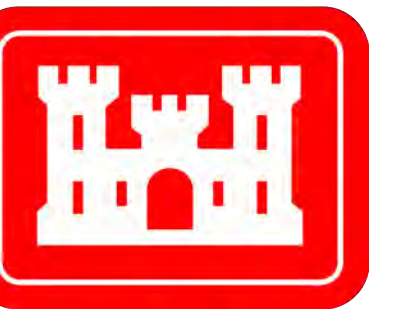
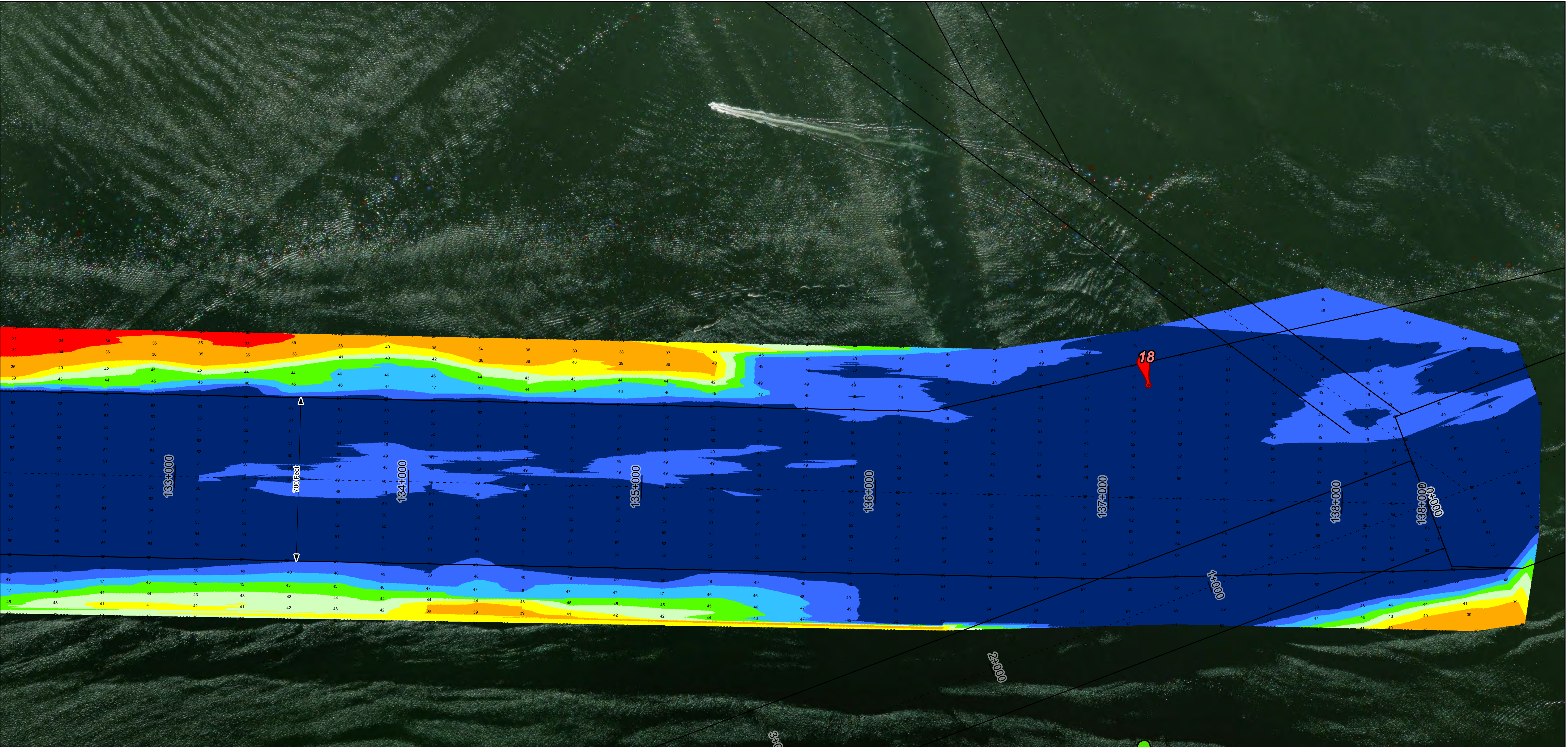
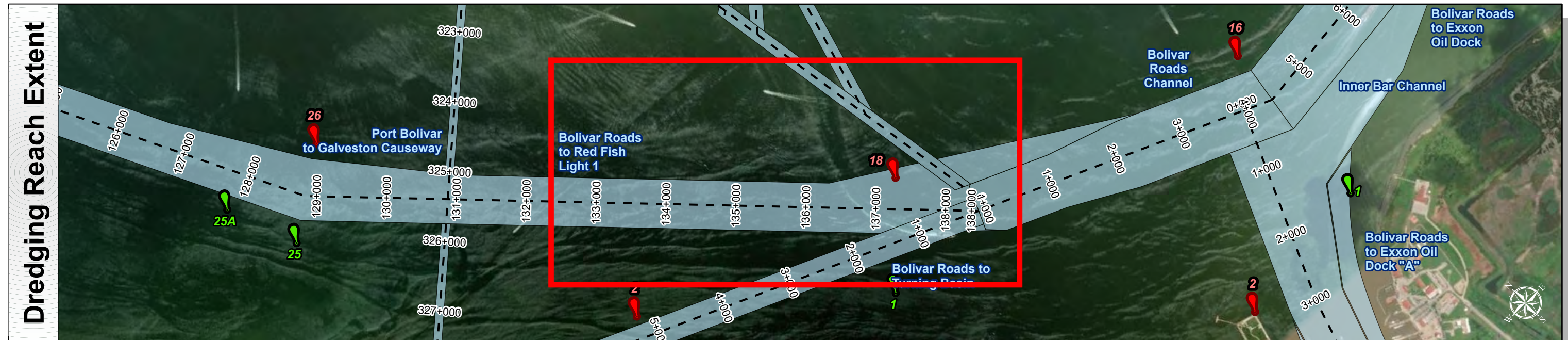
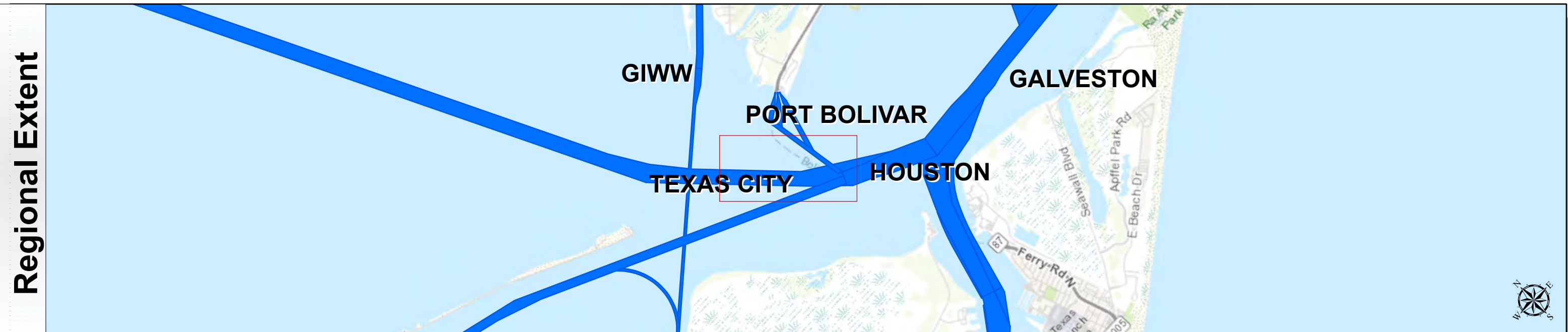


# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 1 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 1
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



**Channel Features**

- Channel Center Line
- Channel Toe
- Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

**MLLW**

**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 Water (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 er1110-1, 8132.
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- For the most up to date information please check our website at: <http://www.svg.usace.army.mil/Missions/Navigation/HydrographicSurveys/>

Service Layer Credits: World Topographic Map, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery, Maxar  
World Ocean Base, Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844

