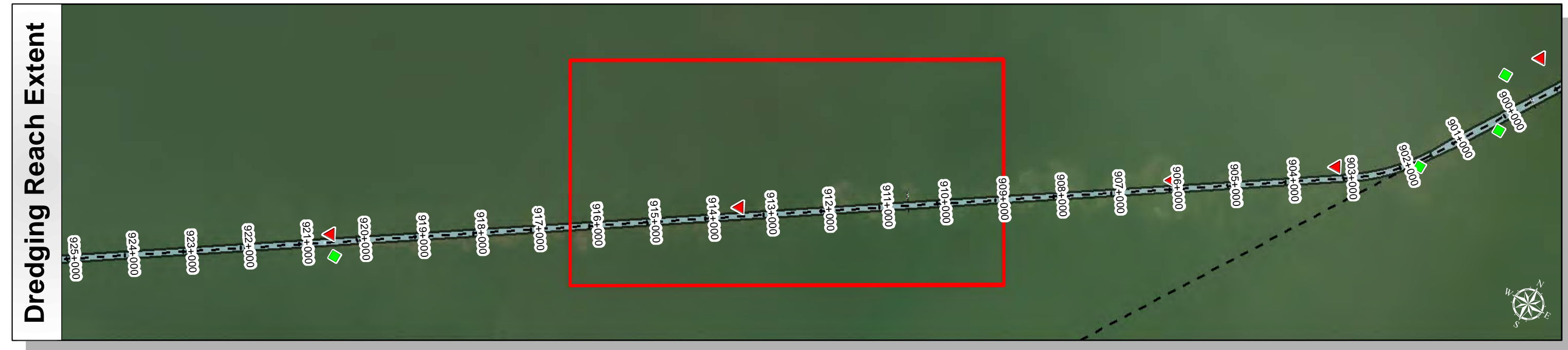
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Natural Bay Bottom

Station: 901+423.55 to 972+939.05
GIWW
, TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



U.S. Army Corps of Engineers
Galveston District



Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 131 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
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

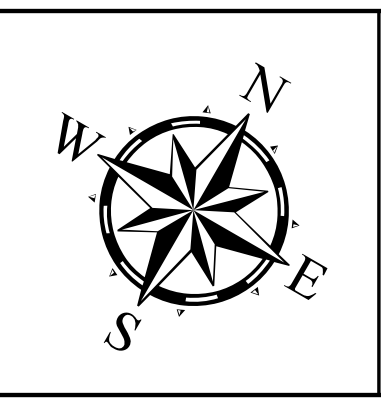
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NOAA Bathymetry (DREDGING REACH EXTENT)

0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50
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NOTES:

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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

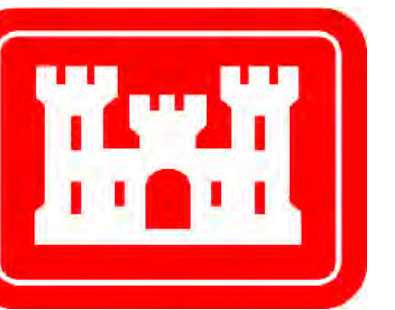
Dredging Reach Extent

Hydrographic Survey Extent

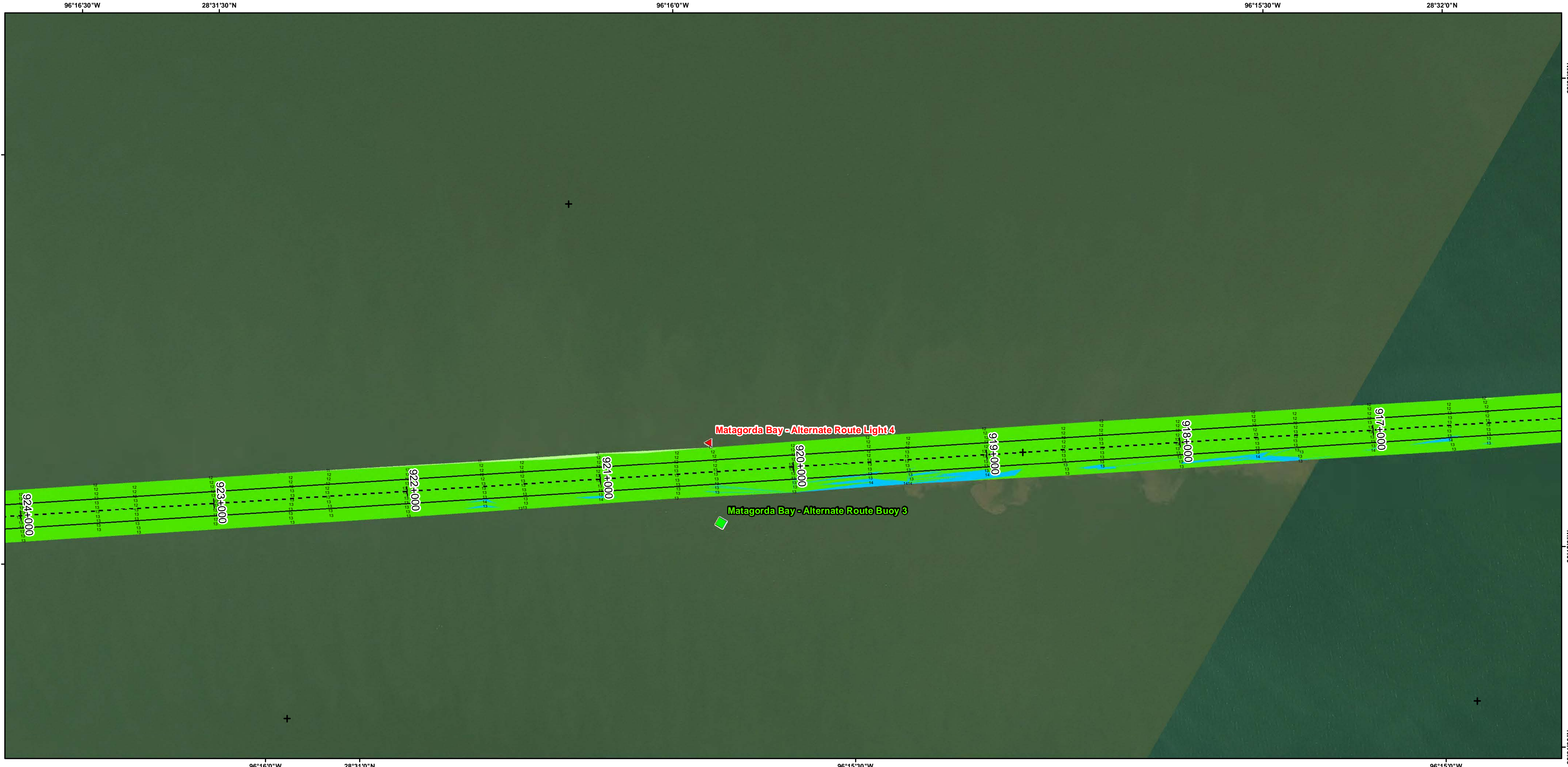
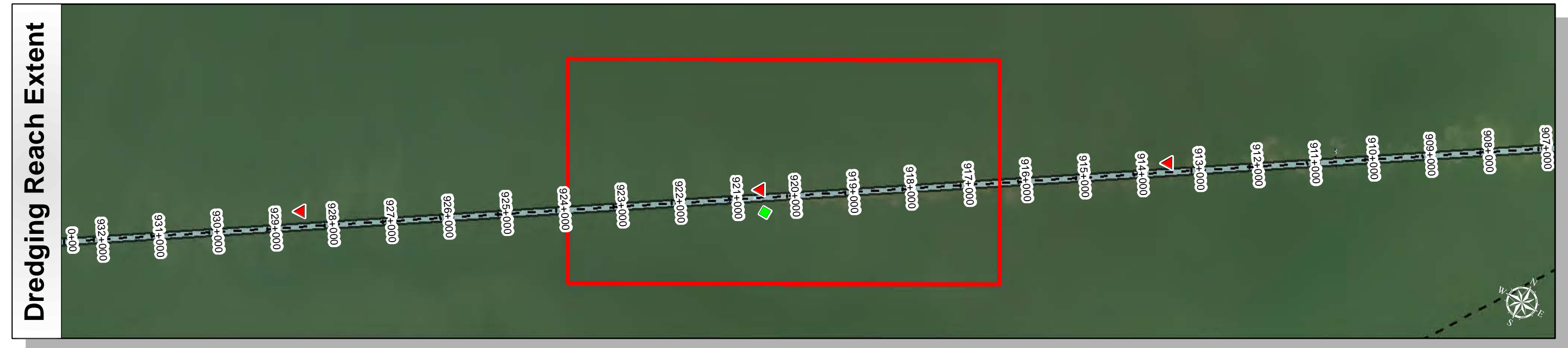
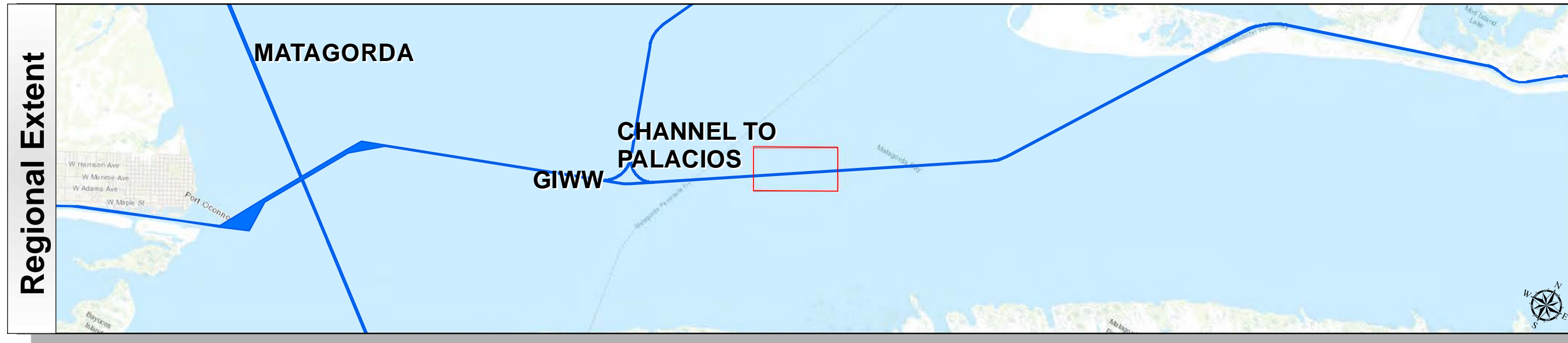
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Natural Bay Bottom

