



PORT HOUSTON
THE INTERNATIONAL PORT OF TEXASSM



Looking Ahead at the Houston Ship Channel

Richard Ruchhoeft | Channel Improvement | Port Houston

13 November 2019



Working Together



PORT HOUSTON
THE INTERNATIONAL PORT OF TEXAS™



Community



Industry

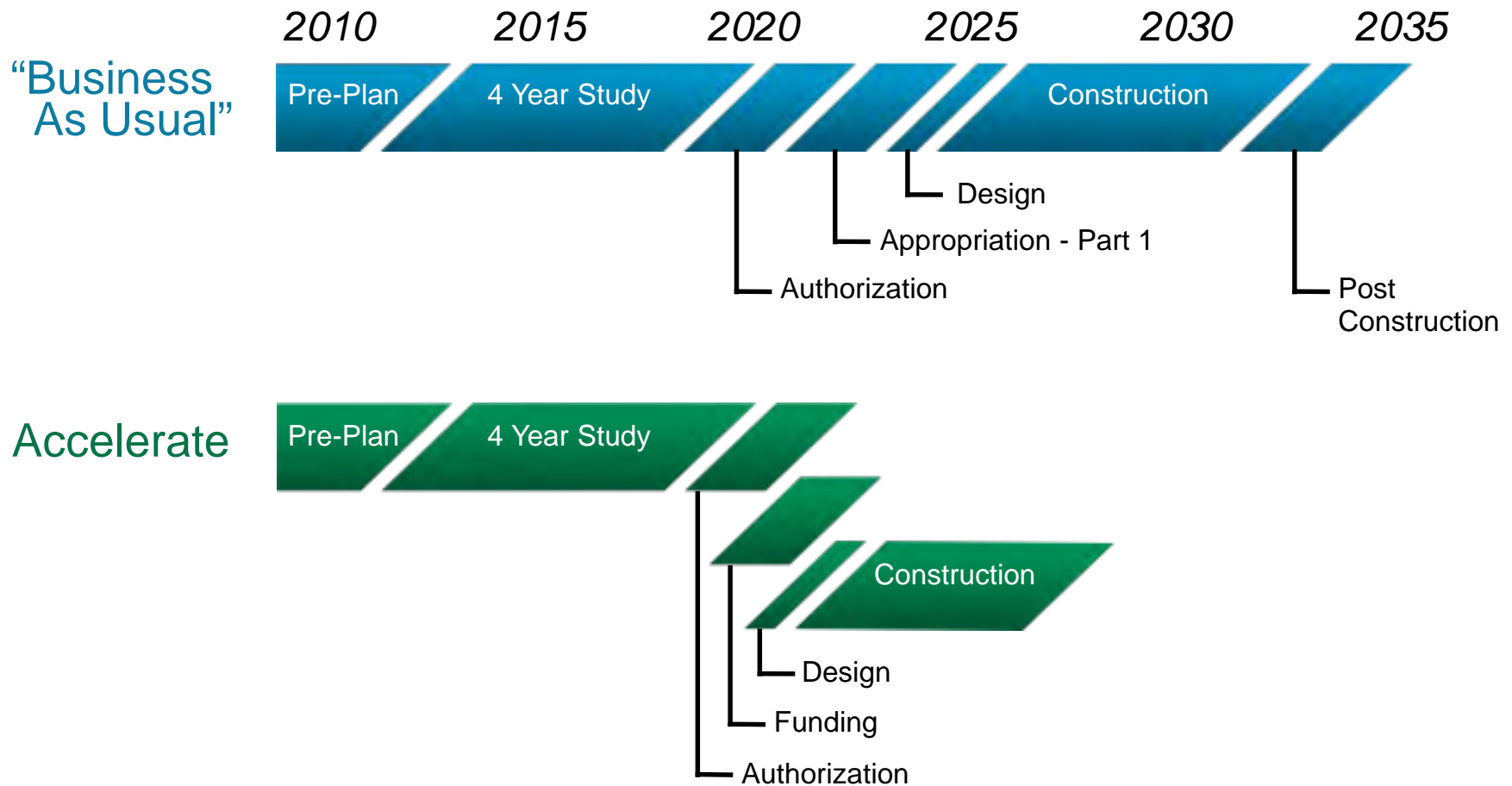


Corps



Port

Timeline...



Awarded Design Contracts



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Company

Joint Venture: GBA / AECOM

HDR

Technical Roles

Project Management, Stakeholder Engagement, Geotechnical, Lab Testing, Analysis, Design & Engineering

Primary Focus Areas

Segments 1a,b,c and 2

- Bolivar Roads to Barbours Cut Dredging
- Bayport Ship Channel Dredging
- Ship Simulation
- Oyster Reef at San Leon/Dollar Reef
- Eight Acre Bird Island
- Long Bird Island
- Bird Island Marsh
- M7/8/9 and M11 (Atkinson Island)
- Shoaling Attenuation Feature at Bayport Flare

**Previously Awarded:
Geotechnical Investigations
And Surveying**

Segments 3 and 4

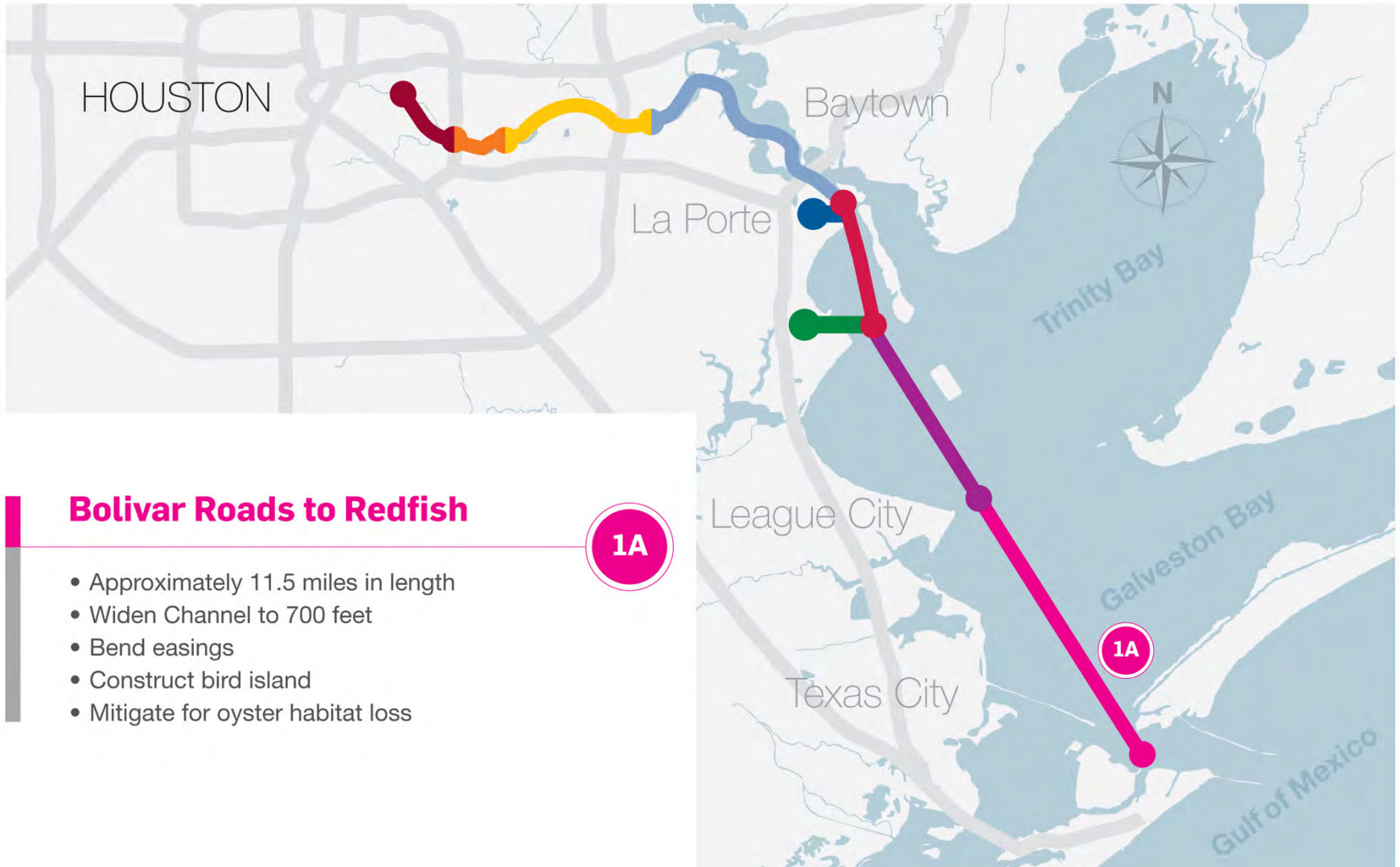
- Boggy Bayou (BW 8) to Sims Bayou Dredging
- Barbours Cut Dredging
- Pipeline Coordination
- Ship Wake Analysis
- Sheetpile/Shoreline Revetment for 1C, 2 (Bayport)
- Sheetpile Structure for Segment 3 (Barbours Cut)
- Relocating South Dike Spillman Island
- M12 (Beneficial Use)
- Beltway 8 Bunker Removal and DMPA Design
- East Clinton 2 DMPA Design
- Aids to Navigation Coordination & Cultural Resources
- Public Outreach