**Dredging Reach Extent**

**Hydrographic Survey Extent**

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

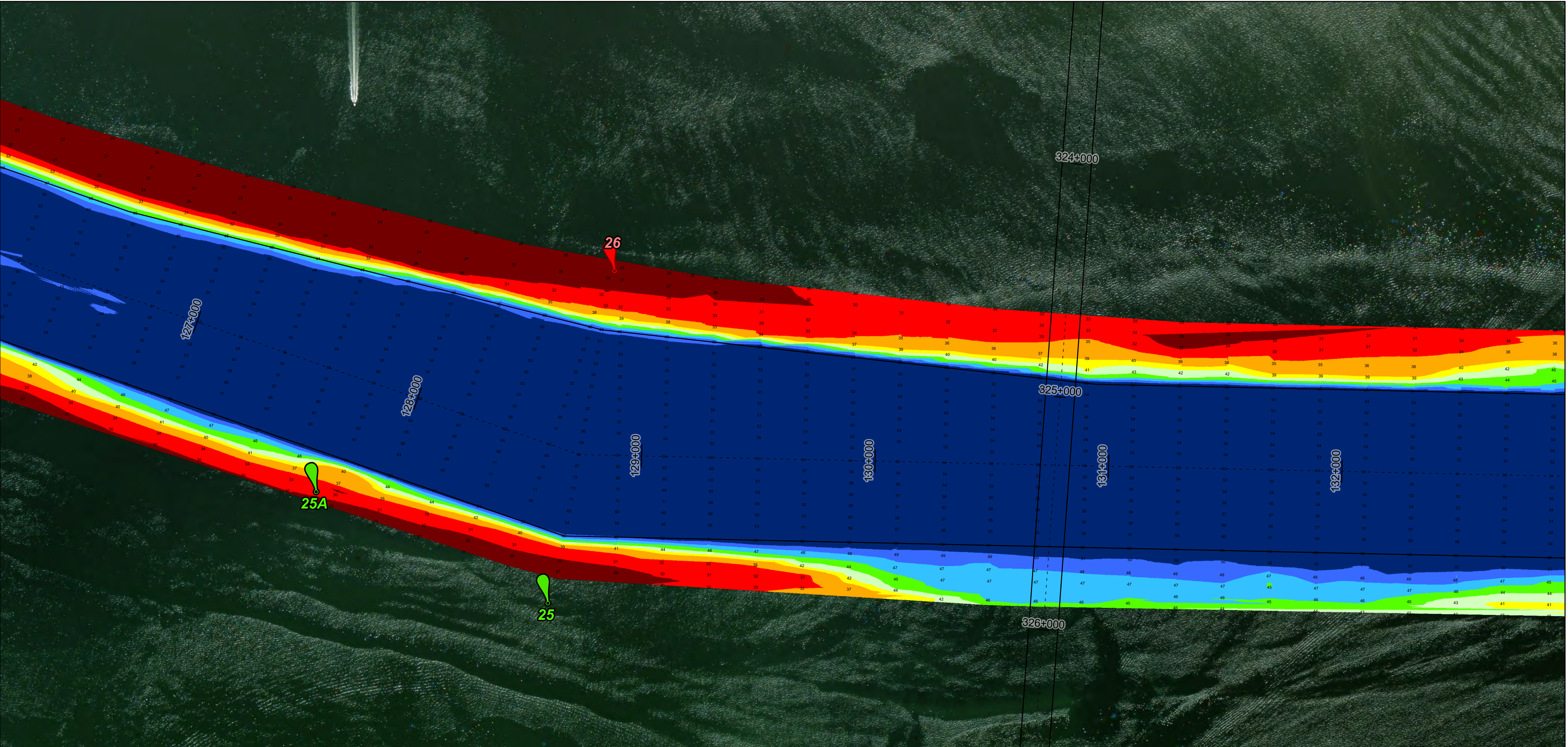
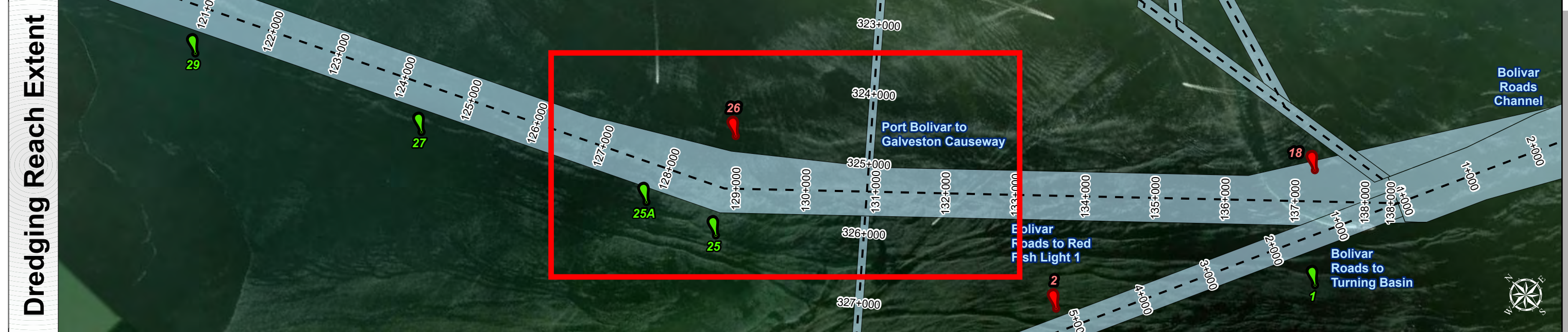
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
HOUSTON  
Bolivar Roads to Red Fish Light 1

# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 2 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 2
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	

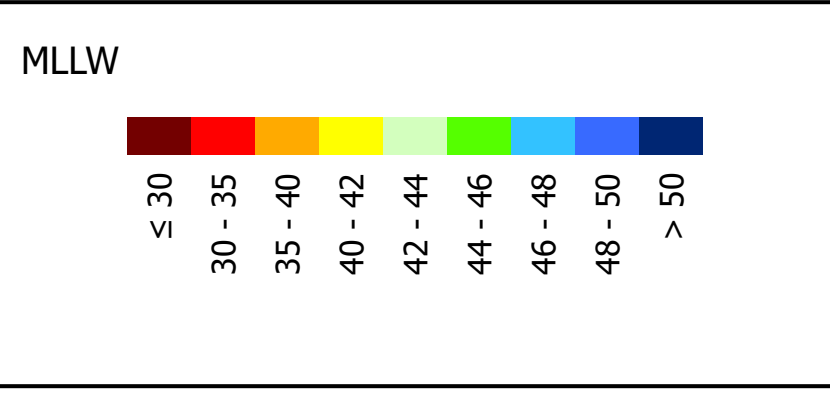


**Channel Features**

- Channel Center Line
- Channel Toe
- ↔ Channel Dimensions

**Aids to Navigation**

- 🟢 Green Side Aids
- 🔴 Red Side Aids
- 🟡 Lights

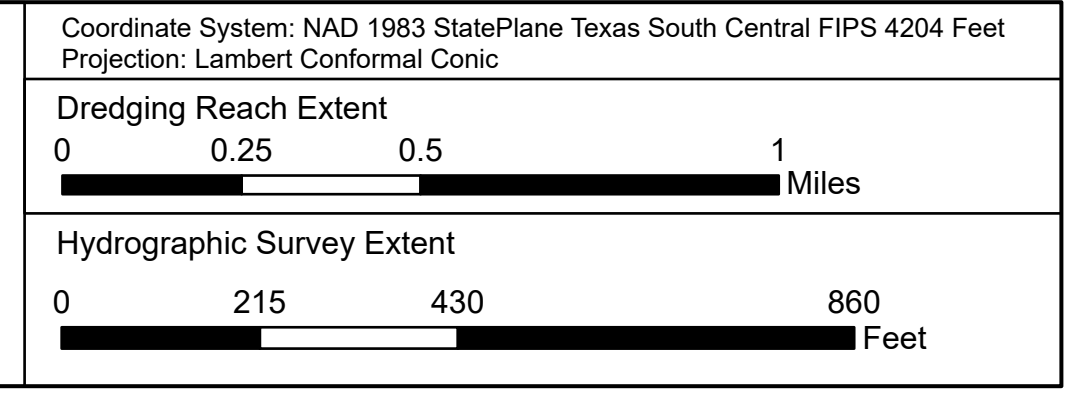


**NOTES:**

- Horizontal coordinates are referenced to Texas State Plane Coordinate System, South Central Zone NAD83 US Survey Feet.
- Elevations are referenced to Mean Lower Low Water (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 er1110-1-8132.
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Service Layer Credits: World Topographic Map, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery: Maxar  
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

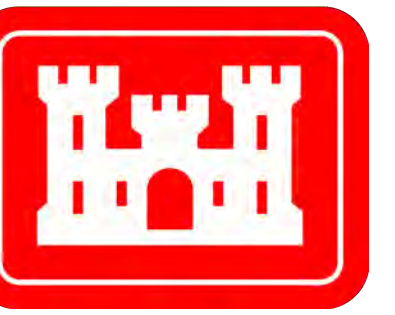
**Additional Combined Survey Dates and Stationing:**  
 Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844



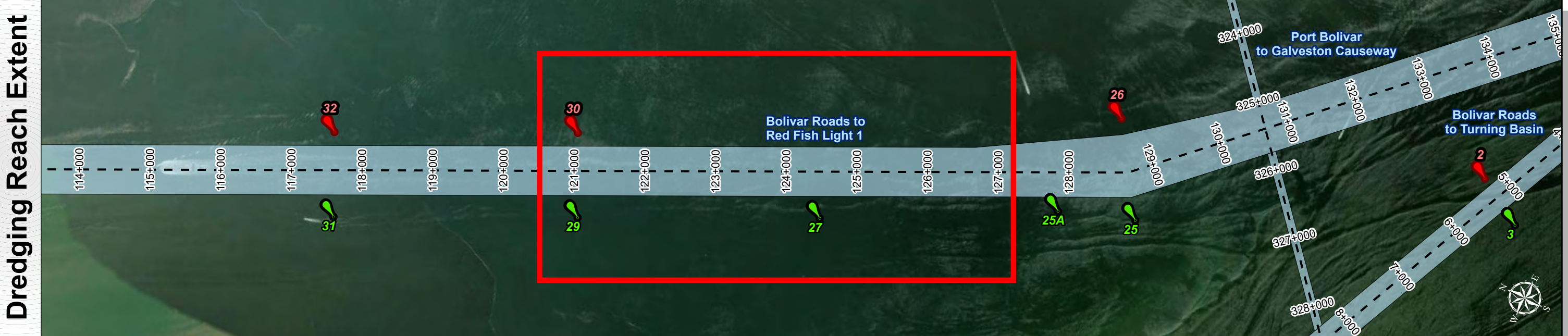
**HYDROGRAPHIC SURVEY**  
 U.S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
**HOUSTON**  
 Bolivar Roads to Red Fish Light 1

# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 3 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 3
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



**Channel Features**

- Channel Center Line
- Channel Toe
- Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

**MLLW**

**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 Water (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 er1110-1-8132.
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Service Layer Credits: World Topographic Map, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA, World Imagery, Maxar, World Ocean Base, Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
 Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844