Station: 901+423.55 to 972+939.05
GIWW
, TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



U.S. Army Corps of Engineers
Galveston District



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> <table border="1"> <tr> <td>0 - 10</td> <td>10 - 15</td> <td>15 - 20</td> <td>20 - 25</td> <td>25 - 30</td> <td>30 - 50</td> </tr> </table>	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50
0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50			

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Projection: Lambert Conformal Conic /Datum: North American 1983

Dredging Reach Extent
0 0.5 1 Miles

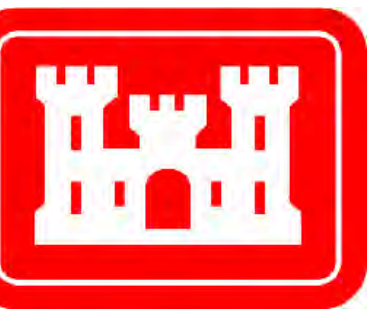
Hydrographic Survey Extent
0 187.5 375 750 Feet

Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 132 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
Additional Info :	

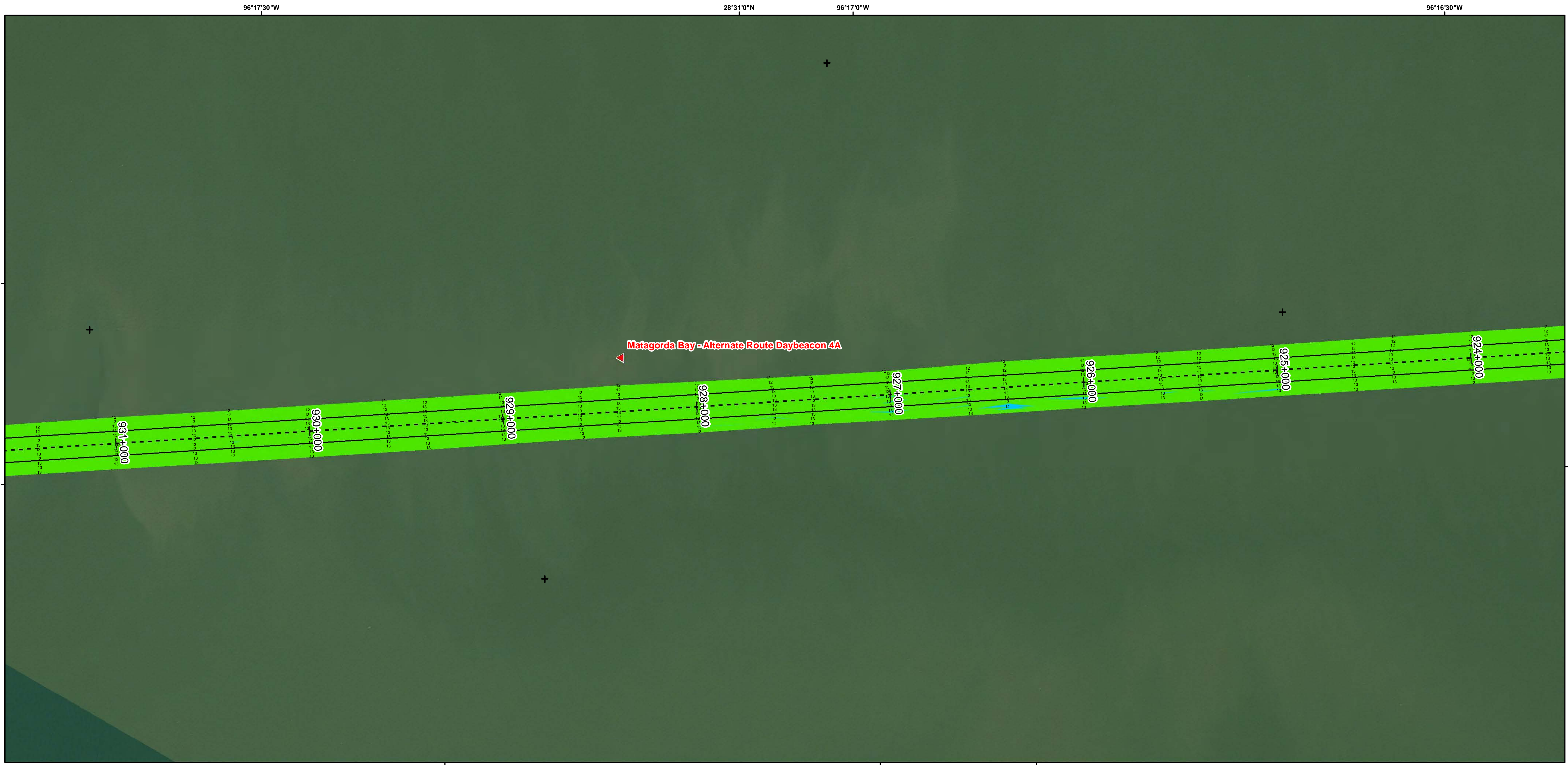
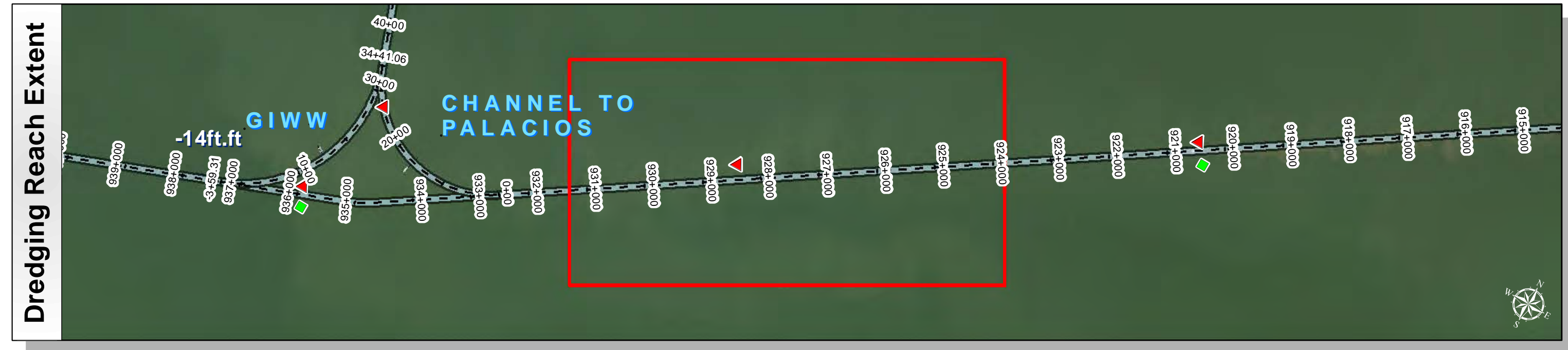
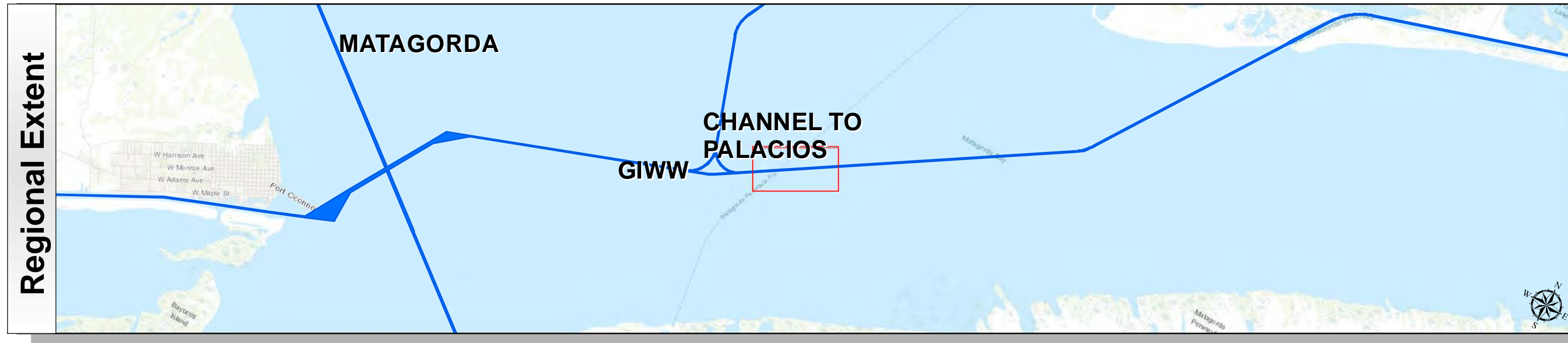
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Natural Bay Bottom

Station: 901+423.55 to 972+939.05
GIWW
, TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