Houston Ship Channel

Proposed Improvements



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Bolivar Roads to Redfish

1A

- Approximately 11.5 miles in length
- Widen Channel to 700 feet
- Bend easings
- Construct bird island
- Mitigate for oyster habitat loss

1A



U.S. Army Corps
of Engineers
Corvallis District

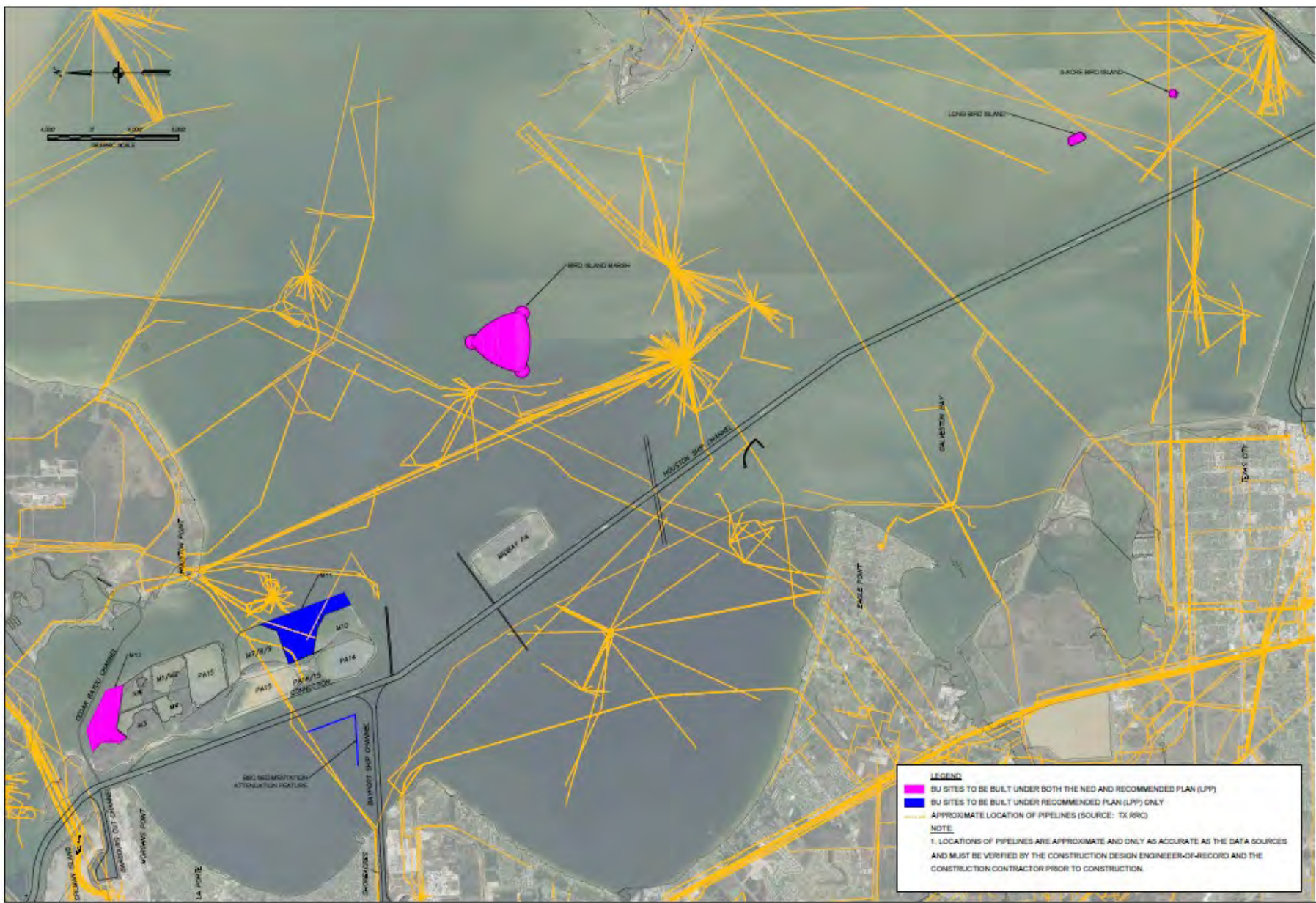
NO.	DATE	DESCRIPTION

DRAWN BY: []
 CHECKED BY: []
 DATE: []

PROJECT NO.: []
 SHEET NO.: []

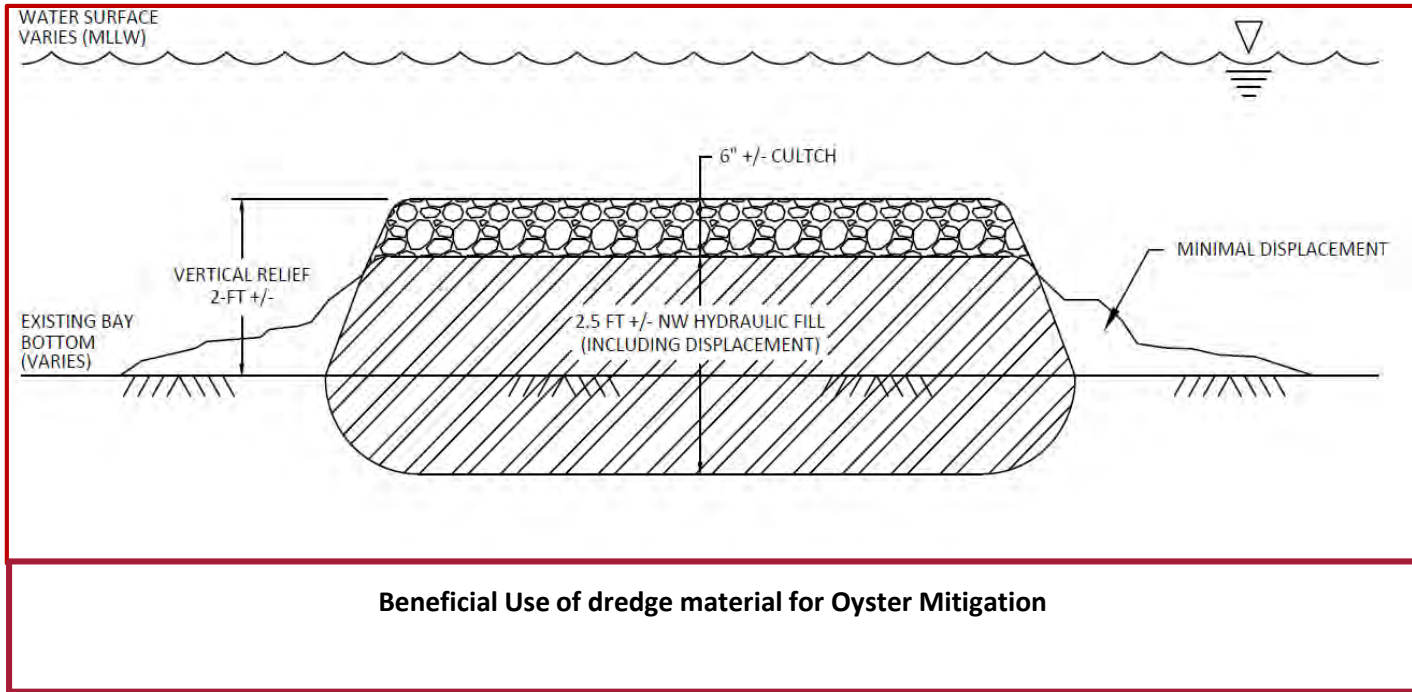
US Army Engineer District, Savannah
 Savannah District Office
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 SHEET: []