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

**Dredging Reach Extent**

**Hydrographic Survey Extent**

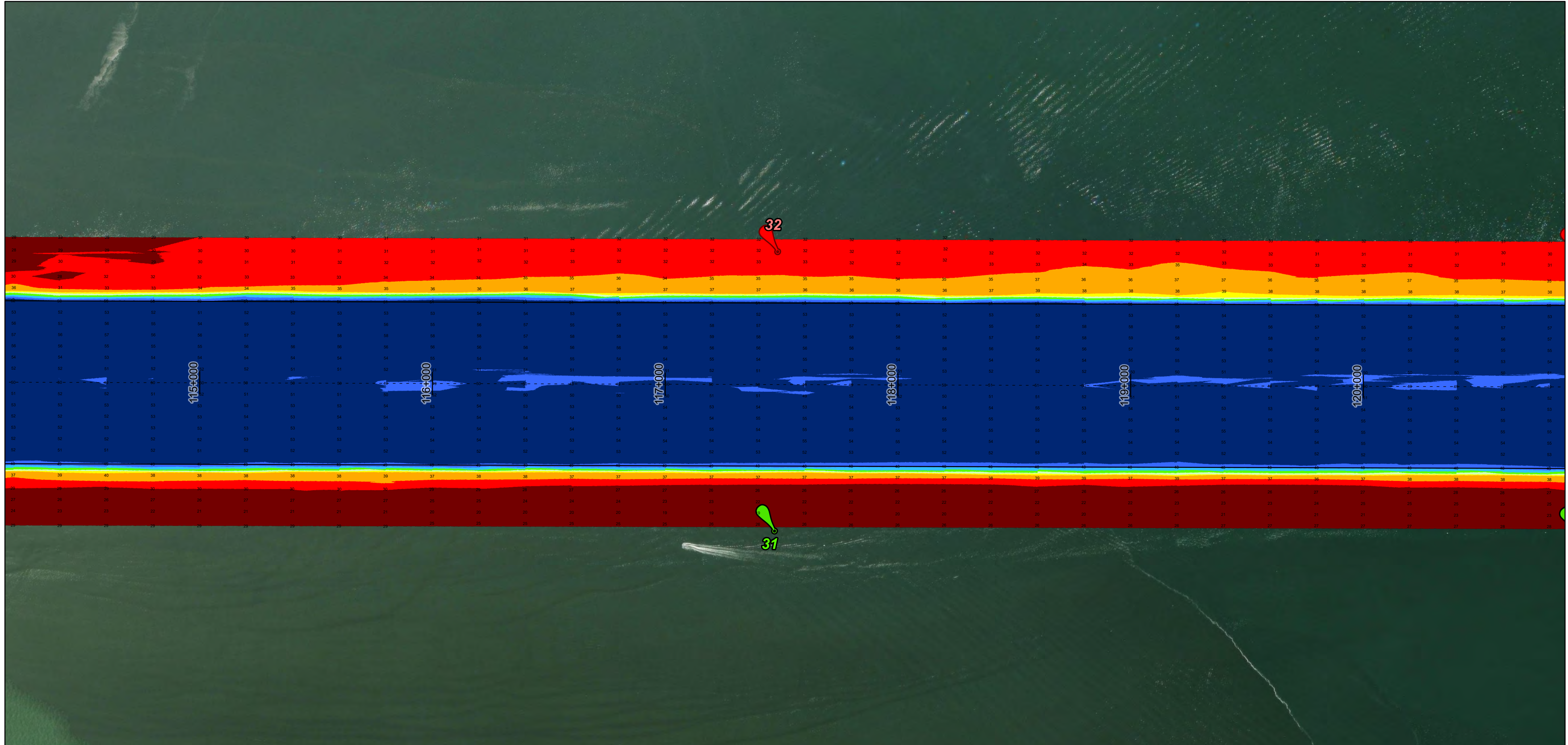
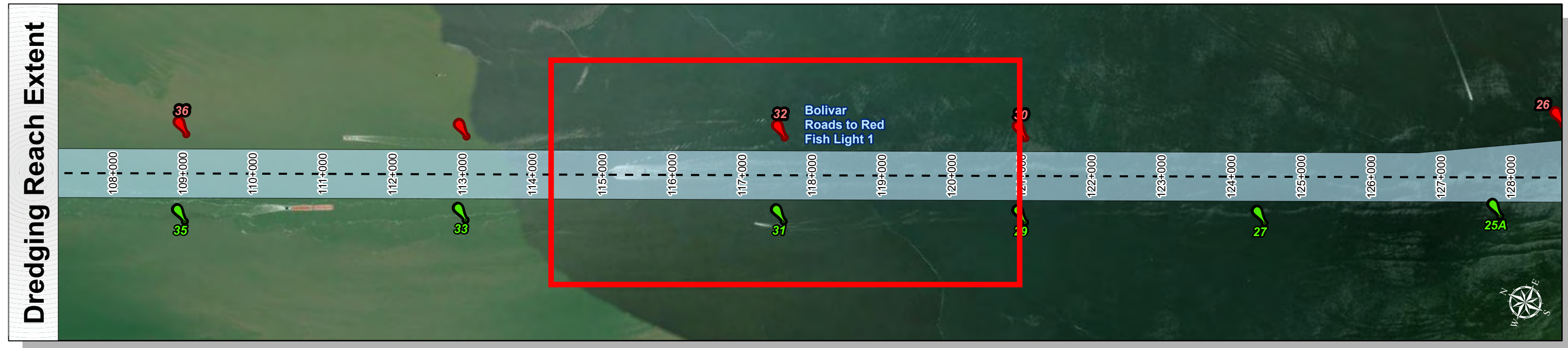
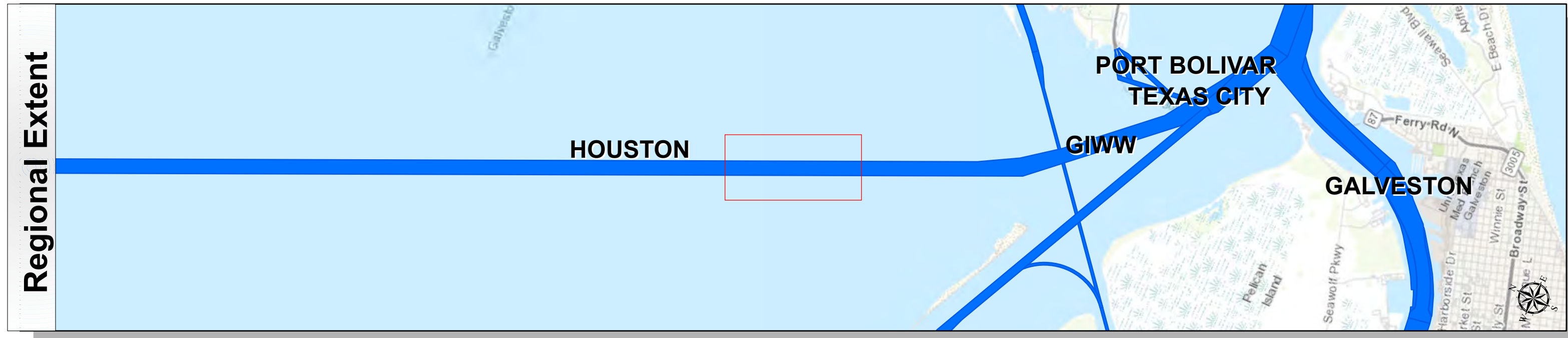
**HYDROGRAPHIC SURVEY**  
 U.S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
**HOUSTON**  
 Bolivar Roads to Red Fish Light 1

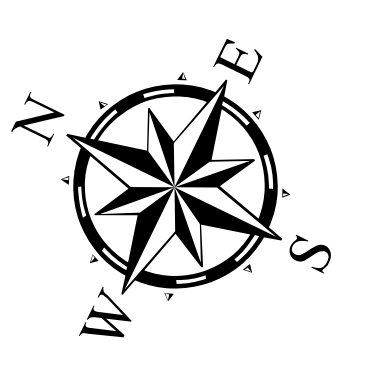
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 4 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 4
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



**Channel Features**

- Channel Center Line
- Channel Toe
- Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

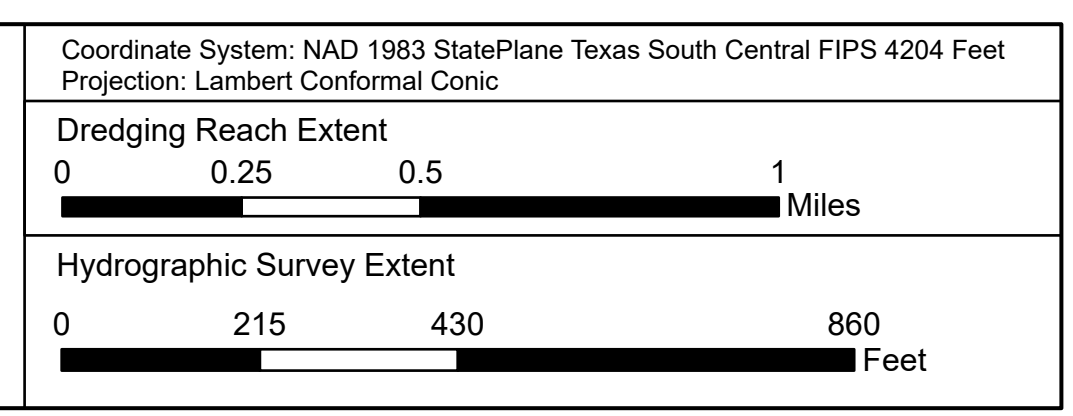
**MLLW**

**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 Water (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 er1110-1-8132.
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Service Layer Credits: World Topographic Map, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, World Imagery, Maxar, World Ocean Base, Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844