U.S. Army Corps of Engineers
Galveston District



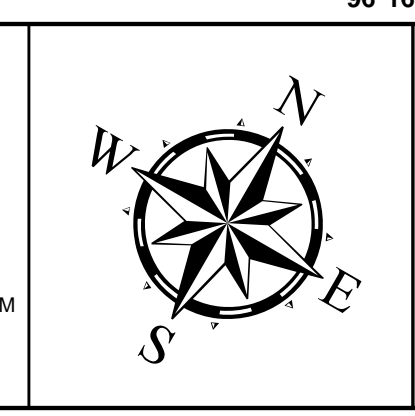
Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 133 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
Additional Info:	

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>

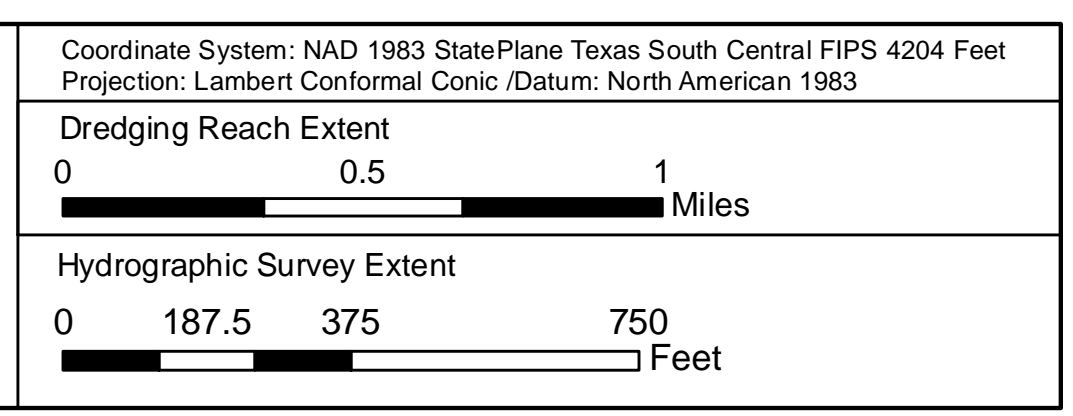
NOTES:

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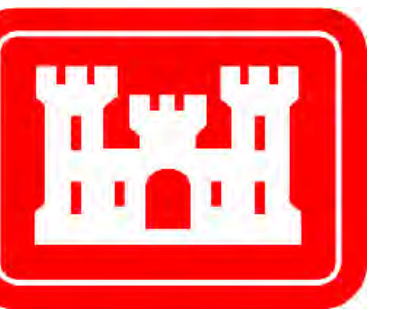
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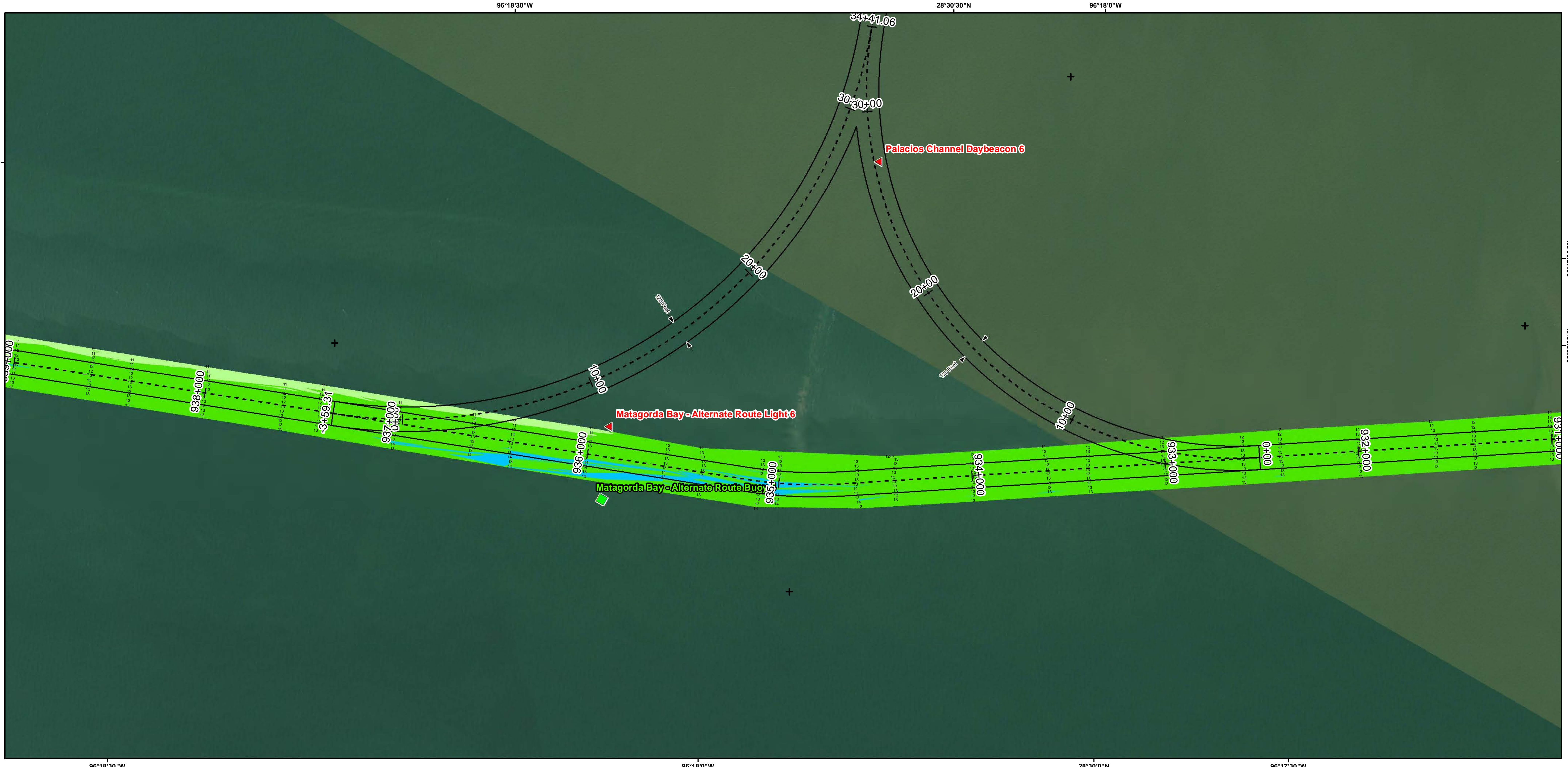
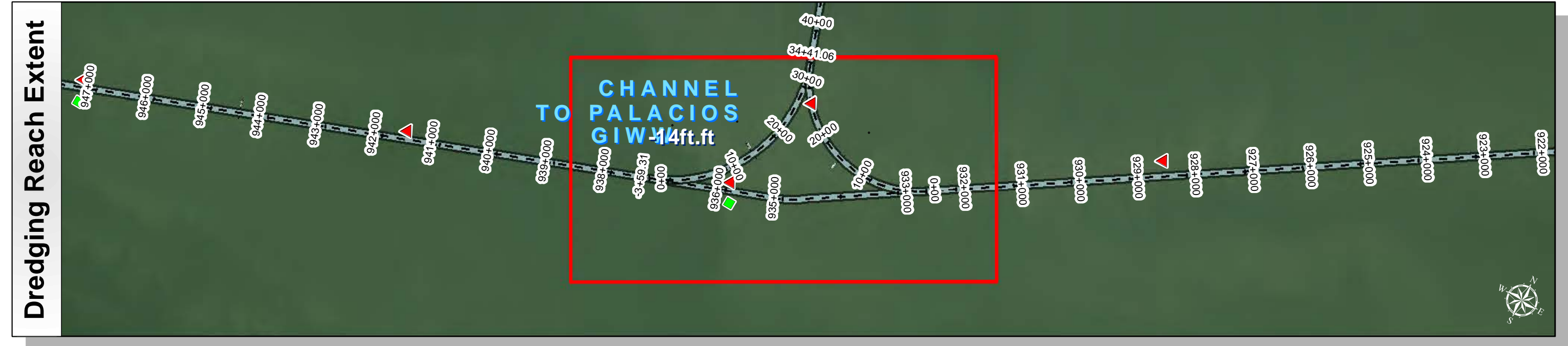
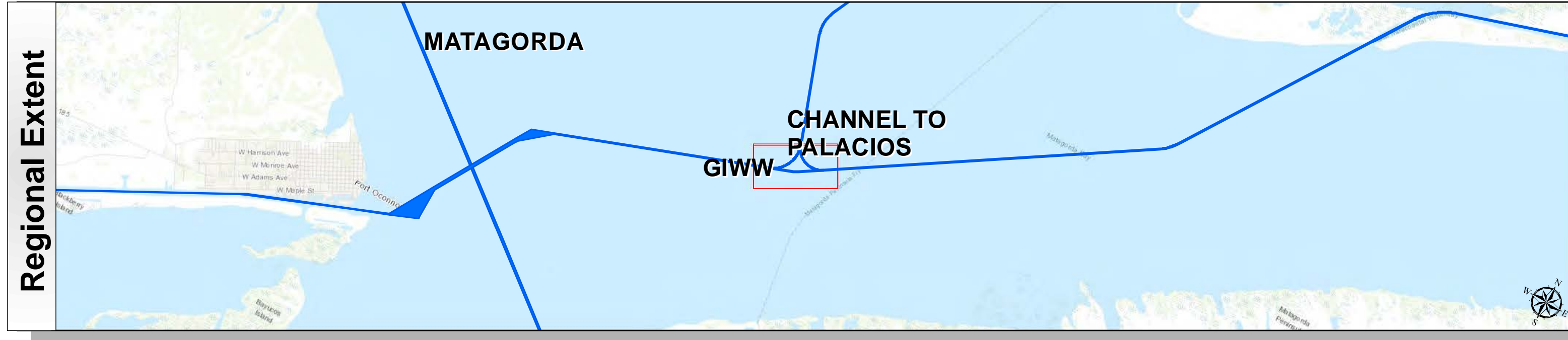
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Natural Bay Bottom