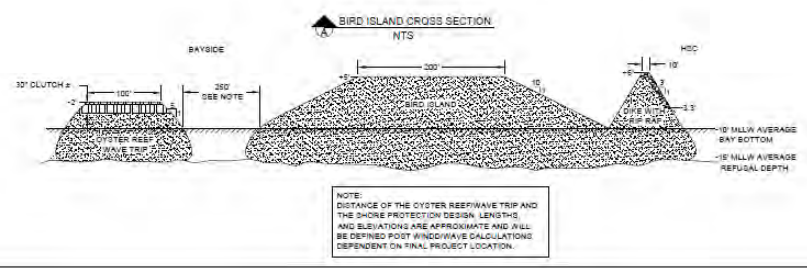
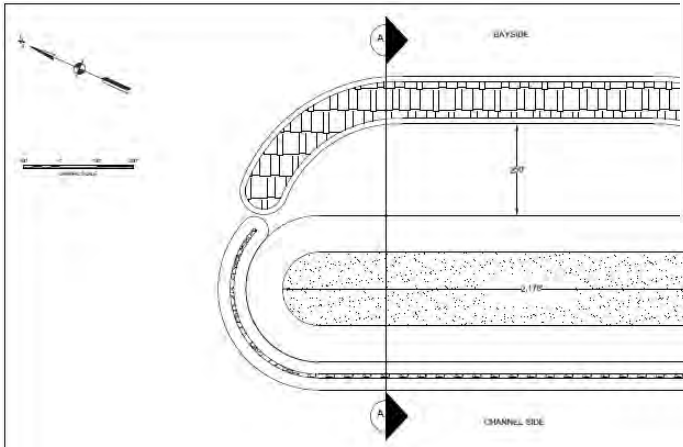
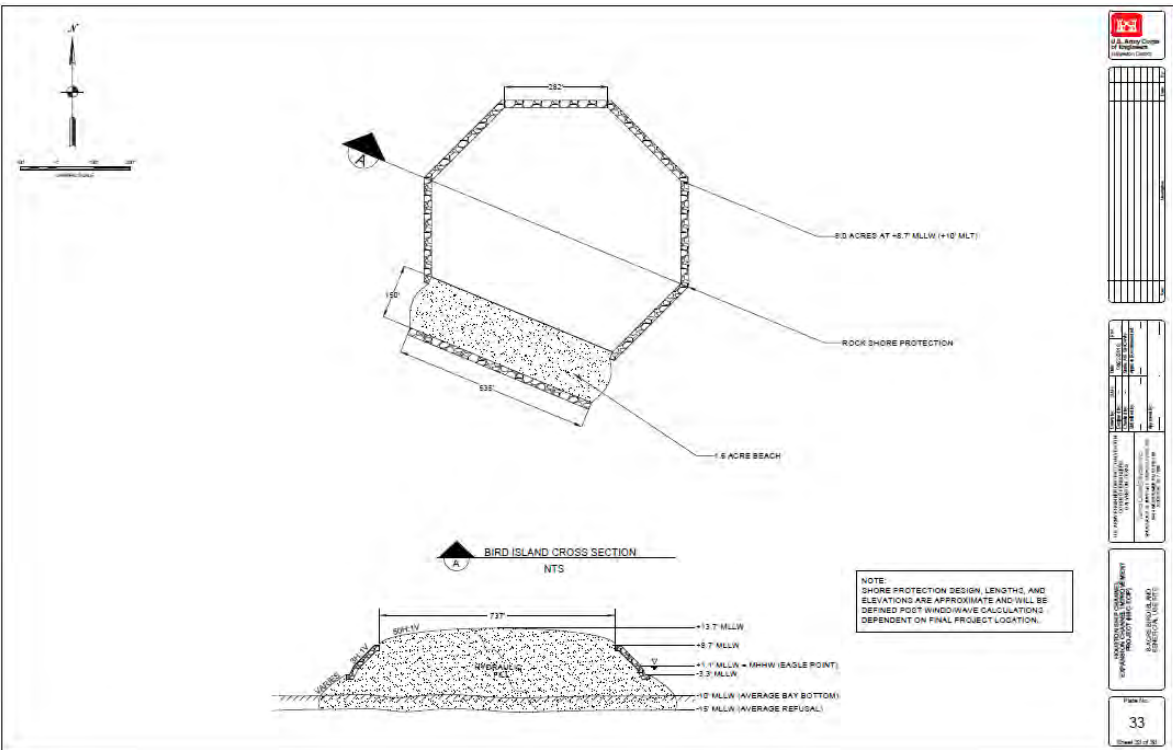
HOUSTON BASE CHANNEL
 EXPANSION CHANNEL IMPROVEMENT
 PROJECT (HBCI)
 REGIMENT 2, 8, 3
 BENEFICIAL USE SITES



LEGEND:
 BU SITES TO BE BUILT UNDER BOTH THE NED AND RECOMMENDED PLAN (LPP)
 BU SITES TO BE BUILT UNDER RECOMMENDED PLAN (LPP) ONLY
 APPROXIMATE LOCATION OF PIPELINES (SOURCE: TX RRC)

NOTE:
 1. LOCATIONS OF PIPELINES ARE APPROXIMATE AND ONLY AS ACCURATE AS THE DATA SOURCES AND MUST BE VERIFIED BY THE CONSTRUCTION DESIGN ENGINEER-OF-RECORD AND THE CONSTRUCTION CONTRACTOR PRIOR TO CONSTRUCTION.





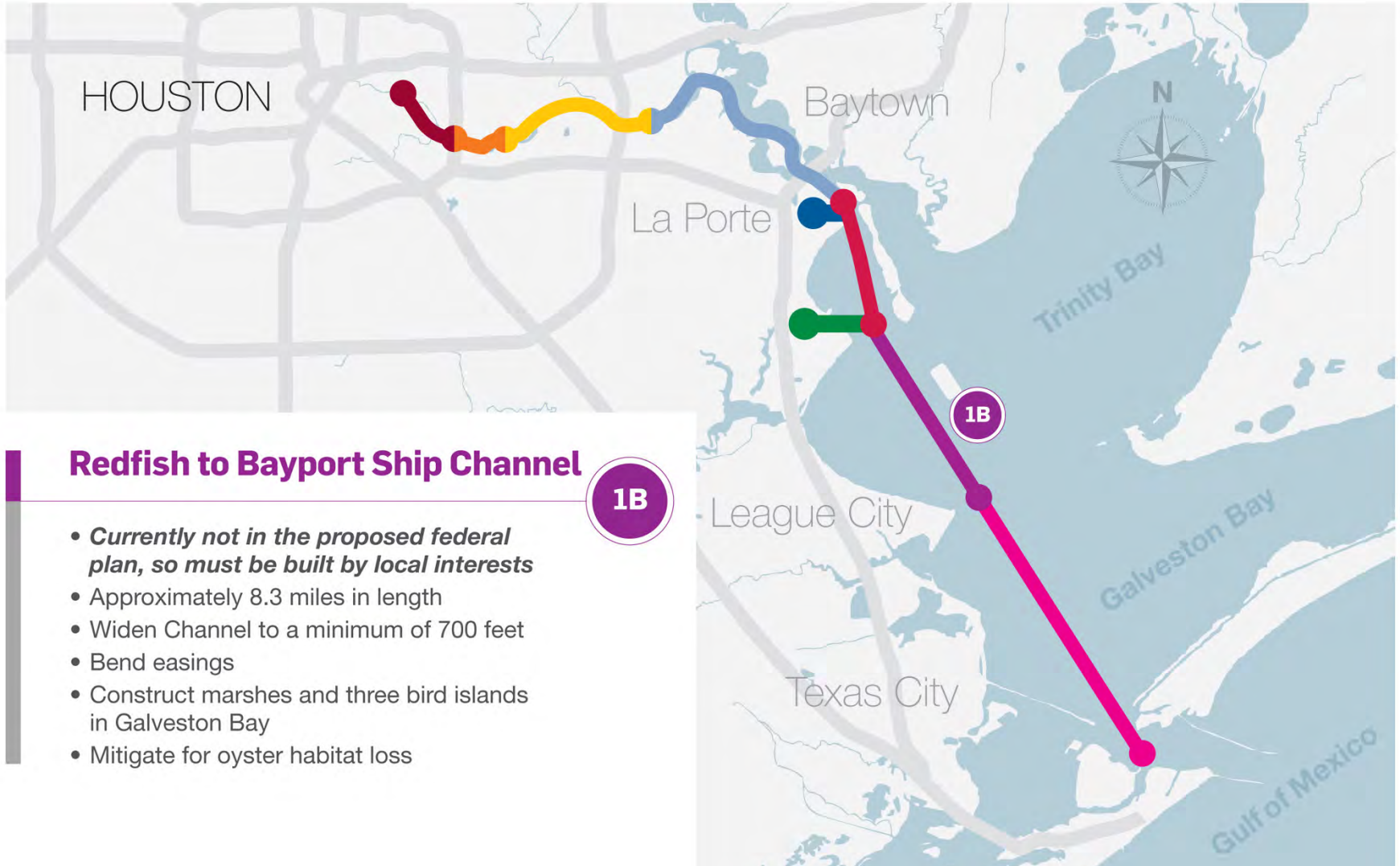
1100 COMMONWEALTH AVENUE, SUITE 1200 RICHMOND, VA 23261 (800) 645-3343 www.vdot.gov
PROJECT:
SHEET NO.:
DATE:
DRAWN BY:
CHECKED BY:
APPROVED BY:
TITLE:
34
Sheet 34 of 33

Houston Ship Channel

Proposed Improvements



PORT HOUSTON
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Redfish to Bayport Ship Channel