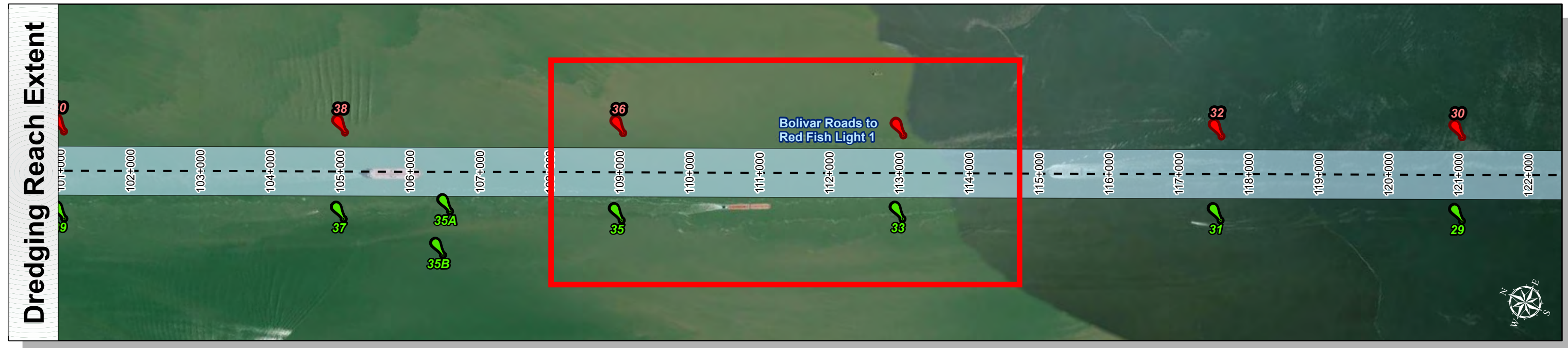
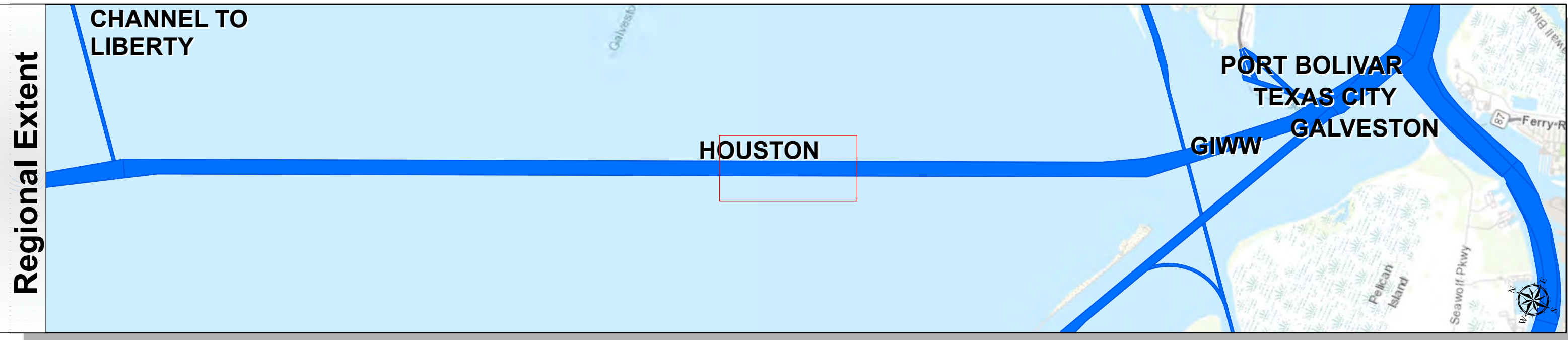
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
Bolivar Roads to Red Fish Light 1

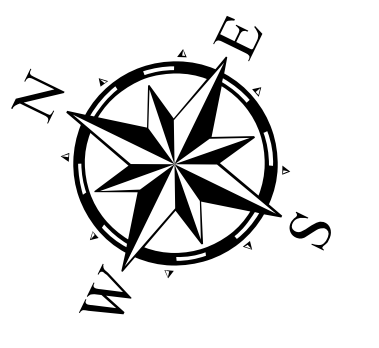
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 5 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 5
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	

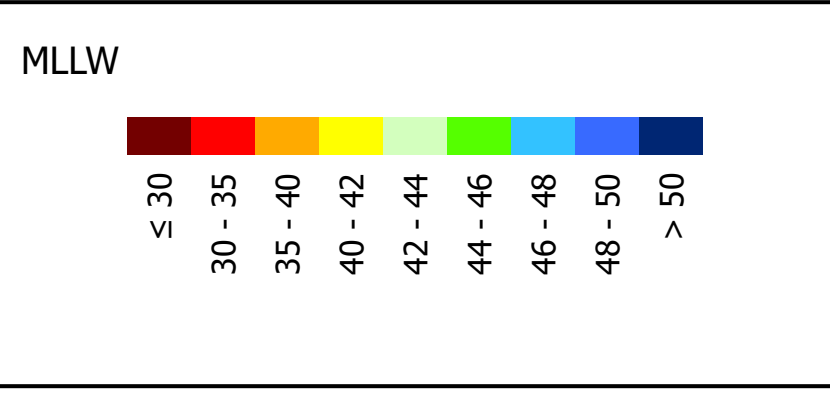


**Channel Features**

- Channel Center Line
- Channel Toe
- ↔ Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

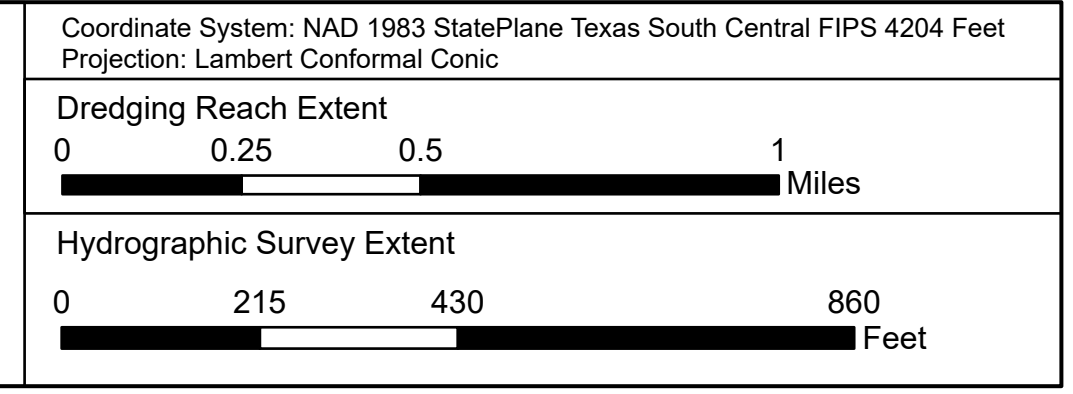


**NOTES:**

- Horizontal coordinates are referenced to Texas State Plane Coordinate System, South Central Zone NAD83 US Survey Feet.
- Elevations are referenced to Mean Lower Low Water (MLLW) datum.
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Service Layer Credits: World Topographic Map, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery: Maxar  
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

Additional Combined Survey Dates and Stationing:  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844



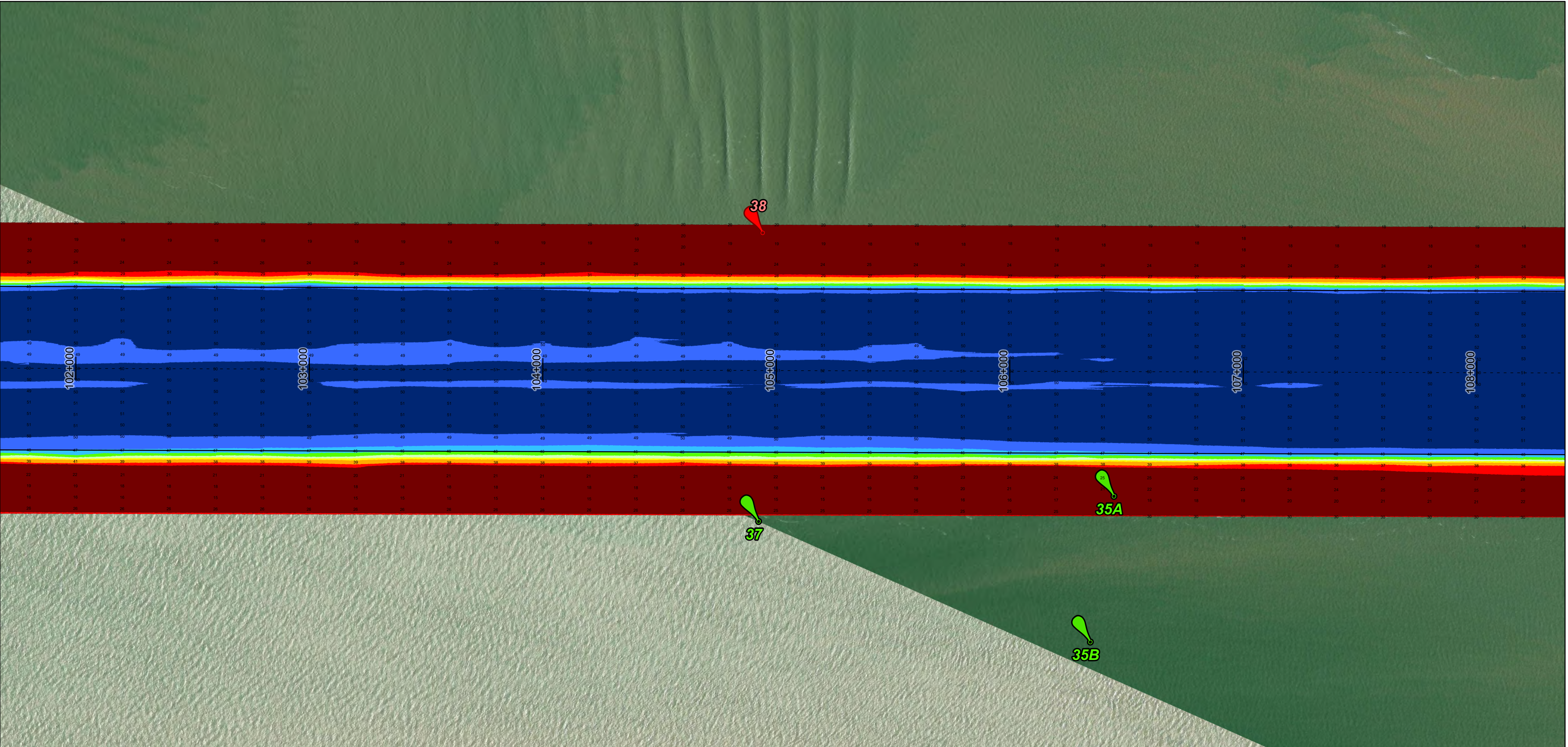
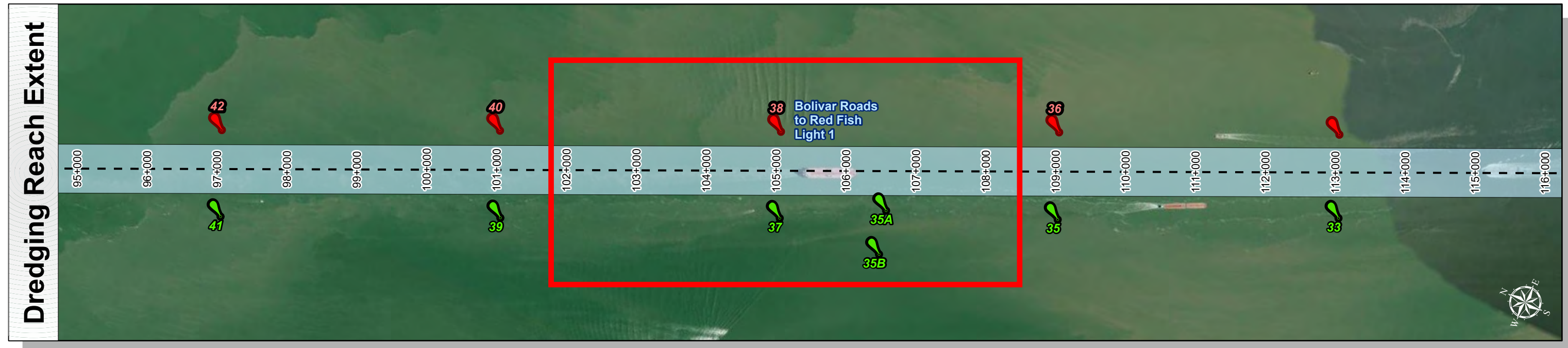
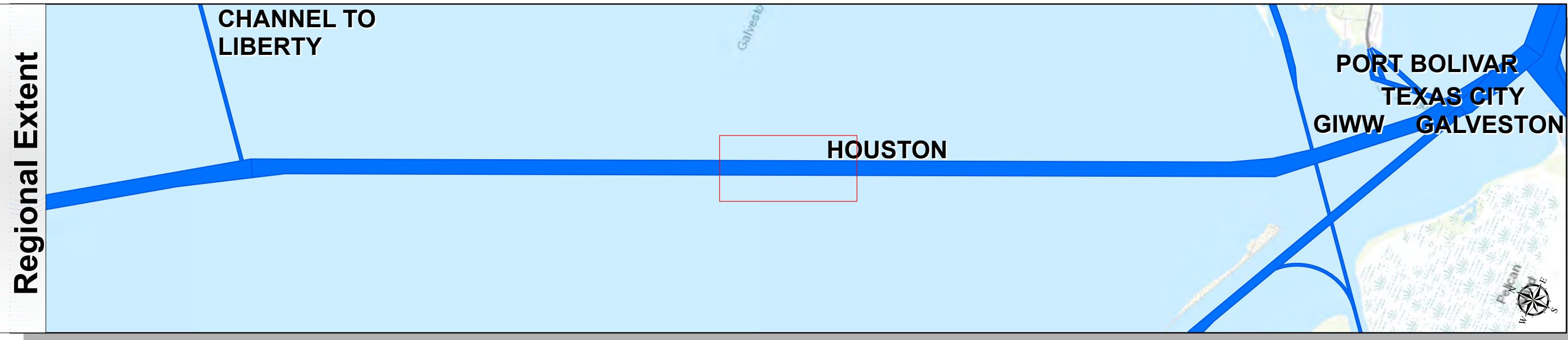
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
Bolivar Roads to Red Fish Light 1