Station: 901+423.55 to 972+939.05
GIWW
, TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



U.S. Army Corps of Engineers
Galveston District



Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 134 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
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

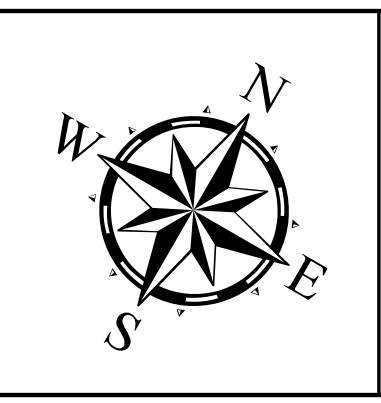
> 4	4 - 6	6 - 8	8 - 10	10 - 12	12 - 14	14 - 16	16 - 18	< 18
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NOAA Bathymetry (DREDGING REACH EXTENT)

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
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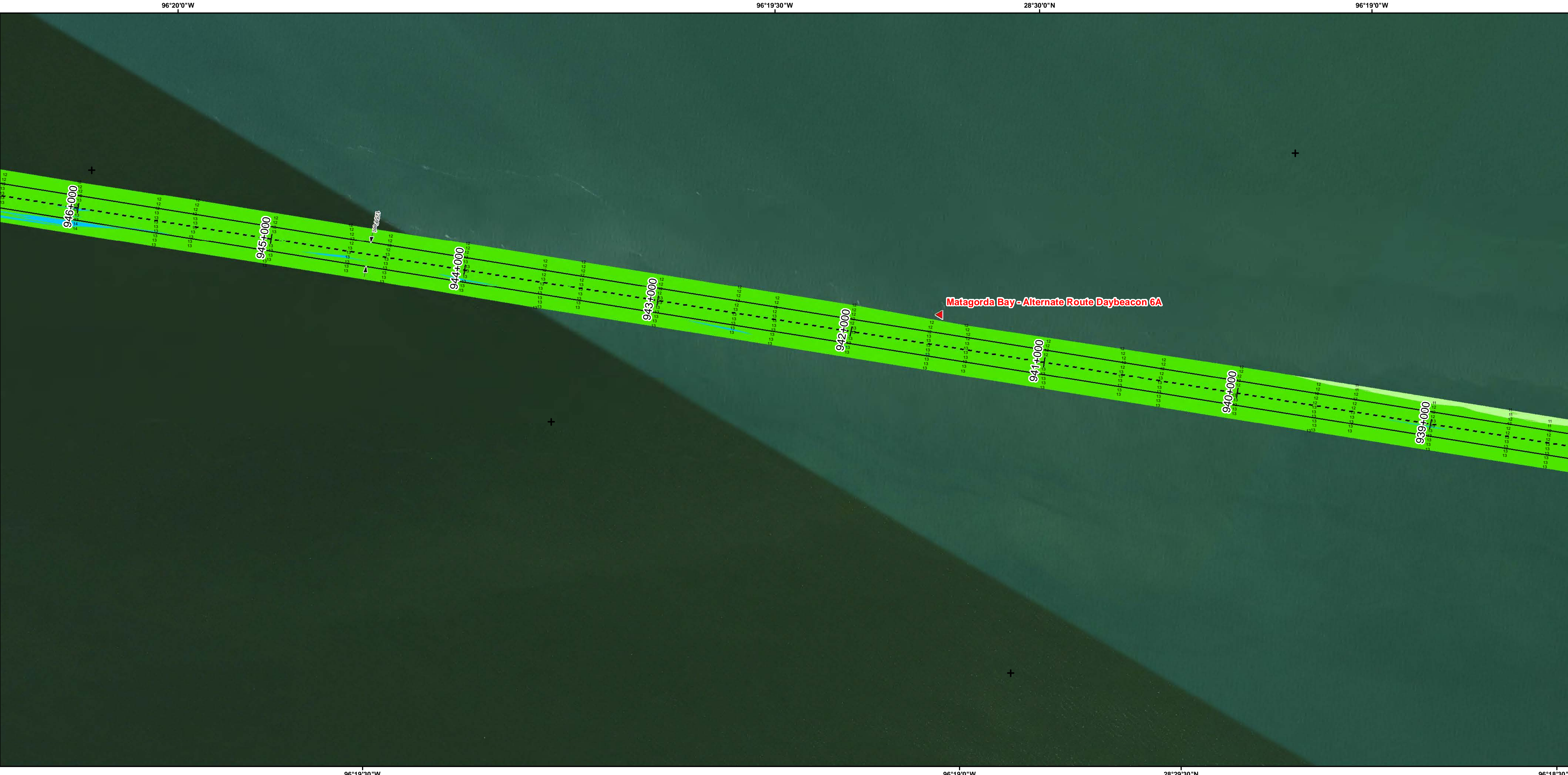
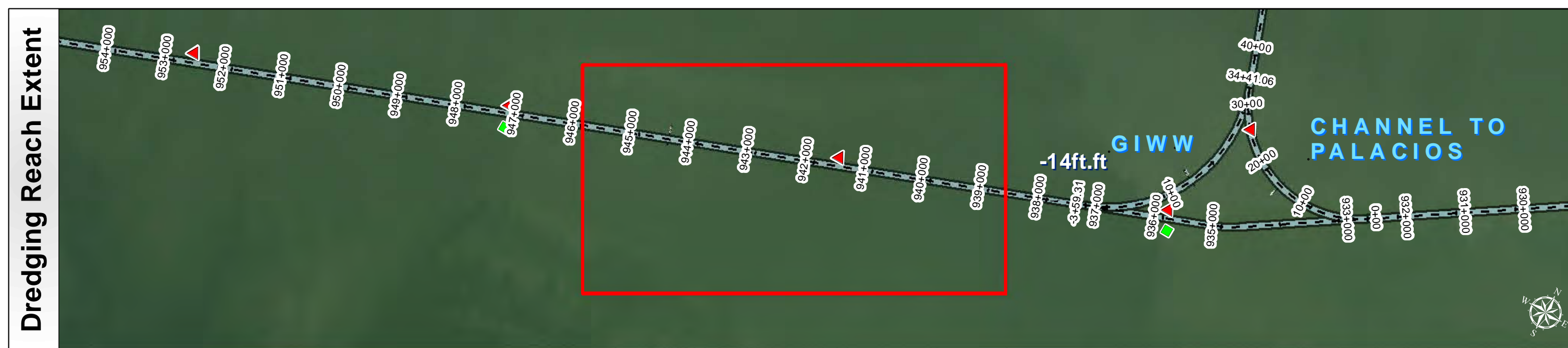
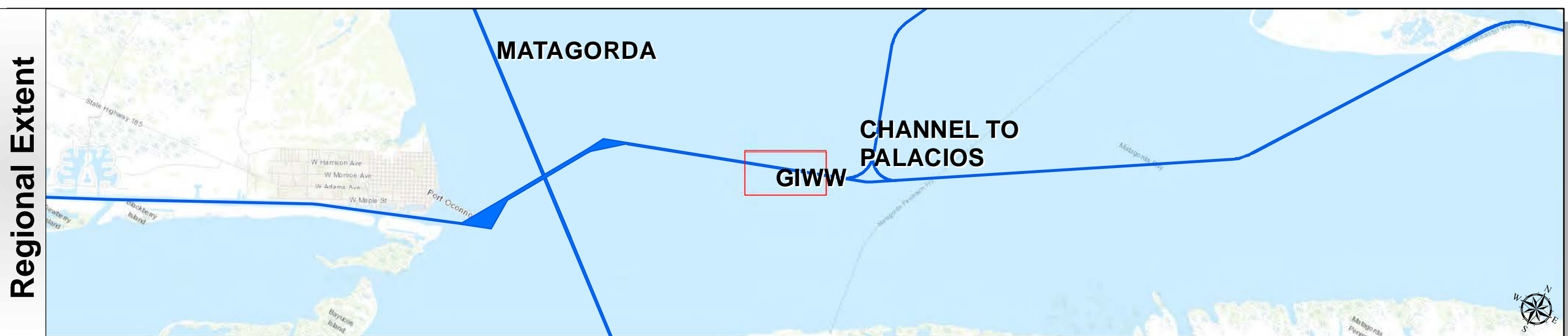
Dredging Reach Extent

Hydrographic Survey Extent

HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
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GALVESTON, TEXAS
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Station: 901+423.55 to 972+939.05
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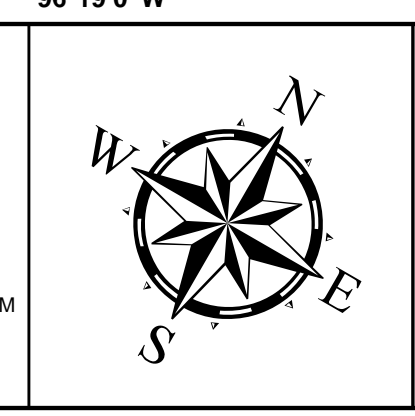
Gulf Intracoastal Waterway: Natural Bay Bottom