1B

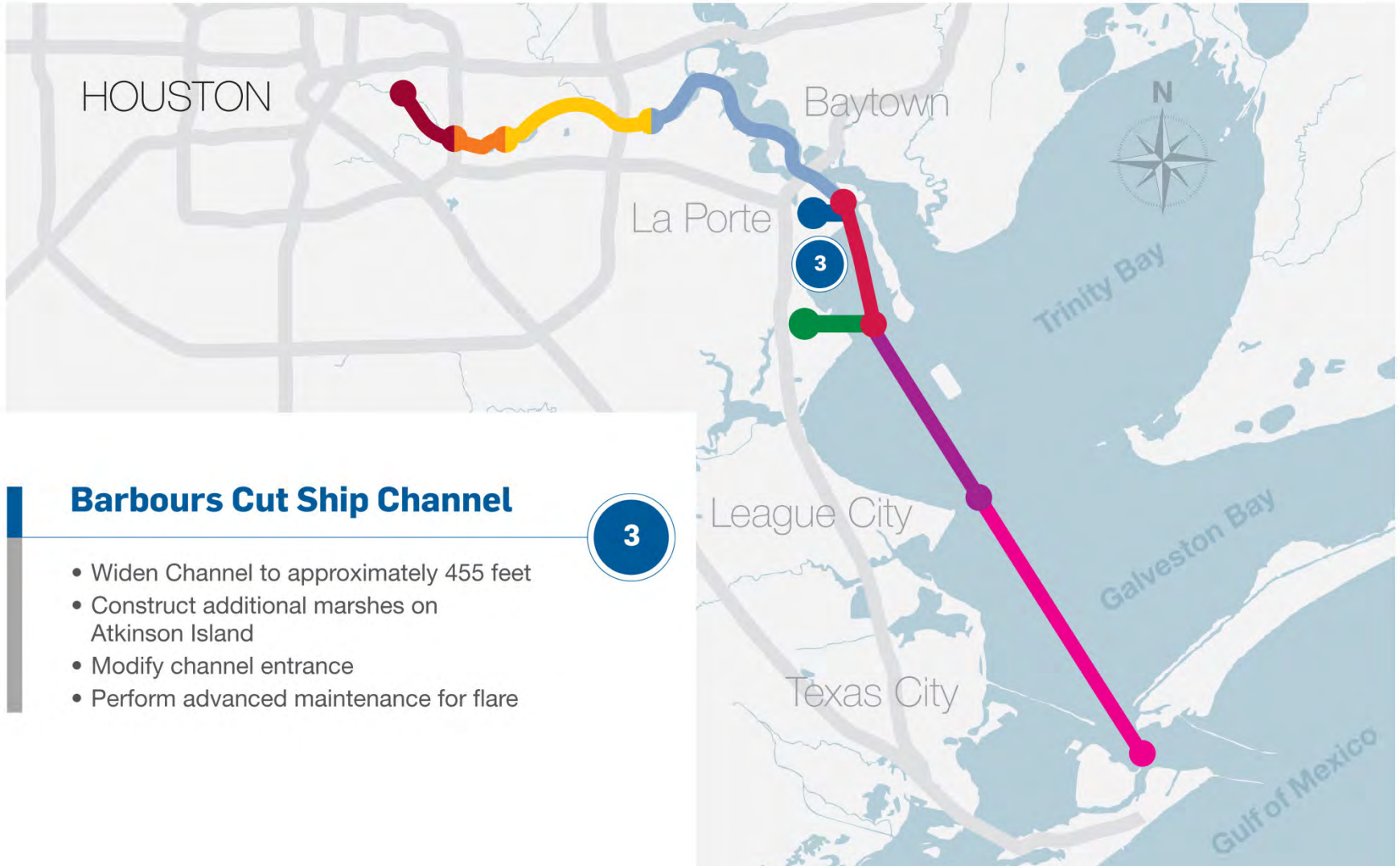
- **Currently not in the proposed federal plan, so must be built by local interests**
- Approximately 8.3 miles in length
- Widen Channel to a minimum of 700 feet
- Bend easings
- Construct marshes and three bird islands in Galveston Bay
- Mitigate for oyster habitat loss

Houston Ship Channel

Proposed Improvements



PORT HOUSTON
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Barbours Cut Ship Channel

3

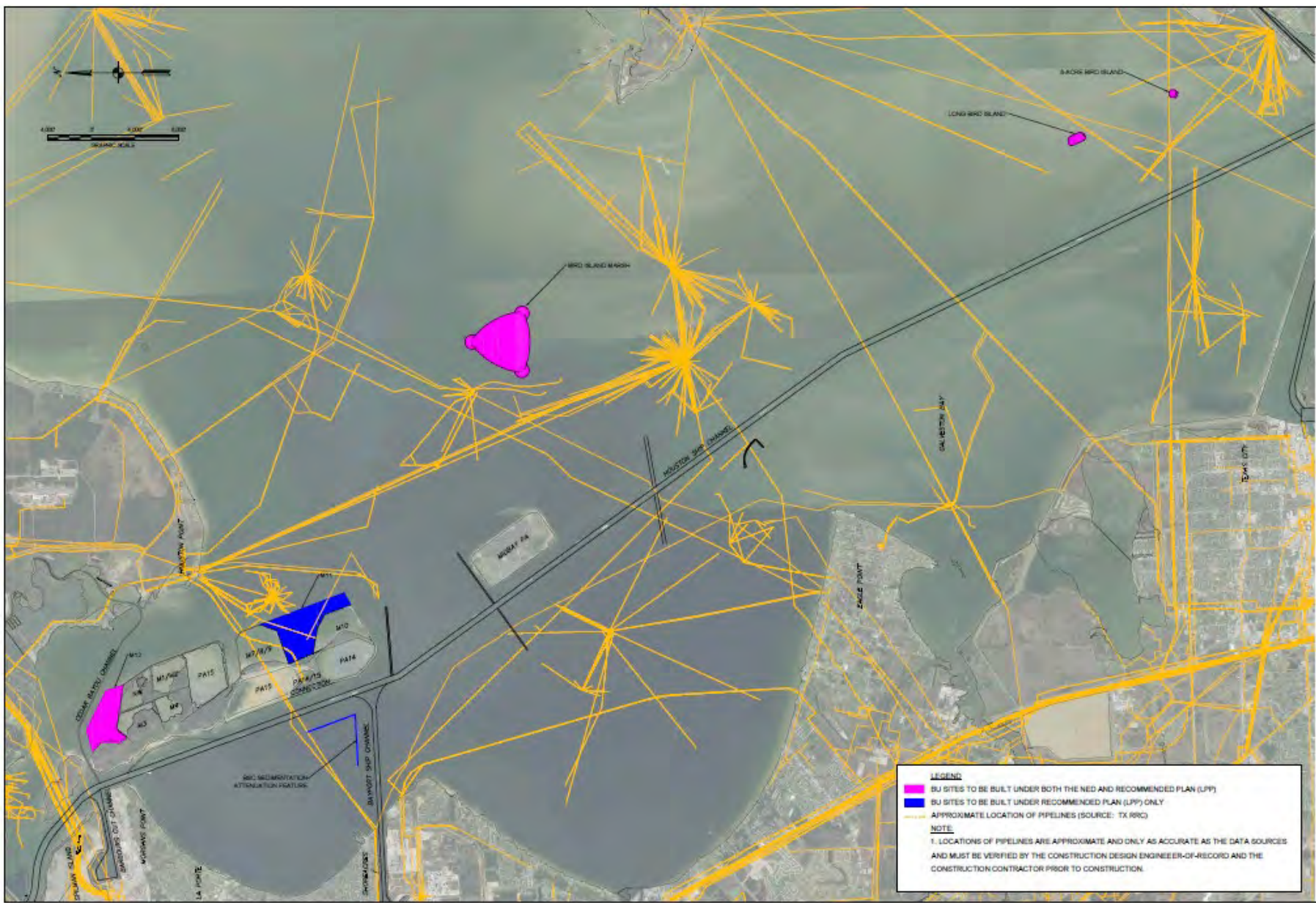
- Widen Channel to approximately 455 feet
- Construct additional marshes on Atkinson Island
- Modify channel entrance
- Perform advanced maintenance for flare



DATE	BY	REVISIONS	DESCRIPTION

PROJECT NO.		DATE	
CONTRACT NO.		SCALE	
PROJECT NAME		SHEET NO.	
PROJECT LOCATION		PROJECT NO.	
PROJECT NO.		PROJECT NAME	
PROJECT LOCATION		PROJECT NO.	