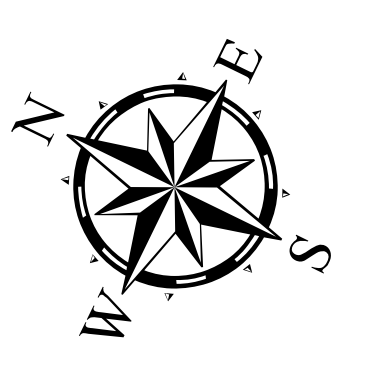
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 6 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 6
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



**Channel Features**

- Channel Center Line
- Channel Toe
- Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

**MLLW**

**NOTES:**

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Service Layer Credits: World Topographic Map: Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery: Maxar  
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844

**Dredging Reach Extent**

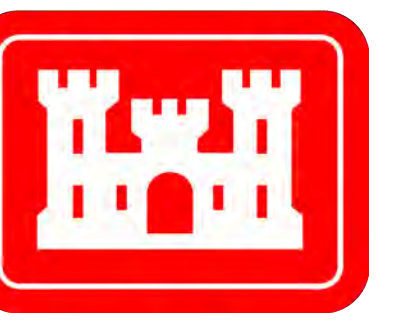
**Hydrographic Survey Extent**

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

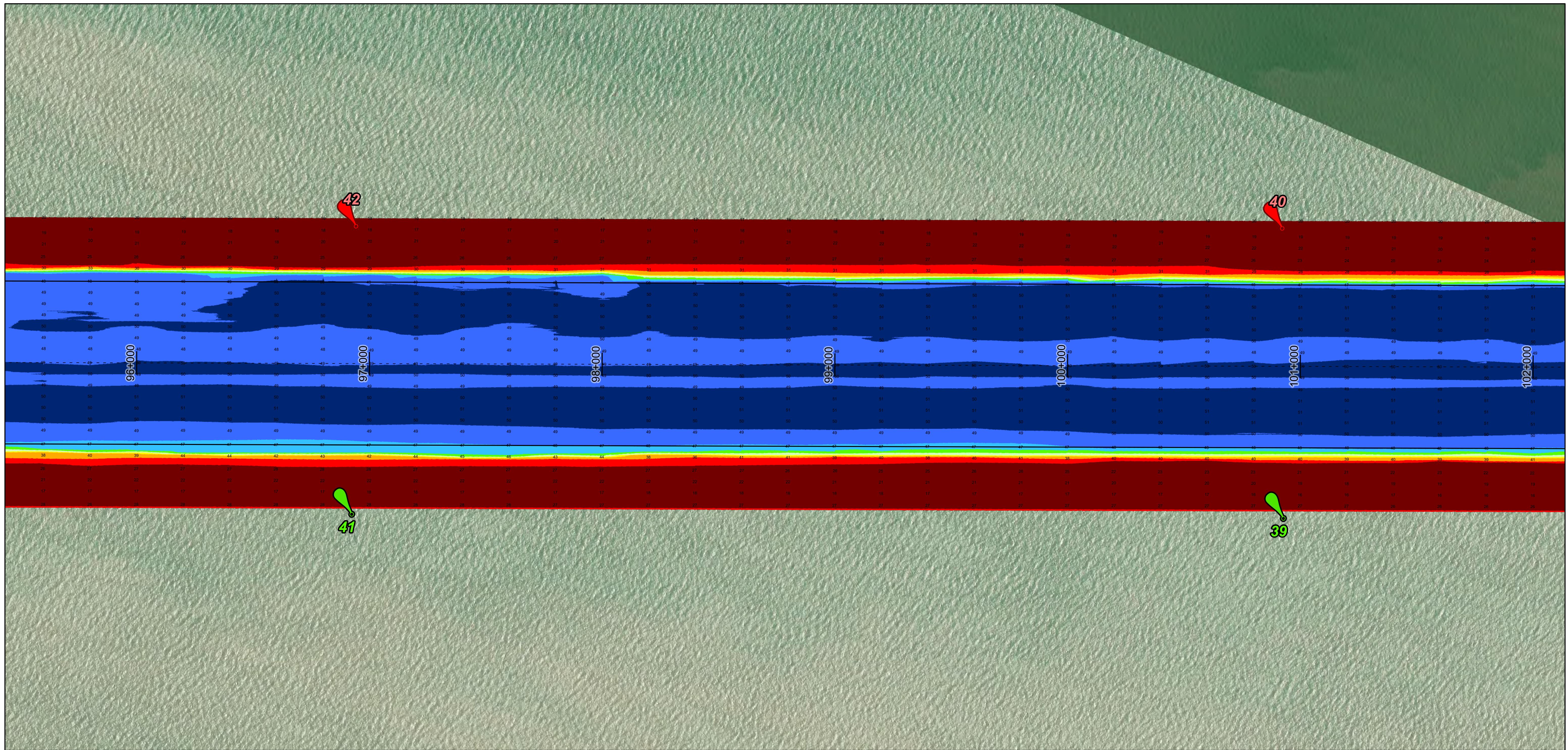
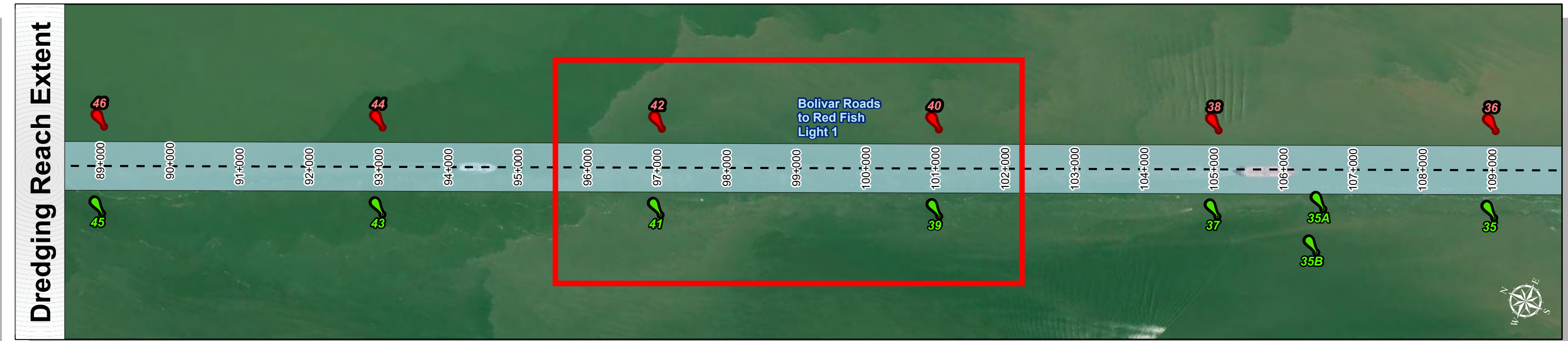
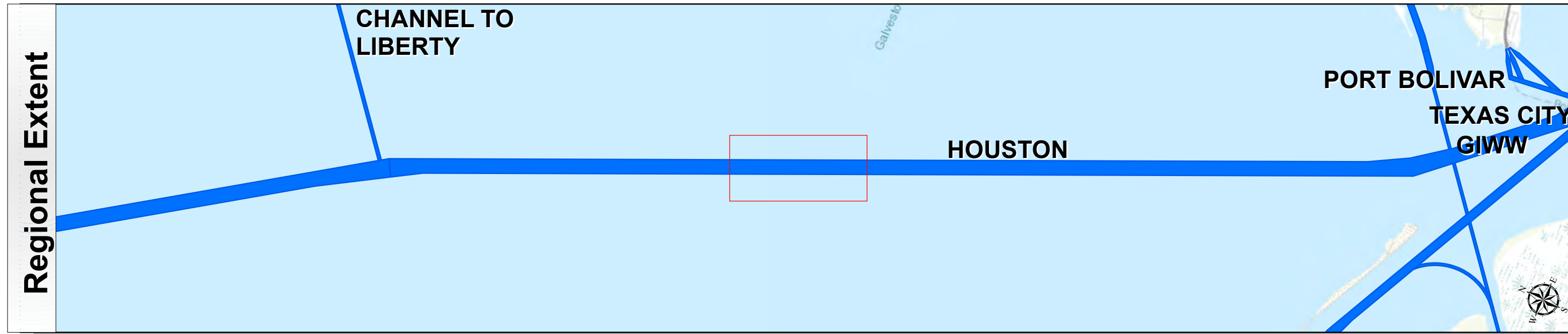
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
Houston  
Bolivar Roads to Red Fish Light 1