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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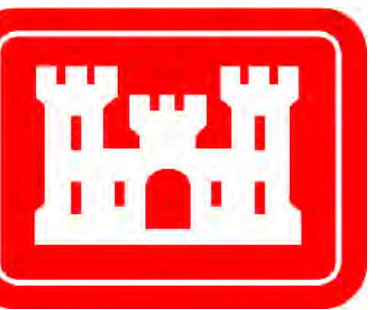
Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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Coordinate 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 0 187.5 375 750 Feet

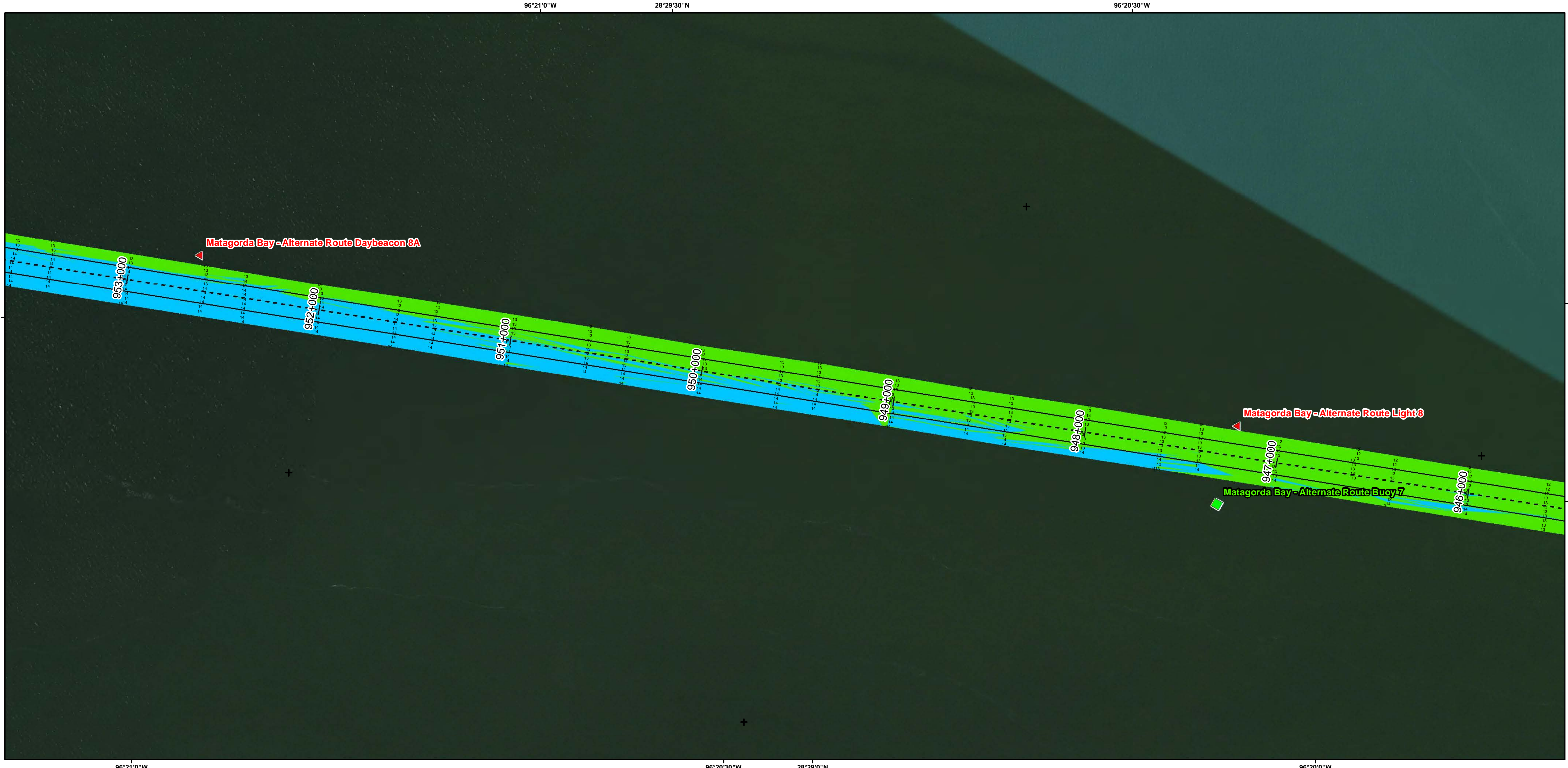
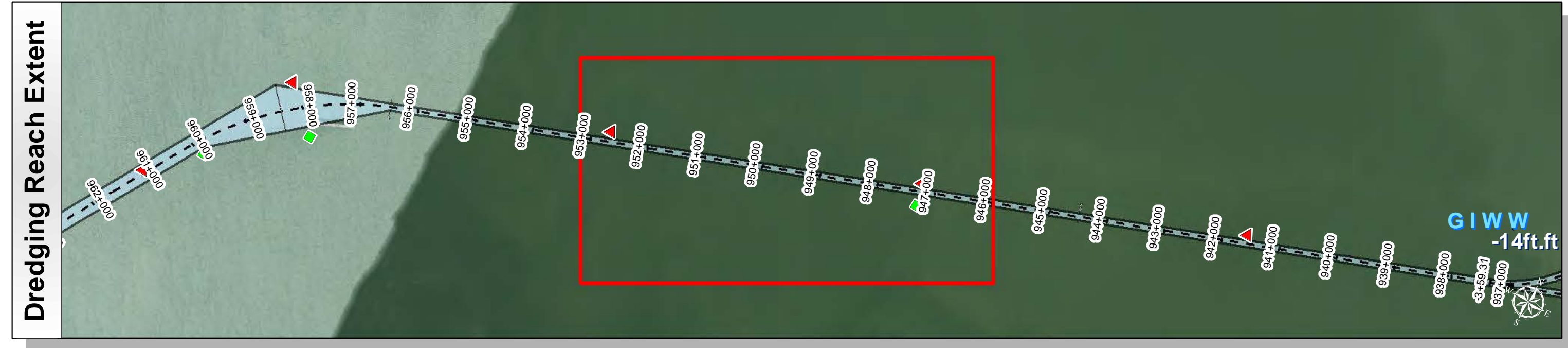
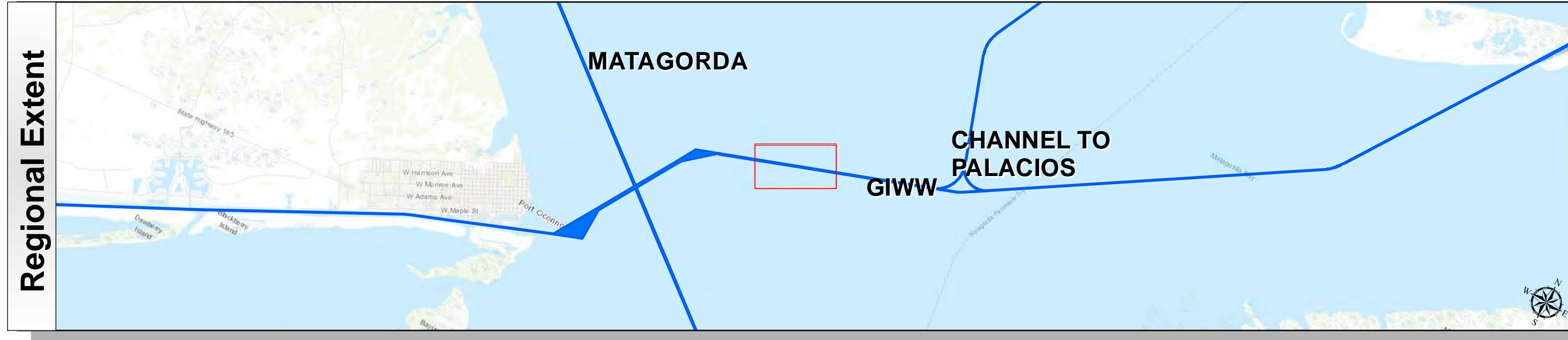
Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 135 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
Additional Info :	

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 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 GALVESTON, TEXAS
 Natural Bay Bottom
Station: 901+423.55 to 972+939.05
 GIWW
 TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



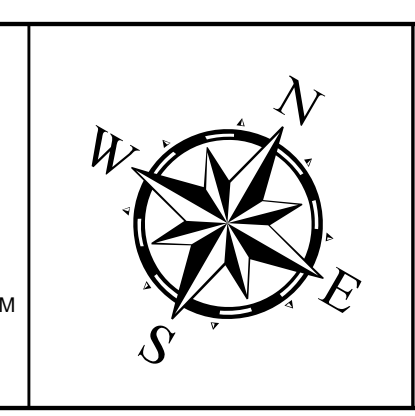
U.S. Army Corps of Engineers
Galveston District



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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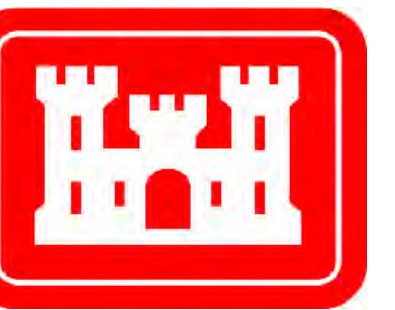
Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet Projection: Lambert Conformal Conic /Datum: North American 1983
Dredging Reach Extent 0 0.5 1 Miles
Hydrographic Survey Extent 0 187.5 375 750 Feet

Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 136 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
Additional Info:	