PROJECT NAME	
PROJECT LOCATION	
PROJECT NO.	
PROJECT LOCATION	



LEGEND:
 [Pink Polygon] BU SITES TO BE BUILT UNDER BOTH THE NED AND RECOMMENDED PLAN (LPP)
 [Blue Polygon] BU SITES TO BE BUILT UNDER RECOMMENDED PLAN (LPP) ONLY
 [Yellow Line] APPROXIMATE LOCATION OF PIPELINES (SOURCE: TX RRC)

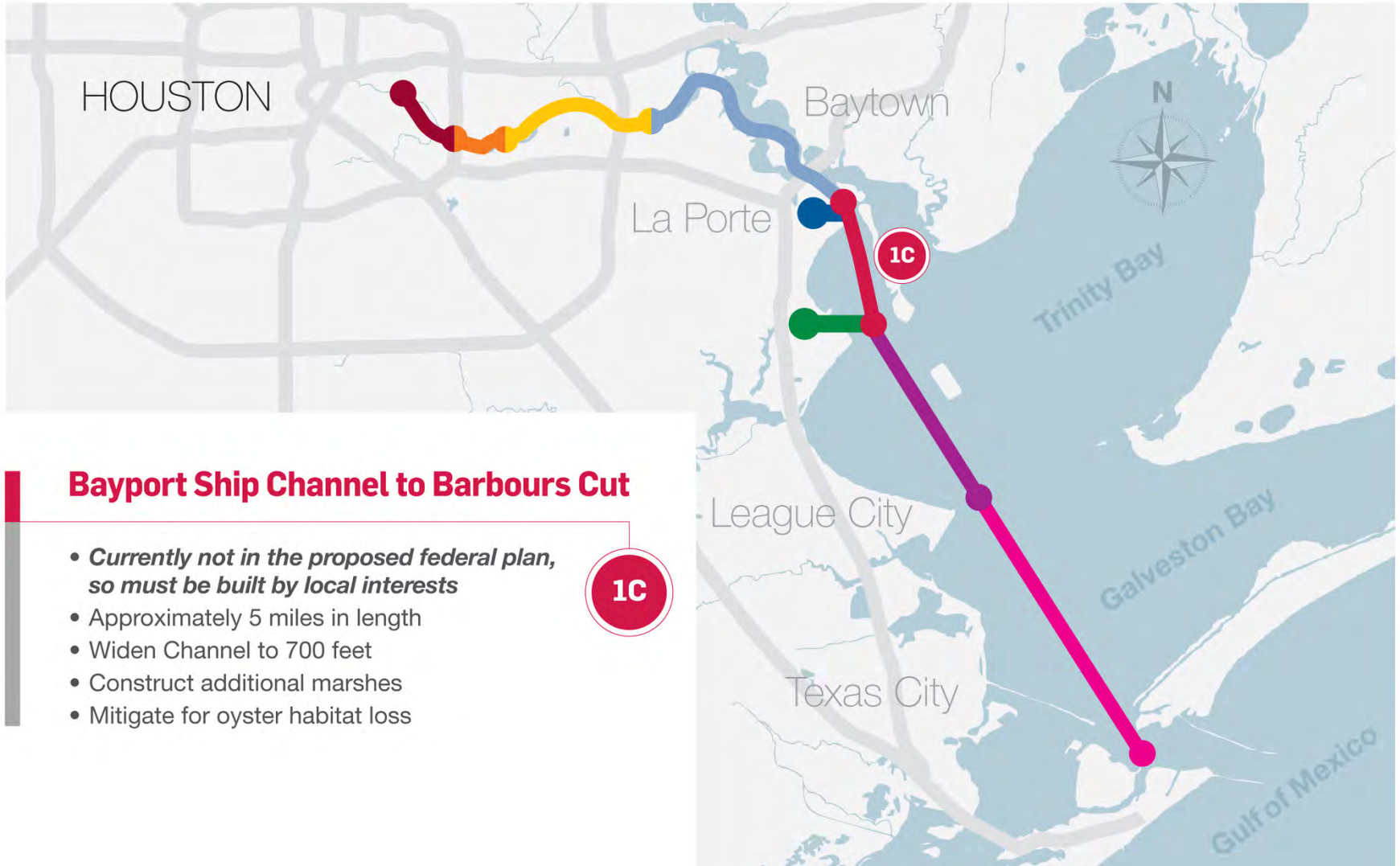
NOTE:
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Houston Ship Channel

Proposed Improvements



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Bayport Ship Channel to Barbours Cut

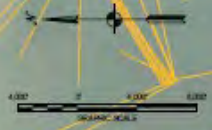
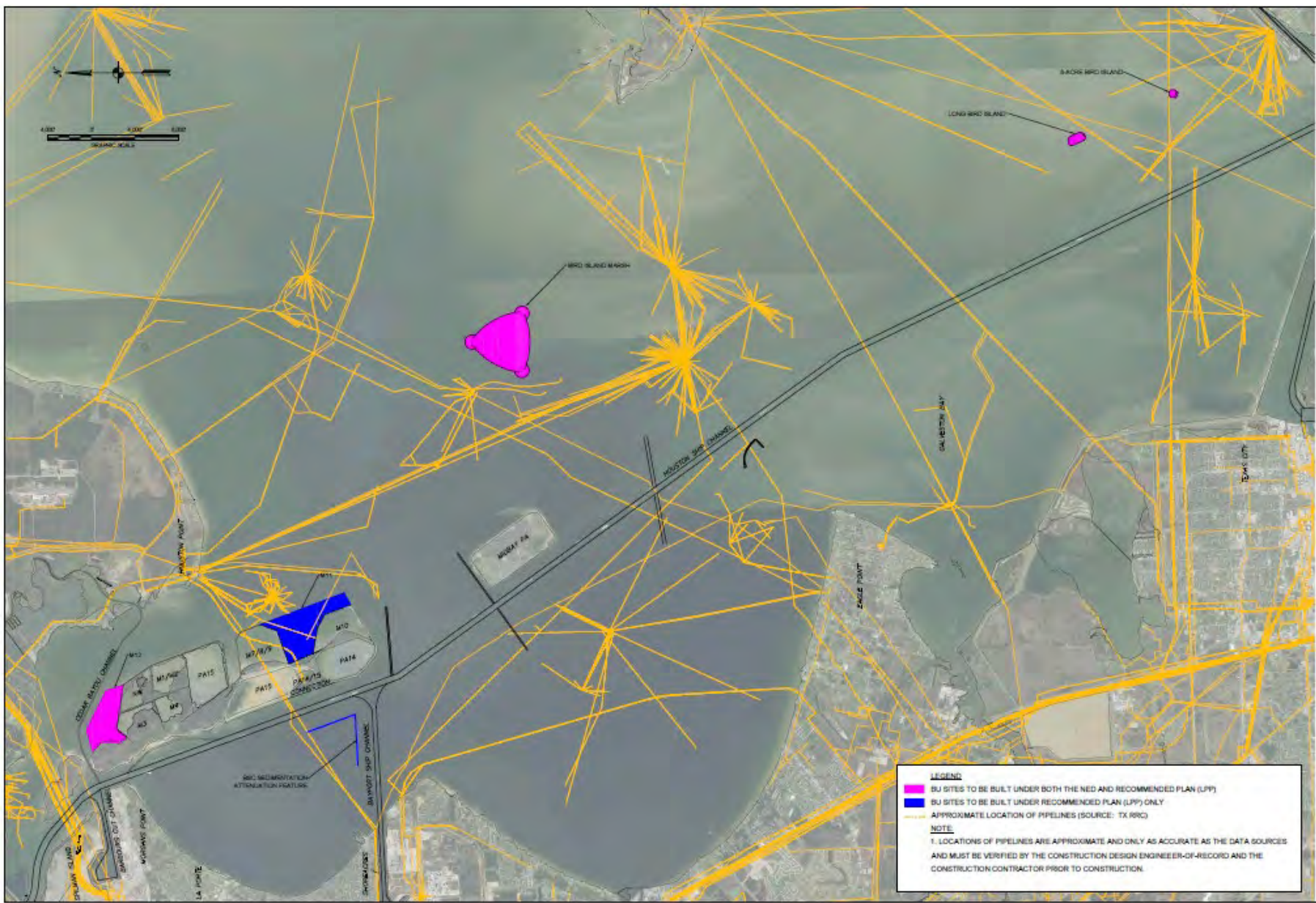
- **Currently not in the proposed federal plan, so must be built by local interests**
- Approximately 5 miles in length
- Widen Channel to 700 feet
- Construct additional marshes
- Mitigate for oyster habitat loss

1C

NO.	DATE	DESCRIPTION	BY	CHKD.

U.S. ARMY ENGINEER DISTRICT (ANALYST) NAME: U.S. ARMY ENGINEER DISTRICT (ANALYST) TITLE: U.S. ARMY ENGINEER DISTRICT (ANALYST) DATE:	PROJECT NO. / DRAWING NO.: SHEET NO. OF TOTAL SHEETS:
U.S. ARMY ENGINEER DISTRICT (DESIGNER) NAME: U.S. ARMY ENGINEER DISTRICT (DESIGNER) TITLE: U.S. ARMY ENGINEER DISTRICT (DESIGNER) DATE:	PROJECT NO. / DRAWING NO.: SHEET NO. OF TOTAL SHEETS:

HOUSTON BASE CHANNEL
EXPANSION CHANNEL IMPROVEMENT
PROJECT (HBC-ECIP)
REGIMENT 2 & 3
BENEFICIAL USE SITES



LEGEND:

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NOTE:

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REV.	DATE	BY	CHKD.	APP'D.	DESCRIPTION

PROJECT NO.	17-023	SECTION NO.	
PROJECT TITLE		DRAWING TITLE	
DESIGNED BY		DRAWN BY	
CHECKED BY			
DATE			

FOR USE OF THE DISTRICT, CONTRACTOR, AND SUBMITTER. ALL INFORMATION IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE.