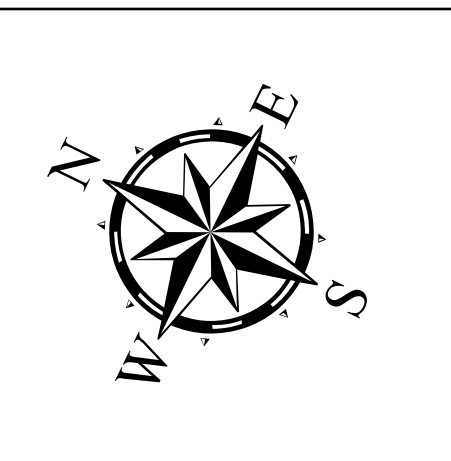
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Authorized Depth: -46ft.	Latest Survey Collection Date: 10 December 2024
Side Slope Ratio: 1:2.5 (Rise :Run)	Document Page: 7 of 10
PDF Print Date: 1/13/2025	Website Index Number: 7
	Scale: 1:2,500
	Mapped by: M3AOXPAC
	Additional Imagery info:



**Channel Features**

- Channel Center Line
- Channel Toe
- ↔ Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

**MLLW**

**NOTES:**

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Service Layer Credits: World Topographic Map: Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery: Maxar  
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844

**Coordinate System:** NAD 1983 StatePlane Texas South Central FIPS 4204 Feet  
**Projection:** Lambert Conformal Conic

**Dredging Reach Extent**  
0 0.25 0.5 1 Miles

**Hydrographic Survey Extent**  
0 215 430 860 Feet

**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
Bolivar Roads to Red Fish Light 1

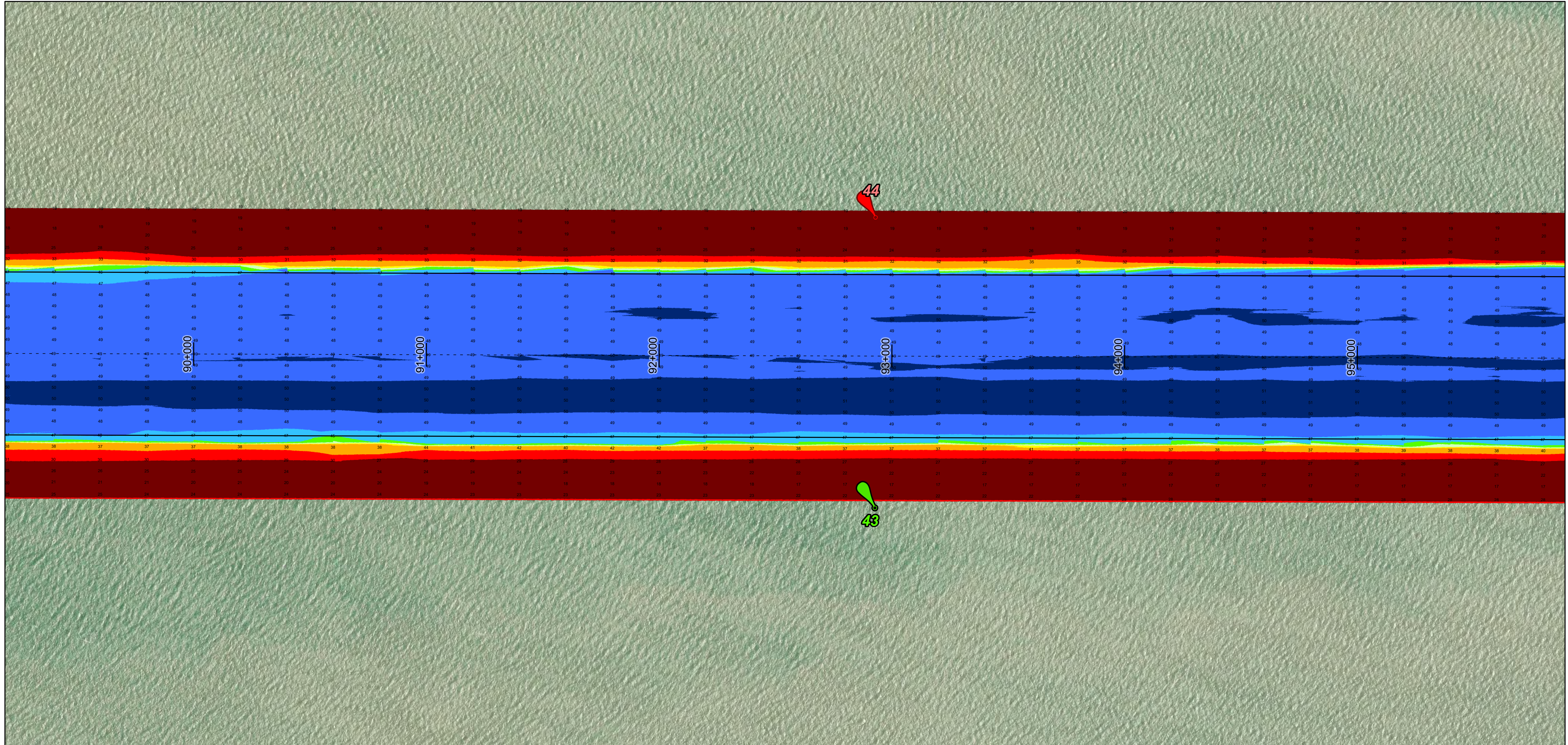
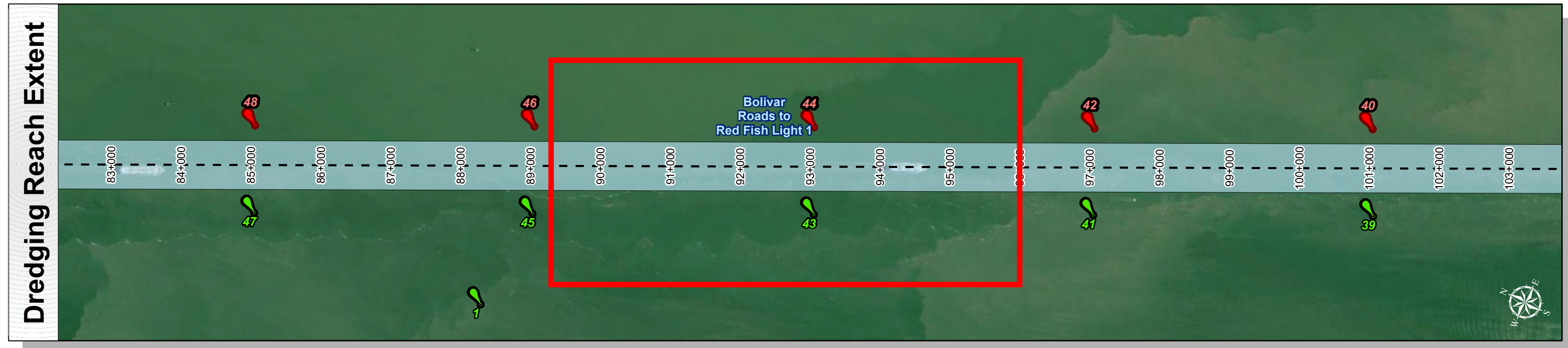
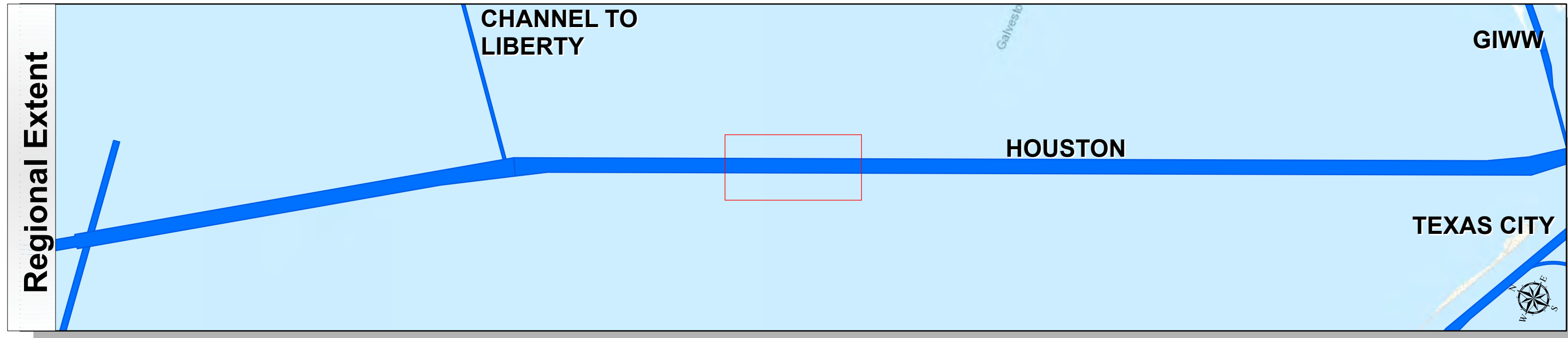
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
Bolivar Roads to Red Fish Light 1