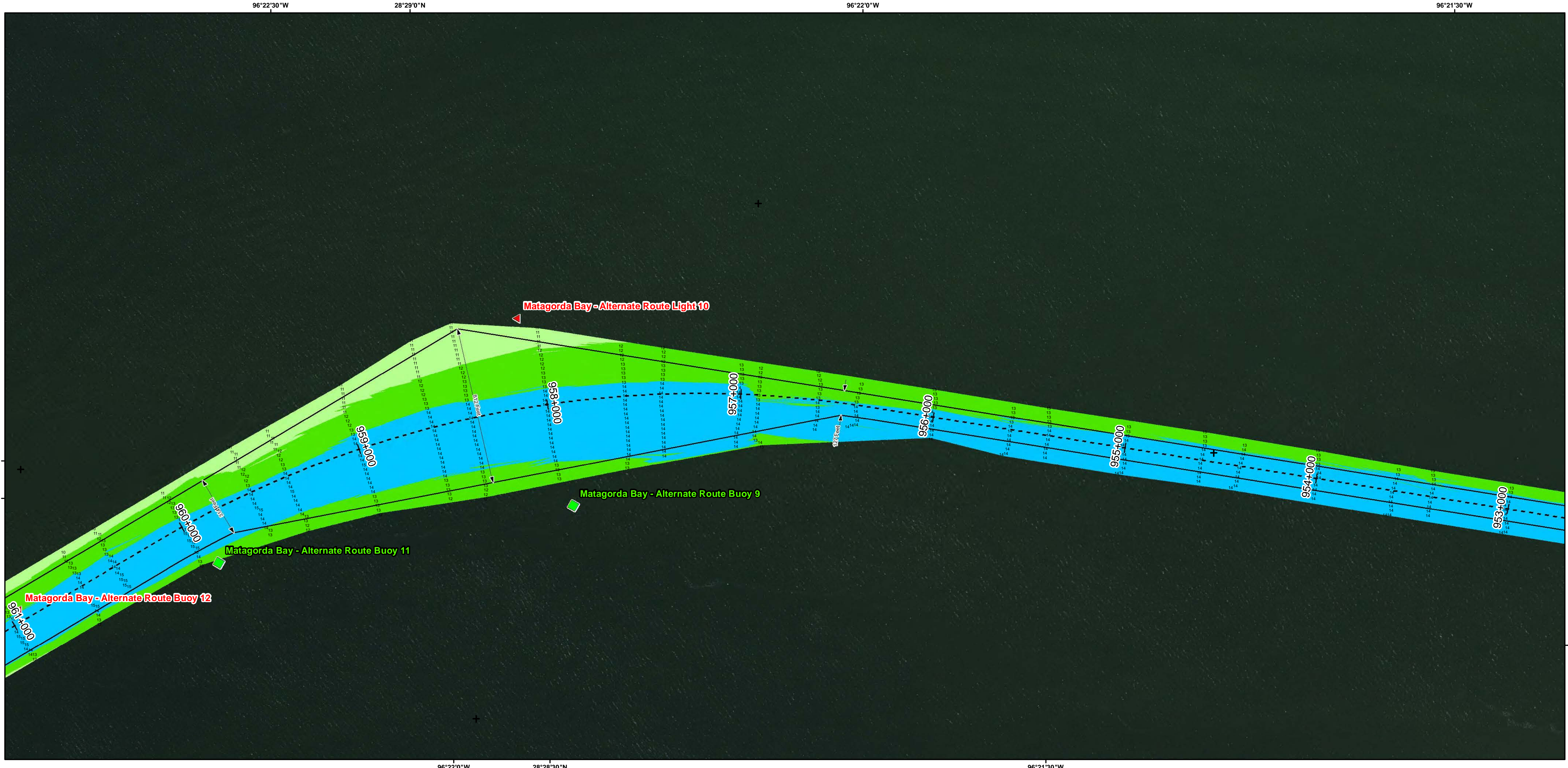
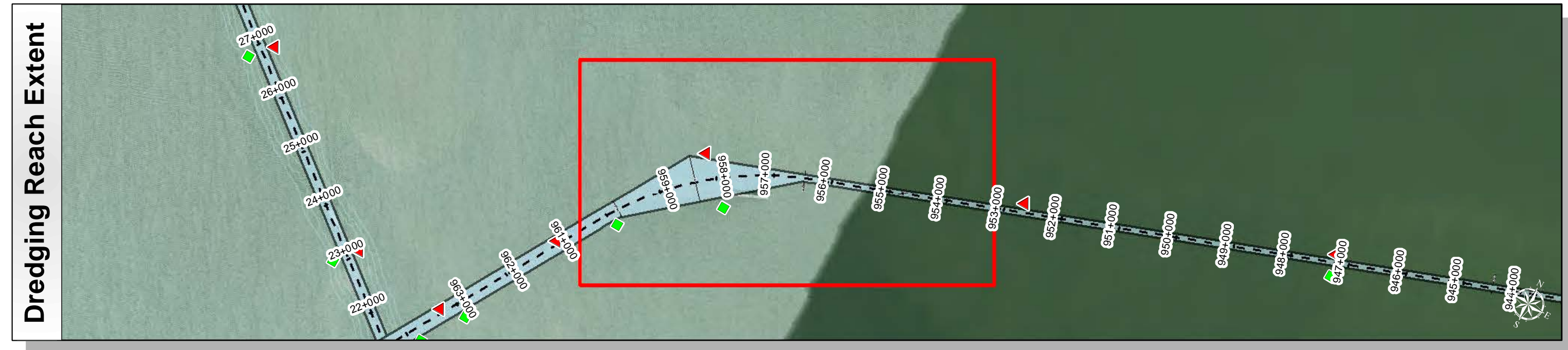
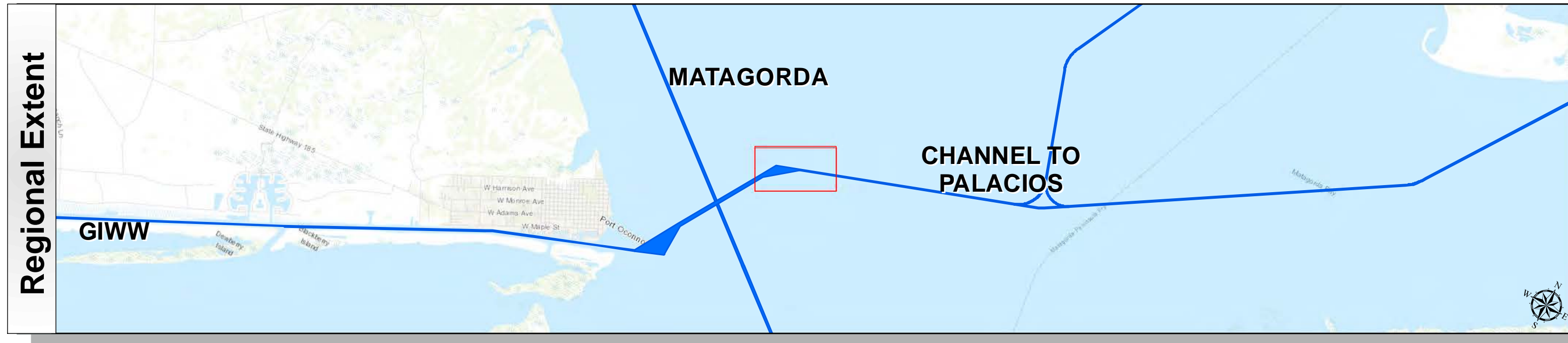
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS
Natural Bay Bottom

Station: 901+423.55 to 972+939.05
GIWW
, TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



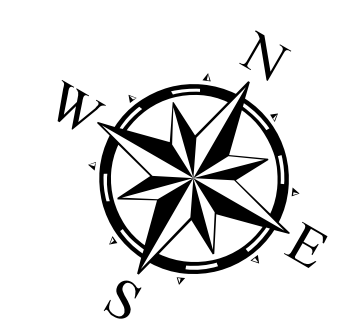
U.S. Army Corps of Engineers
Galveston District



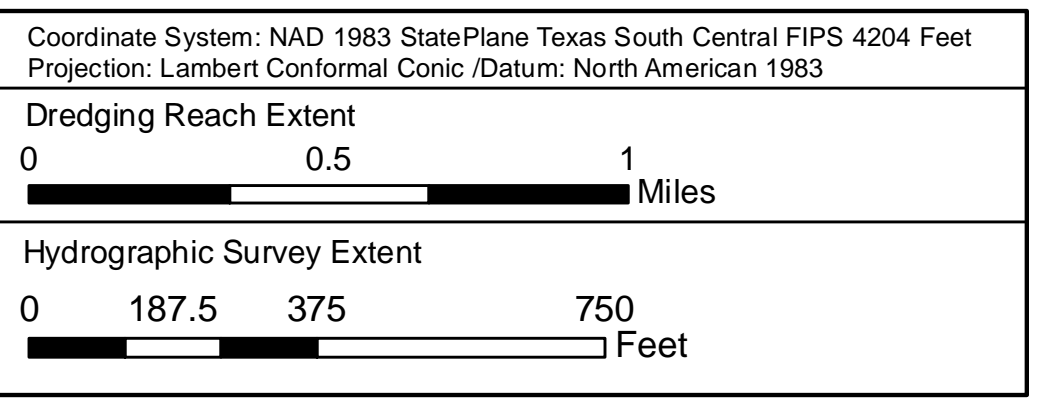
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	Color scale: > 4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, < 18
- - - Channel Center Line	▲ Red Side Aids	NOAA Bathymetry (DREDGING REACH EXTENT)
— Channel Station Lines	■ Green Side Aids	0 - 10, 10 - 15, 15 - 20, 20 - 25, 25 - 30, 30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