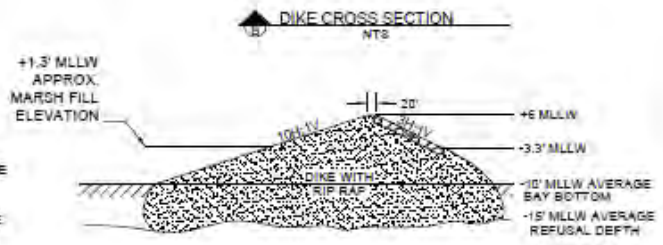
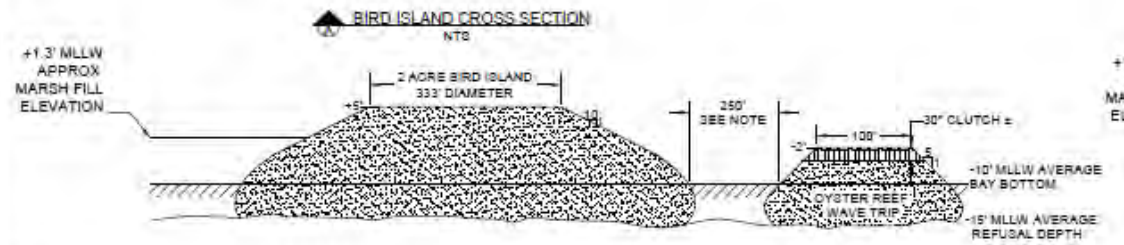
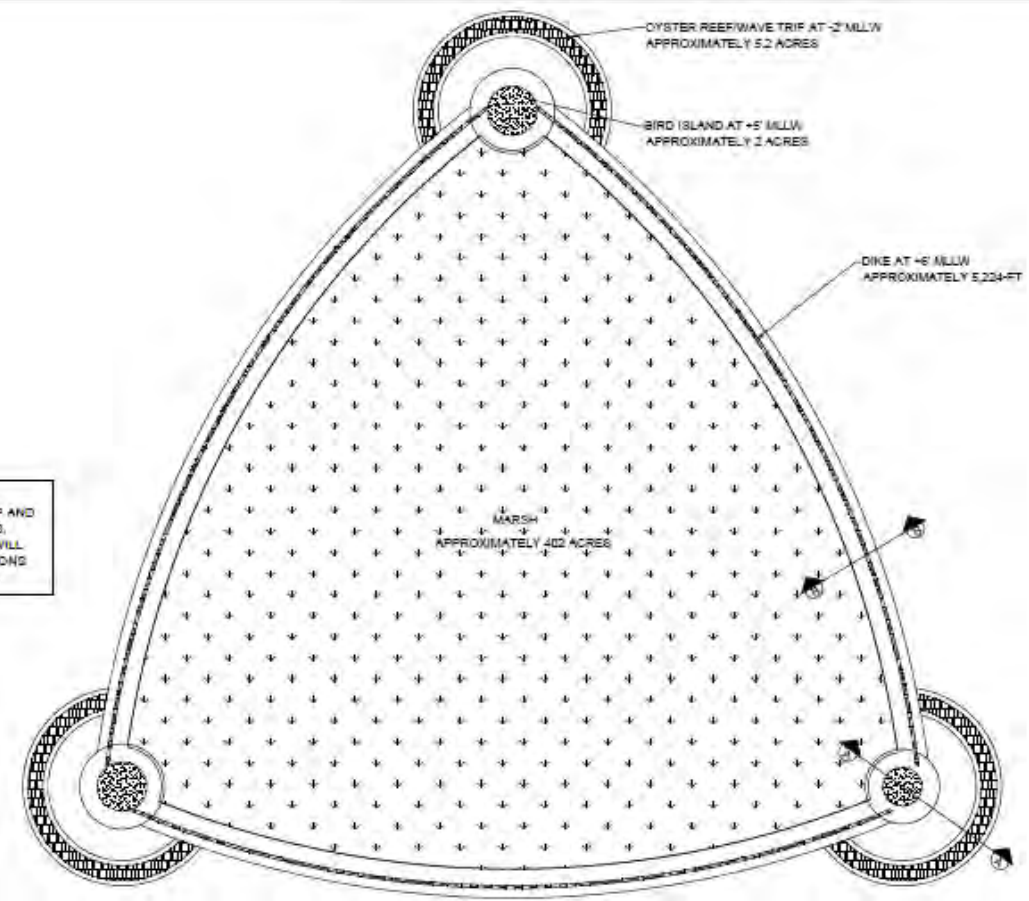
FIGURES AND MAPS ARE UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE.

Page No. 32

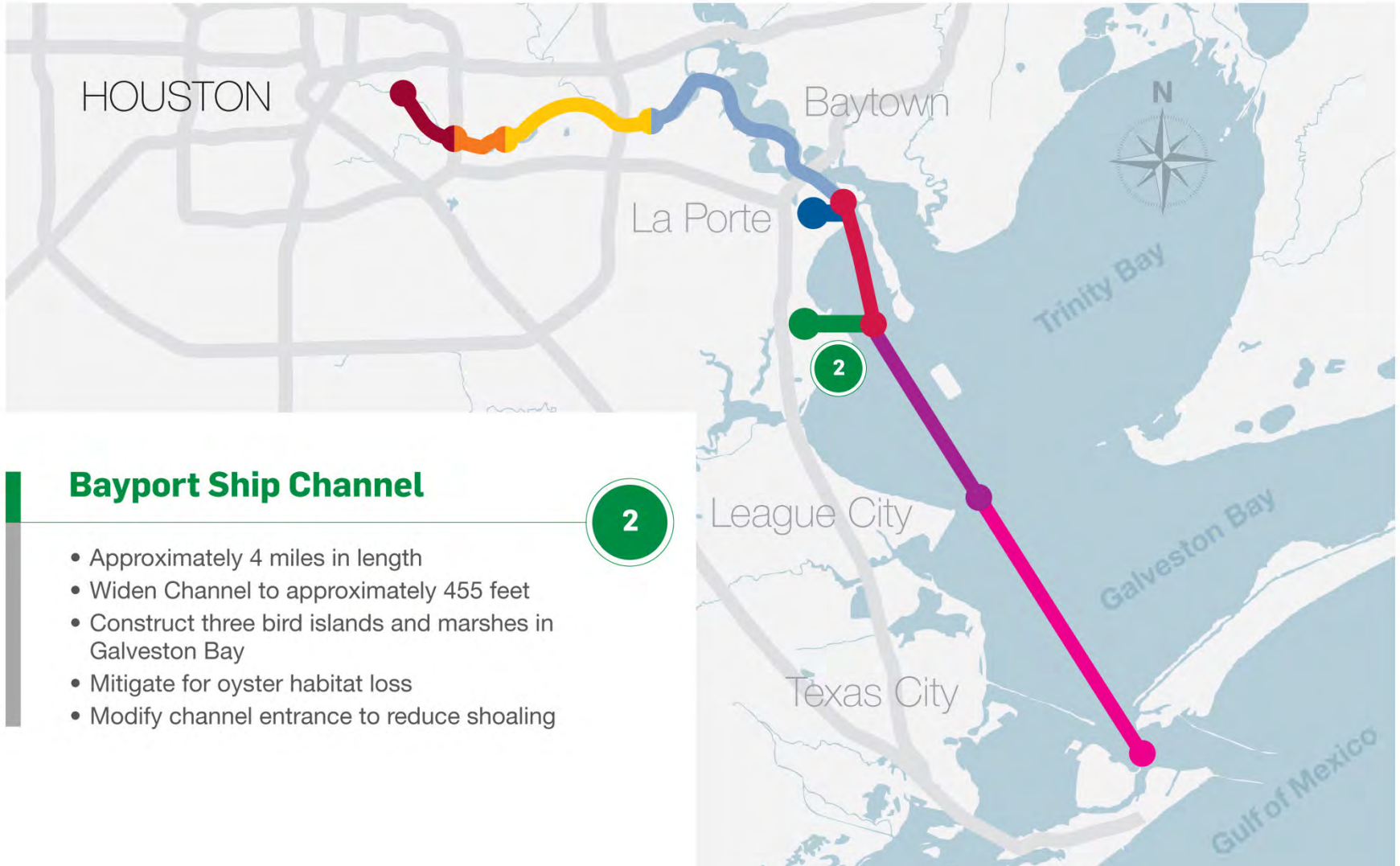
Sheet 32 of 38



NOTE:
DISTANCE OF THE OYSTER REEF/WAVE TRIP AND THE SHORE PROTECTION DESIGN, LENGTHS, AND ELEVATIONS ARE APPROXIMATE AND WILL BE DEFINED POST WIND/WAVE CALCULATIONS DEPENDENT ON FINAL PROJECT LOCATION.