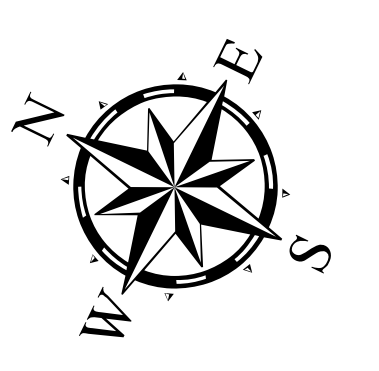
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 8 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 8
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



**Channel Features**

- Channel Center Line
- Channel Toe
- ↔ Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

**MLLW**

**NOTES:**

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Service Layer Credits: World Topographic Map, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery: Maxar  
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844

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

**Dredging Reach Extent**

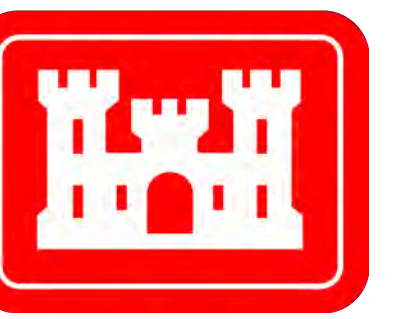
**Hydrographic Survey Extent**

**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

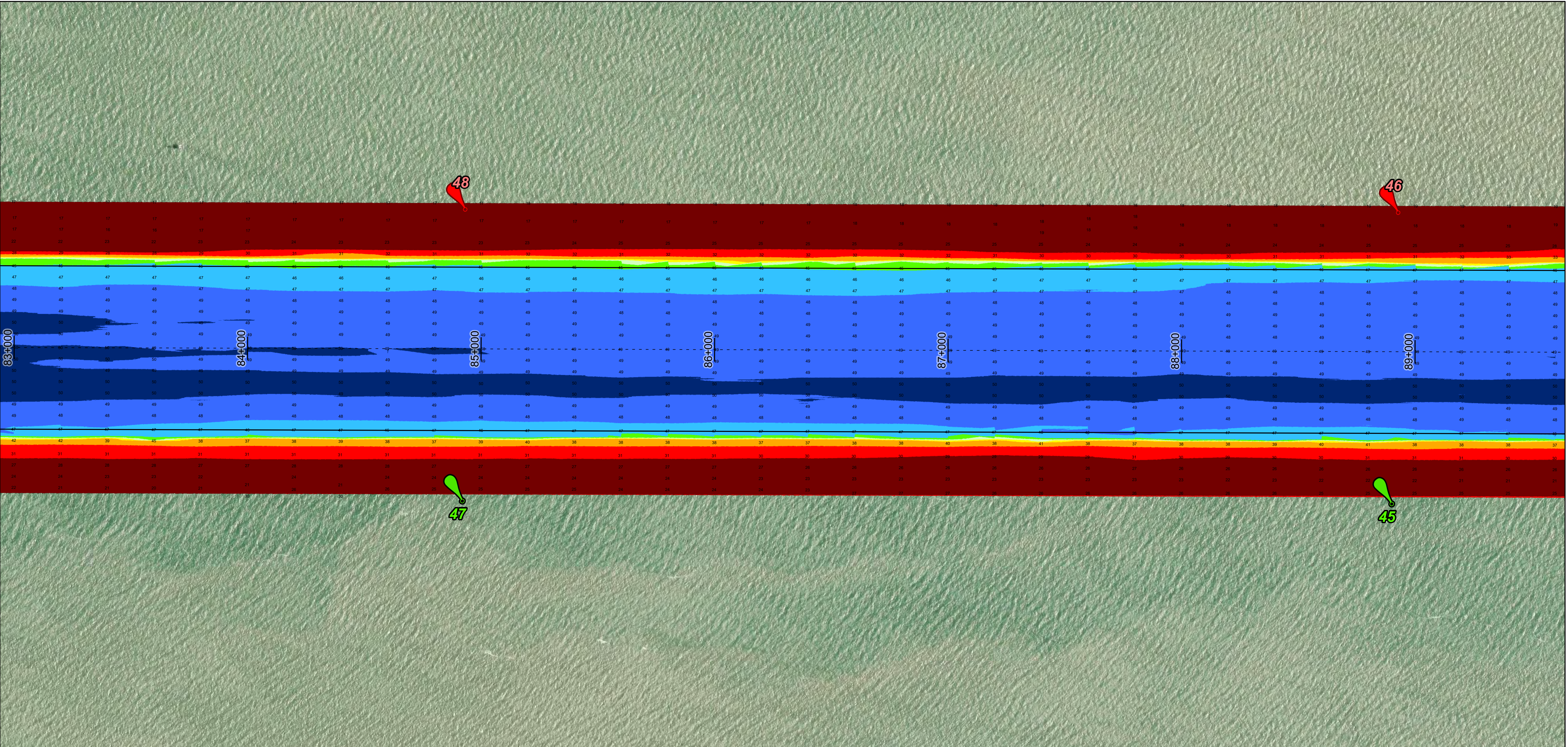
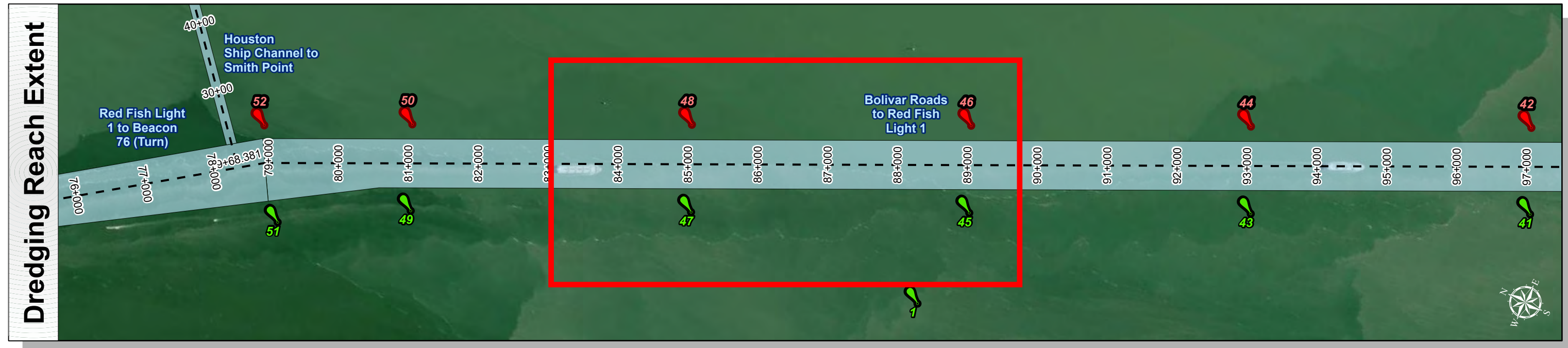
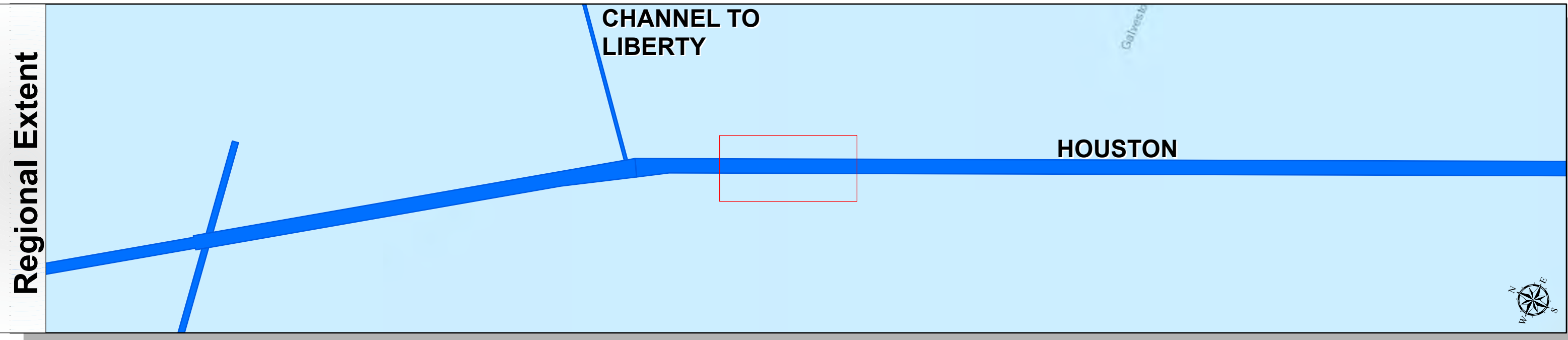
**Station: 138+476 to 78+844**  
Houston  
Bolivar Roads to Red Fish Light 1



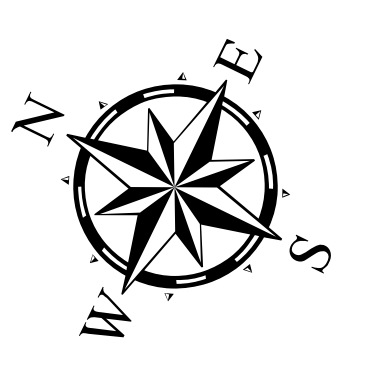
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 9 of 10	Side Slope Ratio: 1:2.5 (Rise ,Run)
Scale: 1:2,500	Website Index Number: 9
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



**Channel Features**

- Channel Center Line
- Channel Toe
- ↔ Channel Dimensions

**Aids to Navigation**

- Green Side Aids
- Red Side Aids
- Lights

**MLLW**

≤ 30 30 - 35 35 - 40 40 - 42 42 - 44 44 - 46 46 - 48 48 - 50 > 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 Water (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 er1110-1-8132.
- 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 200.225
- For the most up to date information please check our website at: <http://www.svg.usace.army.mil/Missions/Navigation/HydrographicSurveys/>