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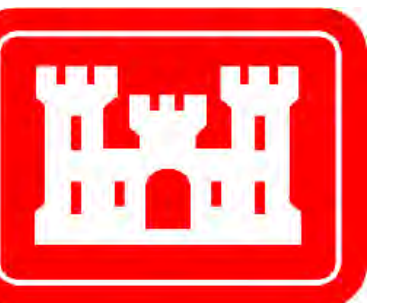


Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 137 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 5/1/2018
Additional Info :	

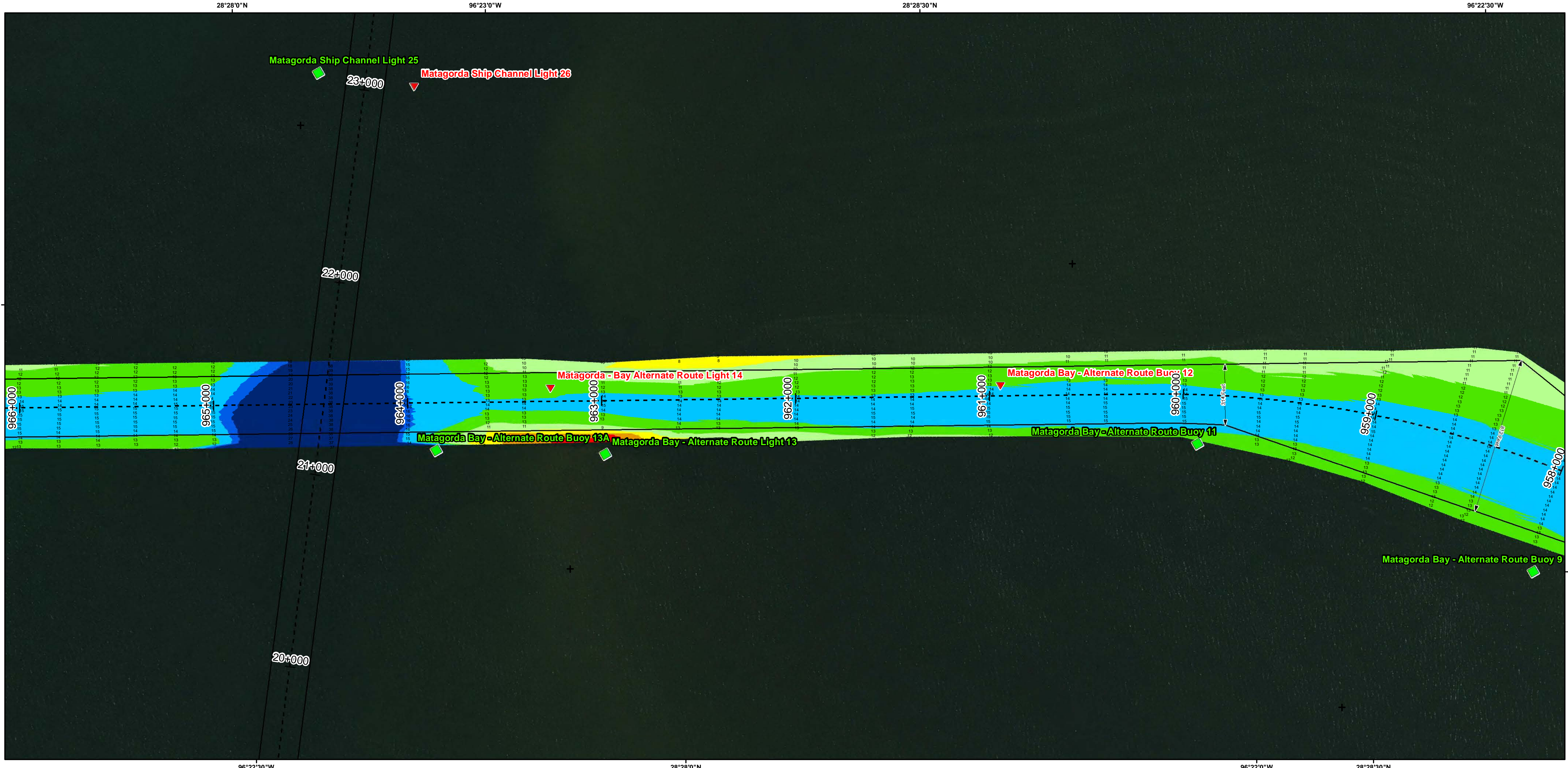
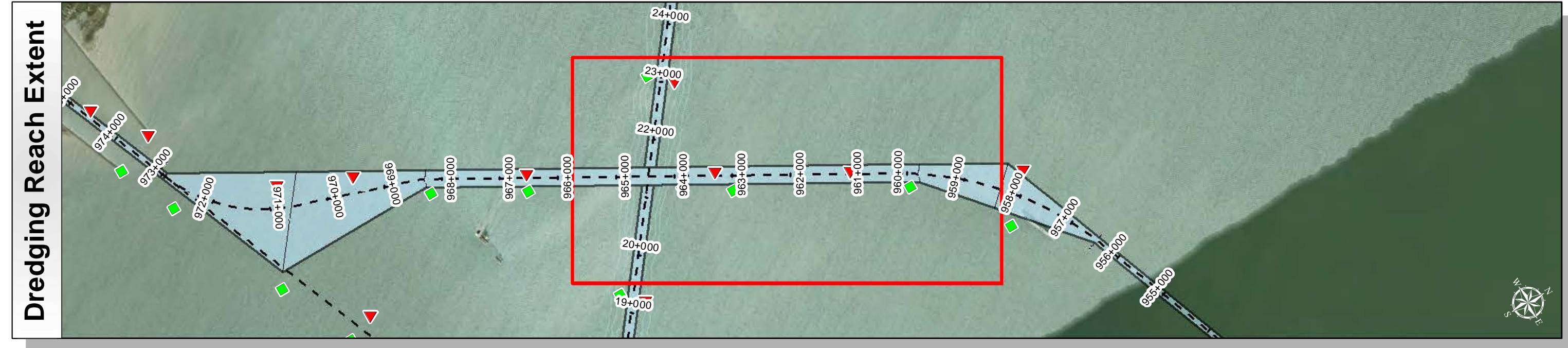
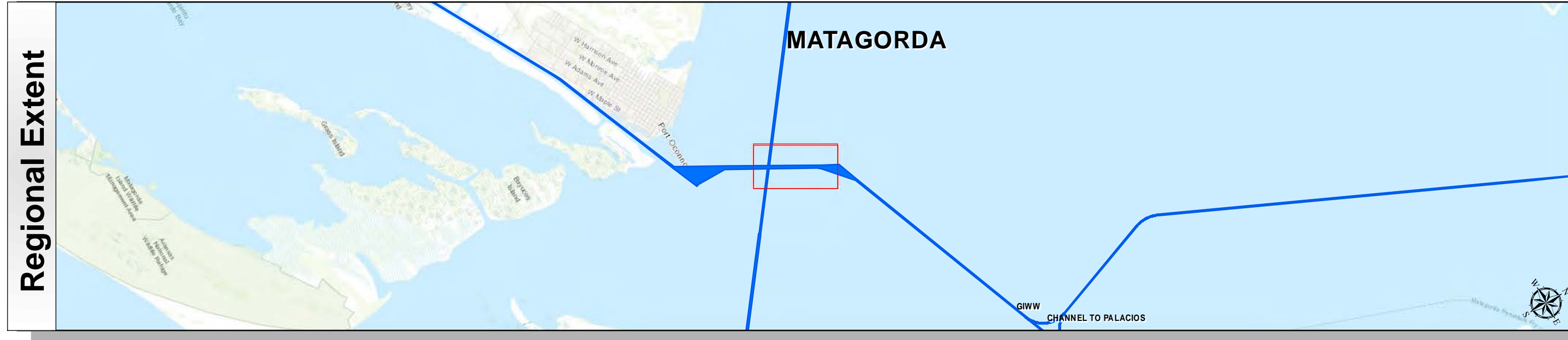
HYDROGRAPHIC SURVEY
 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 GALVESTON, TEXAS
 Natural Bay Bottom

Station: 901+423.55 to 972+939.05
 GIWW
 TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom



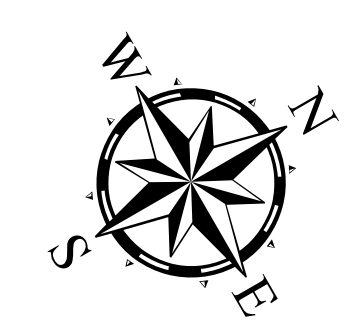
U.S. Army Corps of Engineers
Galveston District



Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	Color scale for depth (feet)
- - - Channel Center Line	▲ Red Side Aids	> 4
— Channel Station Lines	■ Green Side Aids	4 - 6
↔ Channel Dimensions	◆ Mooring Buoy	6 - 8
		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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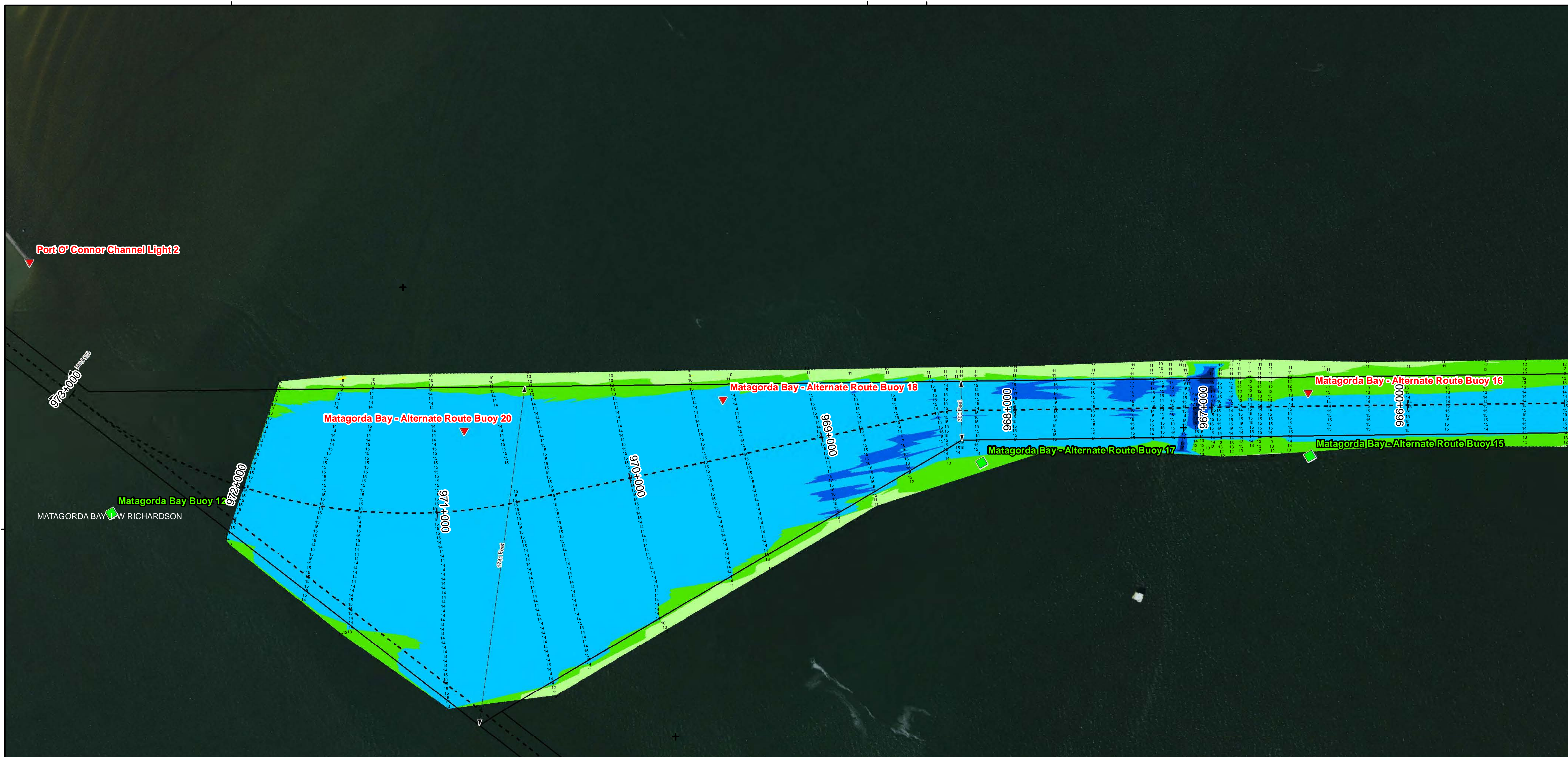
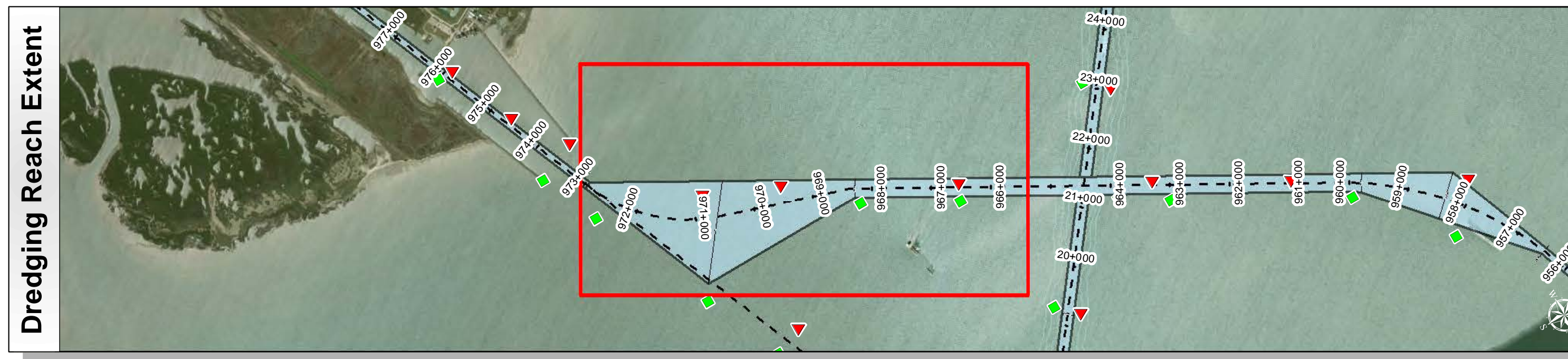
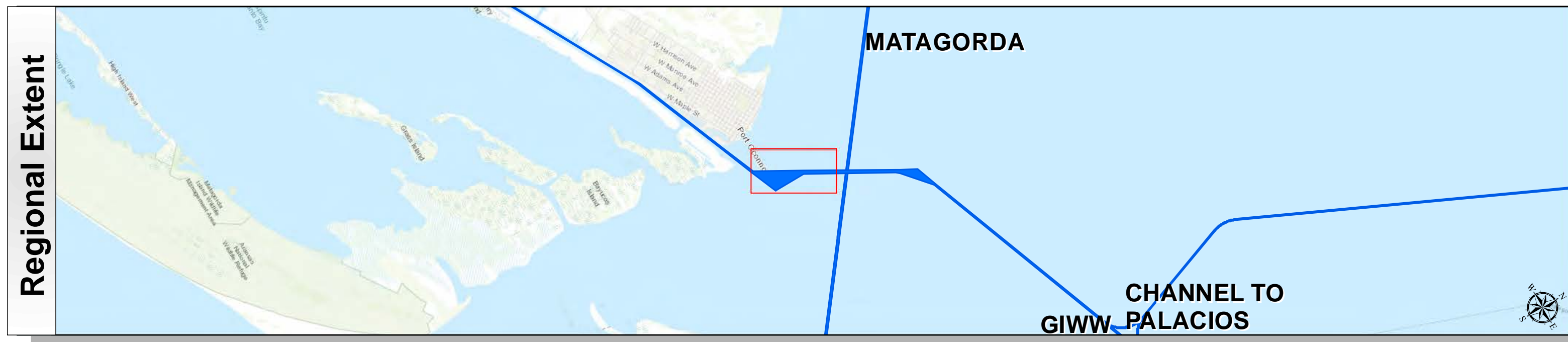
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Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet Projection: Lambert Conformal Conic /Datum: North American 1983
Dredging Reach Extent 0 0.5 1 Miles
Hydrographic Survey Extent 0 187.5 375 750 Feet

Survey Date(s): 01 May 2018	Authorized Depth: -14ft.
Page: 138 of 190	Side Slope Ratio: (Rise : Run)
Scale: 1:3,000	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOXAPAC	Print Date: 5/1/2018
Additional Info:	

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 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 GALVESTON, TEXAS
 Natural Bay Bottom
Station: 901+423.55 to 972+939.05
 GIWW
 TEXAS

Gulf Intracoastal Waterway: Natural Bay Bottom

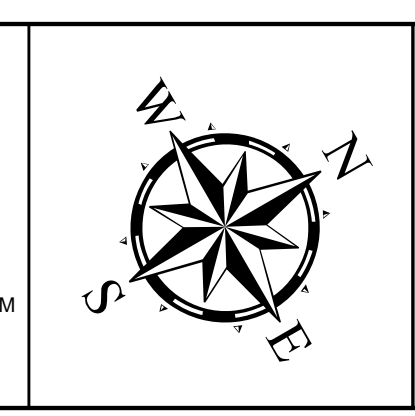


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Page:	139 of 190	Side Slope Ratio: (Rise : Run)	
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Mapped by:	MSAOXPAC	Print Date:	5/1/2018
Additional Info:			

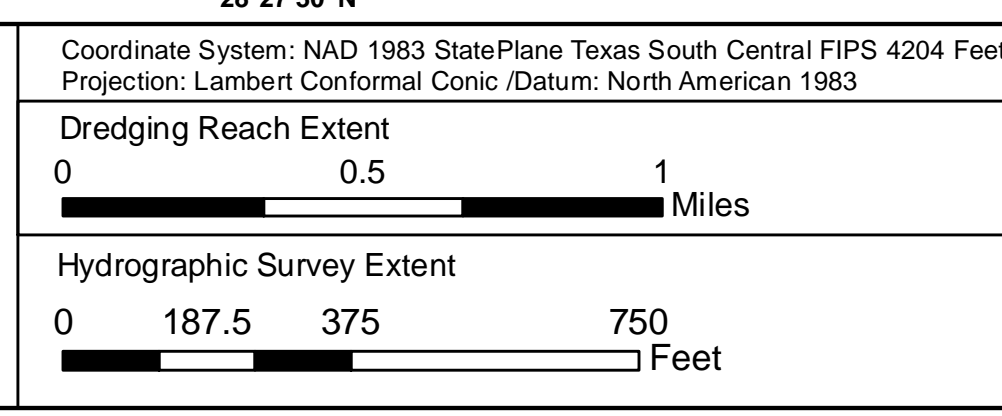
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	Color scale from >4 to <18
- - - Channel Center Line	▲ Red Side Aids	NOAA Bathymetry (DREDGING REACH EXTENT)
— Channel Station Lines	■ Green Side Aids	0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50
↔ Channel Dimensions	◆ Mooring Buoy	

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