Proposed Improvements



Bayport Ship Channel

2

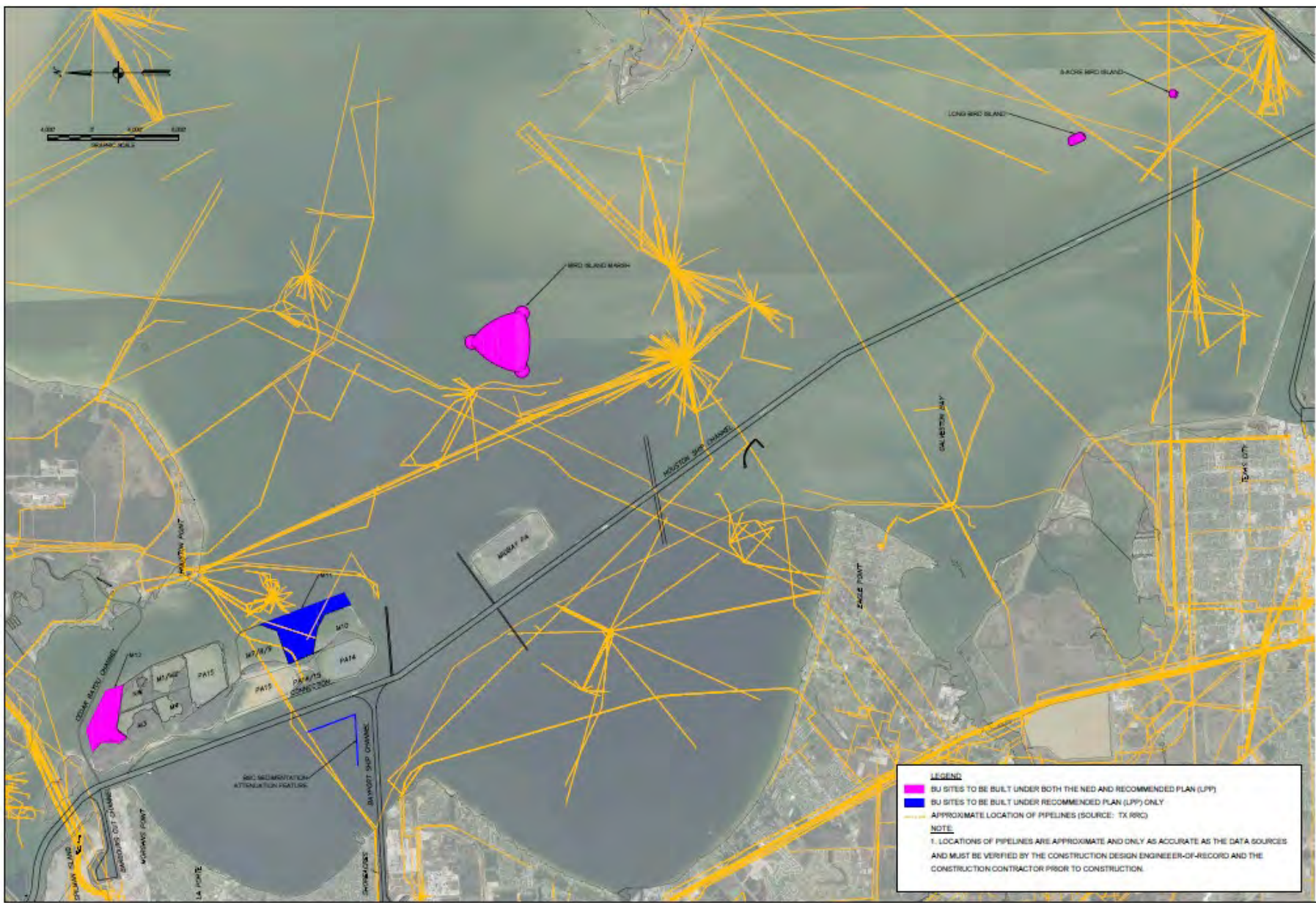
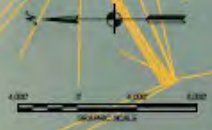
- Approximately 4 miles in length
- Widen Channel to approximately 455 feet
- Construct three bird islands and marshes in Galveston Bay
- Mitigate for oyster habitat loss
- Modify channel entrance to reduce shoaling

REVISIONS	
NO.	DESCRIPTION

NO.	DATE	BY	REVISIONS

U.S. ARMY ENGINEER DISTRICT (ANALYST)
 U.S. ARMY DISTRICT ENGINEER (DESIGNER)
 U.S. ARMY DISTRICT ENGINEER (SUPERVISOR)
 U.S. ARMY DISTRICT ENGINEER (CHECKER)
 U.S. ARMY DISTRICT ENGINEER (APPROVING ENGINEER)
 U.S. ARMY DISTRICT ENGINEER (APPROVING OFFICER)

HOUSTON BASE CHANNEL
 EXPANSION CHANNEL IMPROVEMENT
 PROJECT (HBC-ECIP)
 REGIMENT 1, 2 & 3
 BENEFICIAL USE SITES



LEGEND

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NOTE

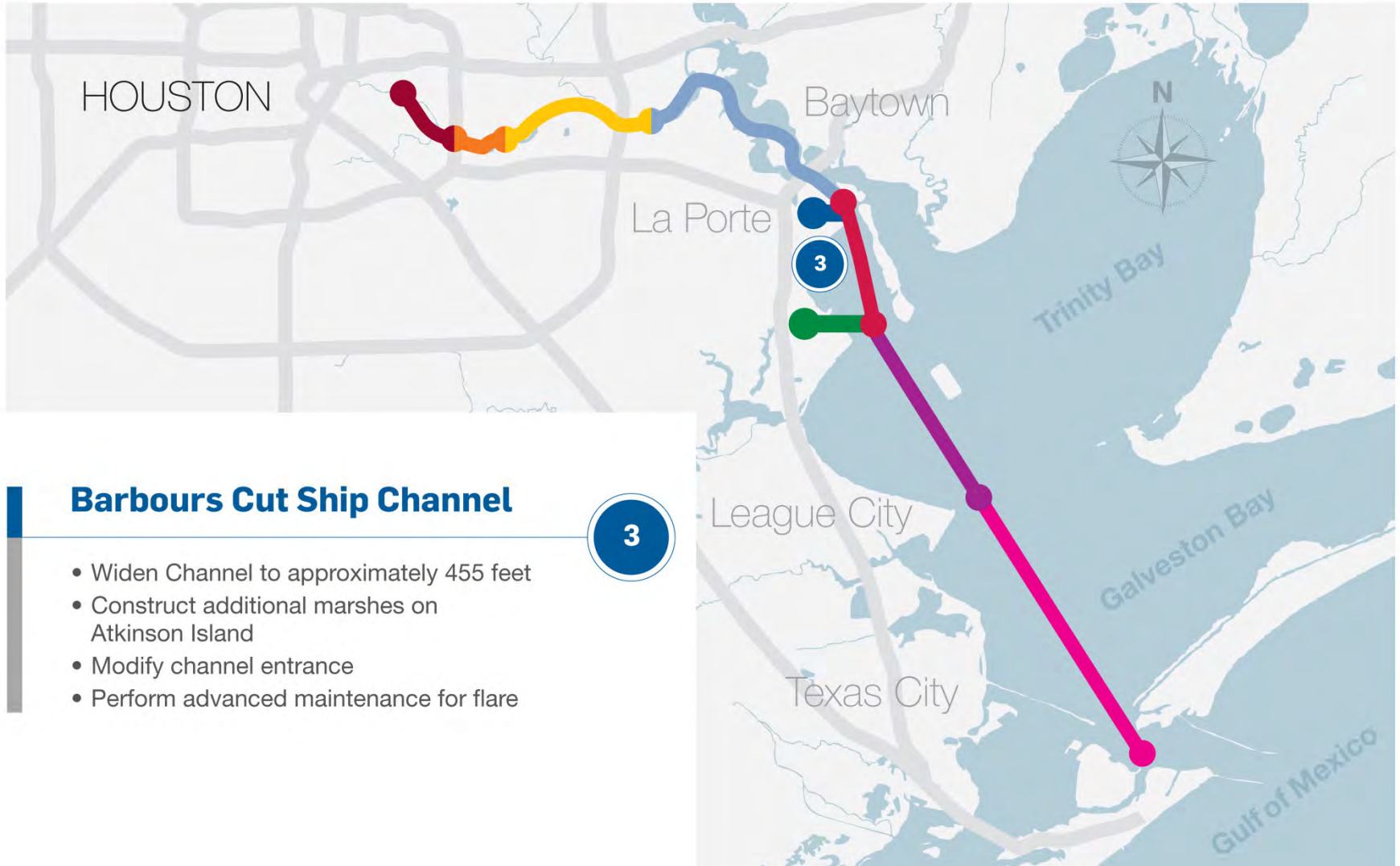
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Houston Ship Channel