Service Layer Credits: World Topographic Map: Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA  
World Imagery: Maxar  
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

**Additional Combined Survey Dates and Stationing:**  
Combined survey dates 20241110\_CS; 20241210\_PR\_80P478\_78P844

**Dredging Reach Extent**

0 0.25 0.5 1 Miles

**Hydrographic Survey Extent**

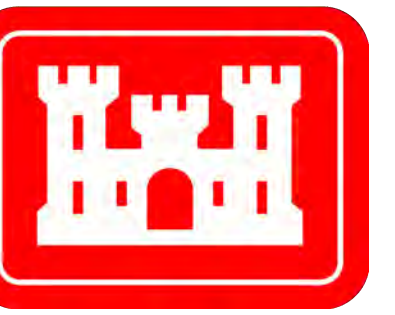
0 215 430 860 Feet

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

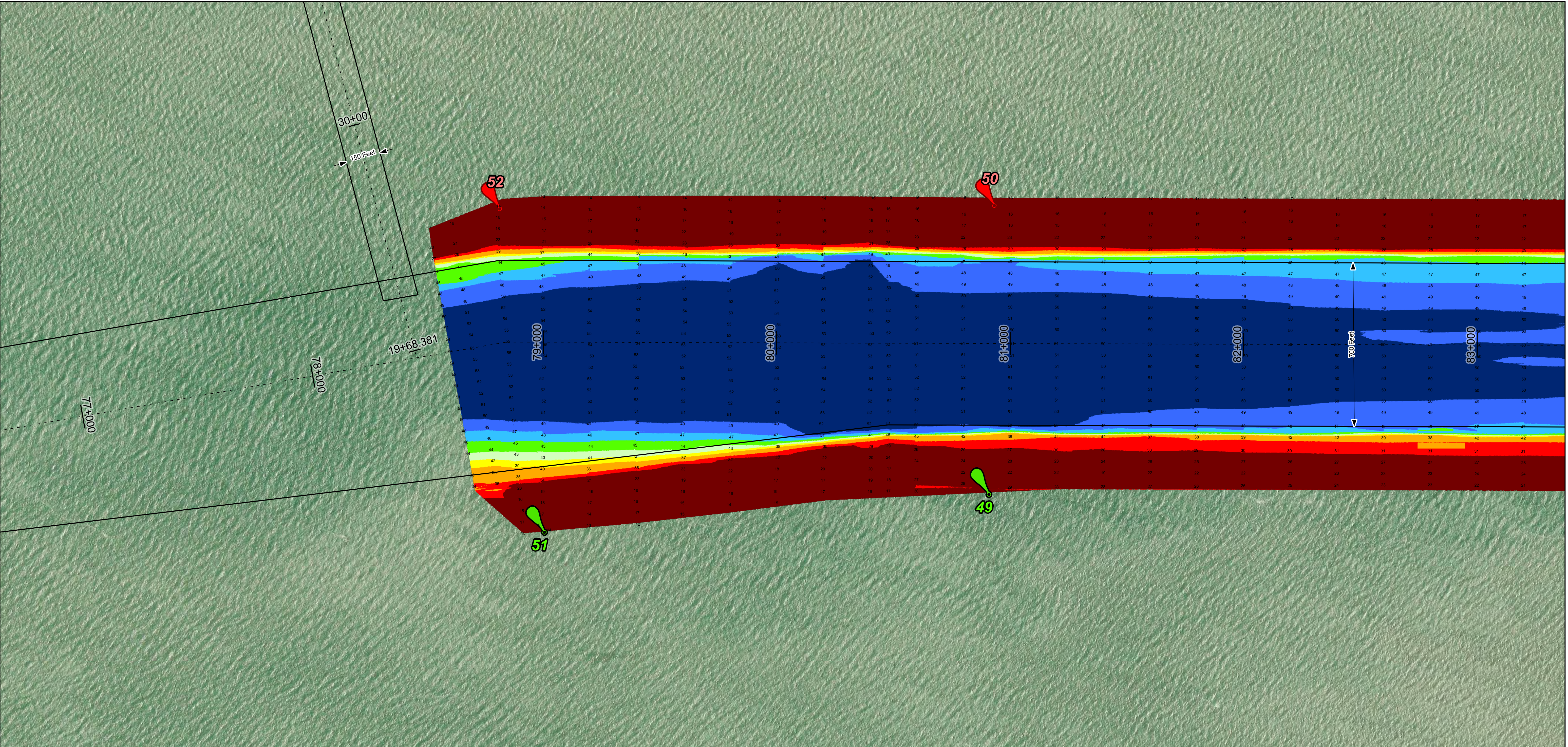
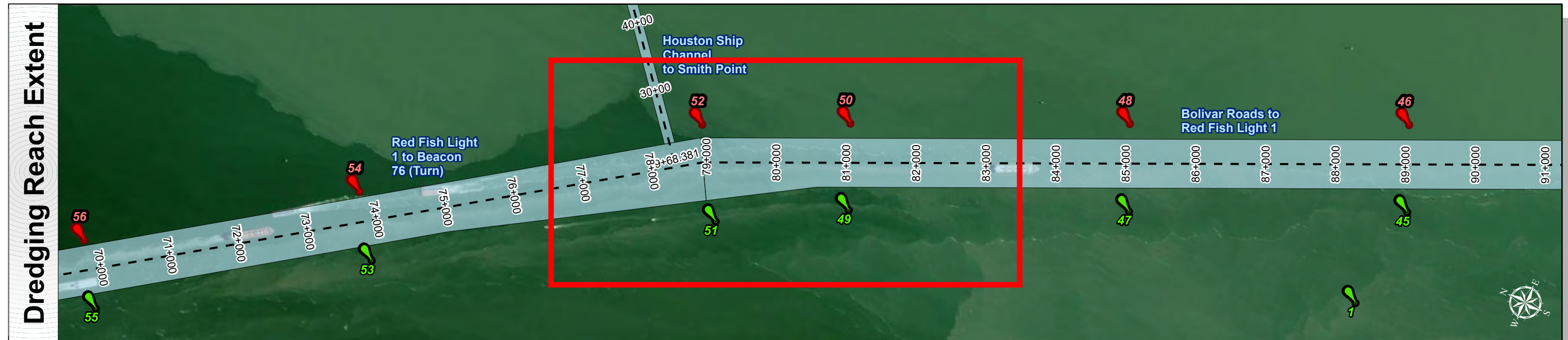
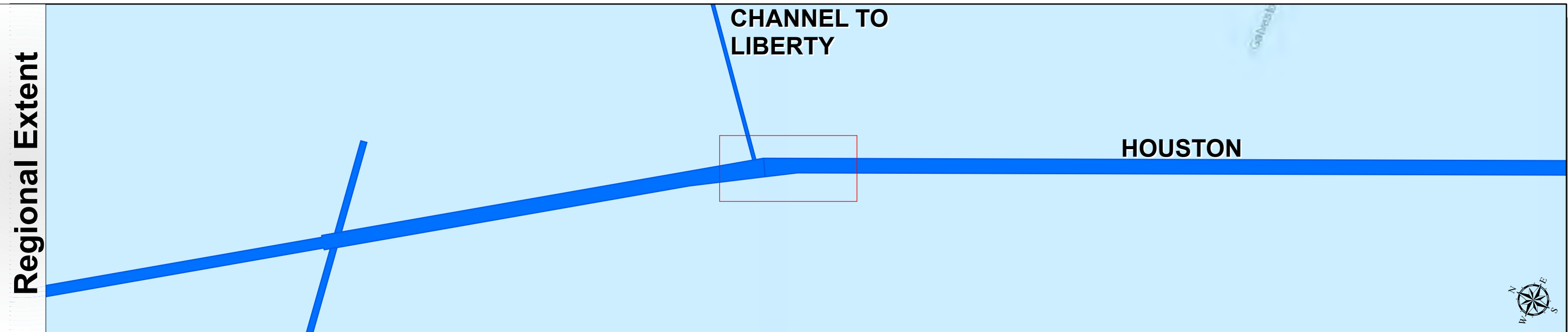
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

**Station: 138+476 to 78+844**  
**HOUSTON**  
Bolivar Roads to Red Fish Light 1

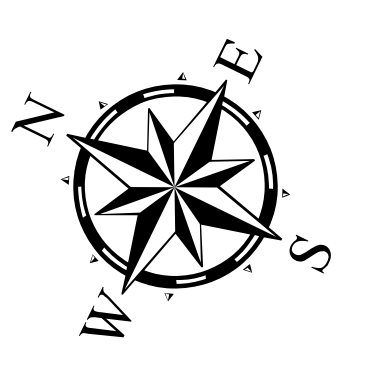
# Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers  
Galveston District



Latest Survey Collection Date: 10 December 2024	Authorized Depth: -46ft.
Document Page: 10 of 10	Side Slope Ratio: 1:2.5 (Rise : Run)
Scale: 1:2,500	Website Index Number: 10
Mapped by: M3AOXPAC	PDF Print Date: 1/13/2025
Additional Imagery info:	



Channel Features	Aids to Navigation	MLLW
<ul style="list-style-type: none"> <li>Channel Center Line</li> <li>Channel Toe</li> <li>Channel Dimensions</li> </ul>	<ul style="list-style-type: none"> <li>Green Side Aids</li> <li>Red Side Aids</li> <li>Lights</li> </ul>	

NOTES:  
 1. Horizontal coordinates are referenced to Texas State Plane Coordinate System, South Central Zone NAD83 US Survey Feet.  
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Additional Combined Survey Dates and Stationing: Combined survey dates 20241110_CS; 20241210_PR_80P478_78P844
Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet Projection: Lambert Conformal Conic
Dredging Reach Extent 0 0.25 0.5 1 Miles
Hydrographic Survey Extent 0 215 430 860 Feet

<p><b>HYDROGRAPHIC SURVEY</b>                  U.S. ARMY ENGINEER DISTRICT                  CORPS OF ENGINEERS                  GALVESTON, TEXAS</p> <p><b>Station: 138+476 to 78+844</b>  <b>HOUSTON</b>                  Bolivar Roads to Red Fish Light 1</p>
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