Proposed Improvements



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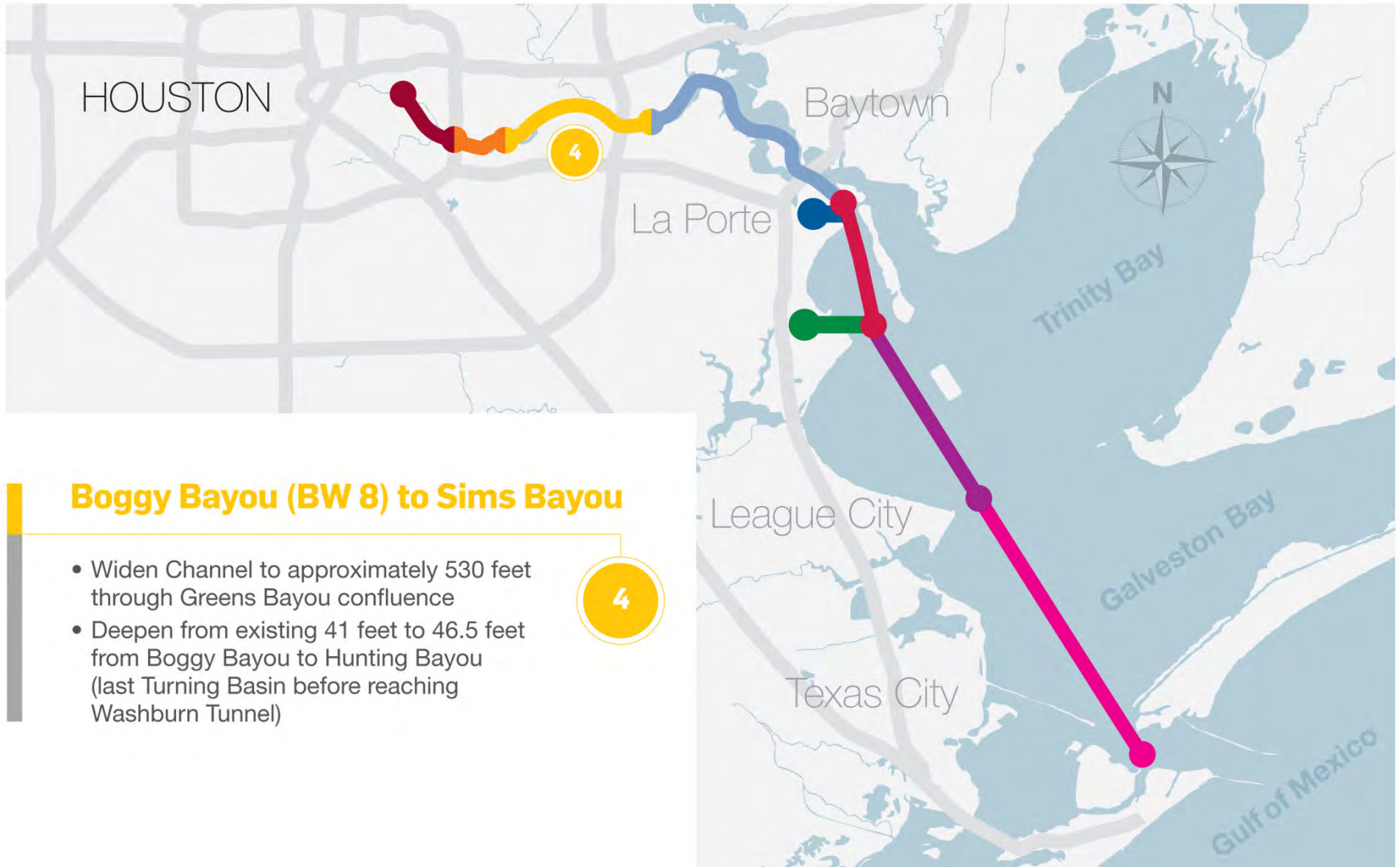


Barbours Cut Ship Channel

3

- Widen Channel to approximately 455 feet
- Construct additional marshes on Atkinson Island
- Modify channel entrance
- Perform advanced maintenance for flare

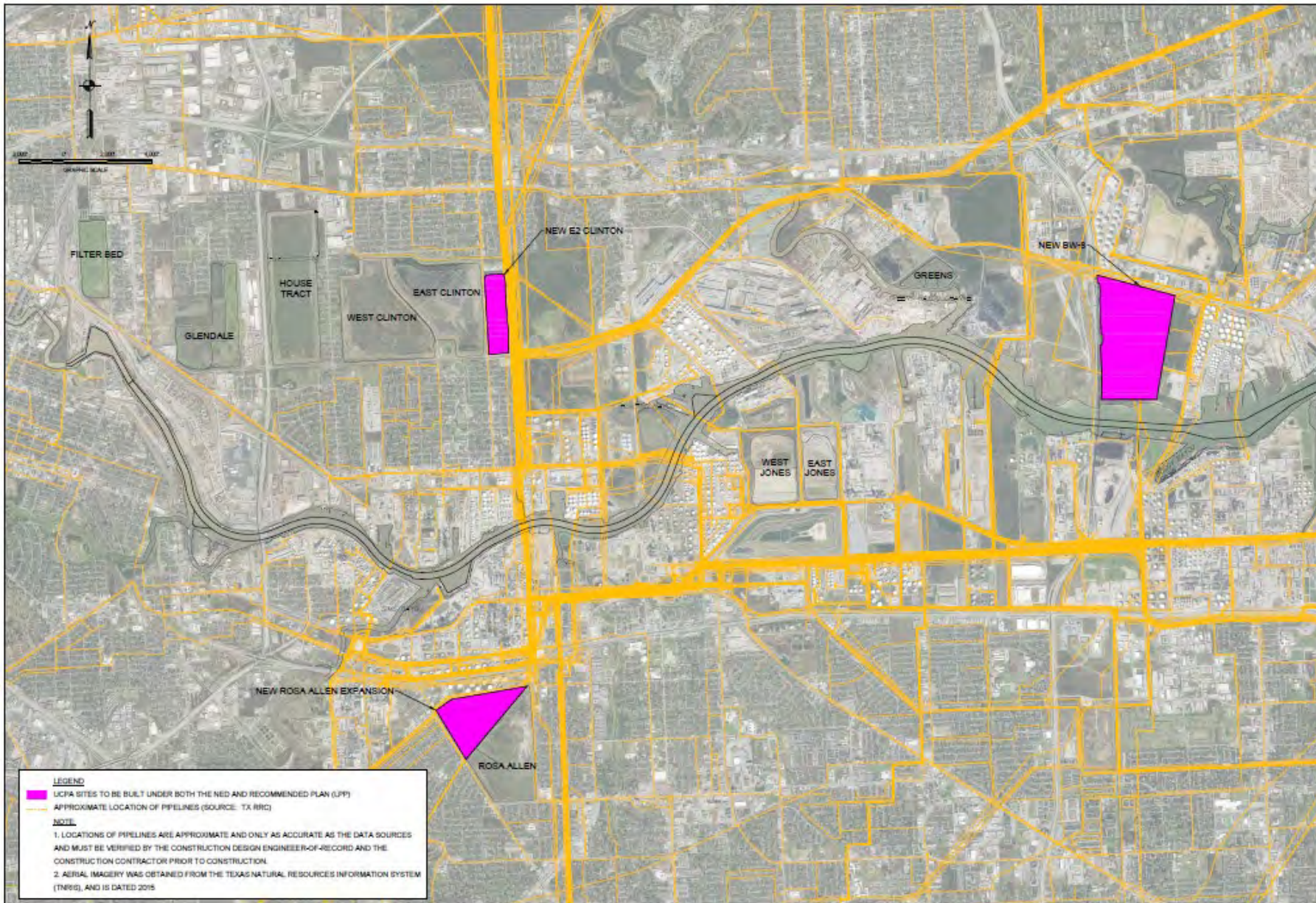
Proposed Improvements





Boggy Bayou (BW 8) to Sims Bayou

- Widen Channel to approximately 530 feet through Greens Bayou confluence
- Deepen from existing 41 feet to 46.5 feet from Boggy Bayou to Hunting Bayou (last Turning Basin before reaching Washburn Tunnel)

4



LEGEND
 LICFA SITES TO BE BUILT UNDER BOTH THE NEED AND RECOMMENDED PLAN (LPP)
 APPROXIMATE LOCATION OF PIPELINES (SOURCE: TX ERC)
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 2. AERIAL IMAGERY WAS OBTAINED FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRIS), AND IS DATED 2015

U.S. Army Corps of Engineers
 Construction District

PROJECT INFORMATION
 DISTRICT: HOUSTON
 PROJECT: HOUSTON SHIP CHANNEL EXPANSION CHANNEL IMPROVEMENT PROJECT (PHS-ICIMP)
 DRAWING NO.: 35
 DATE: 12/15/15

DESIGNED BY
 NAME: [Redacted]
 TITLE: [Redacted]

CHECKED BY
 NAME: [Redacted]
 TITLE: [Redacted]

APPROVED BY
 NAME: [Redacted]
 TITLE: [Redacted]

U.S. ARMY ENGINEERING DISTRICT, HOUSTON
 3302 WESTHOPE DRIVE
 HOUSTON, TEXAS 77058-5002
 TEL: 281/354-3700
 FAX: 281/354-3701

HOUSTON SHIP CHANNEL EXPANSION CHANNEL IMPROVEMENT PROJECT (PHS-ICIMP)
 SEGMENT 4 S&AS
 NEW UPLAND CONTROLLED PLACEMENT AREAS

File No.
35
 Sheet 35 of 38

SCHEDULE



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Bidding: Q4 2020
Award: Q1 2021
Industry Days: To be determined



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THANK YOU

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