



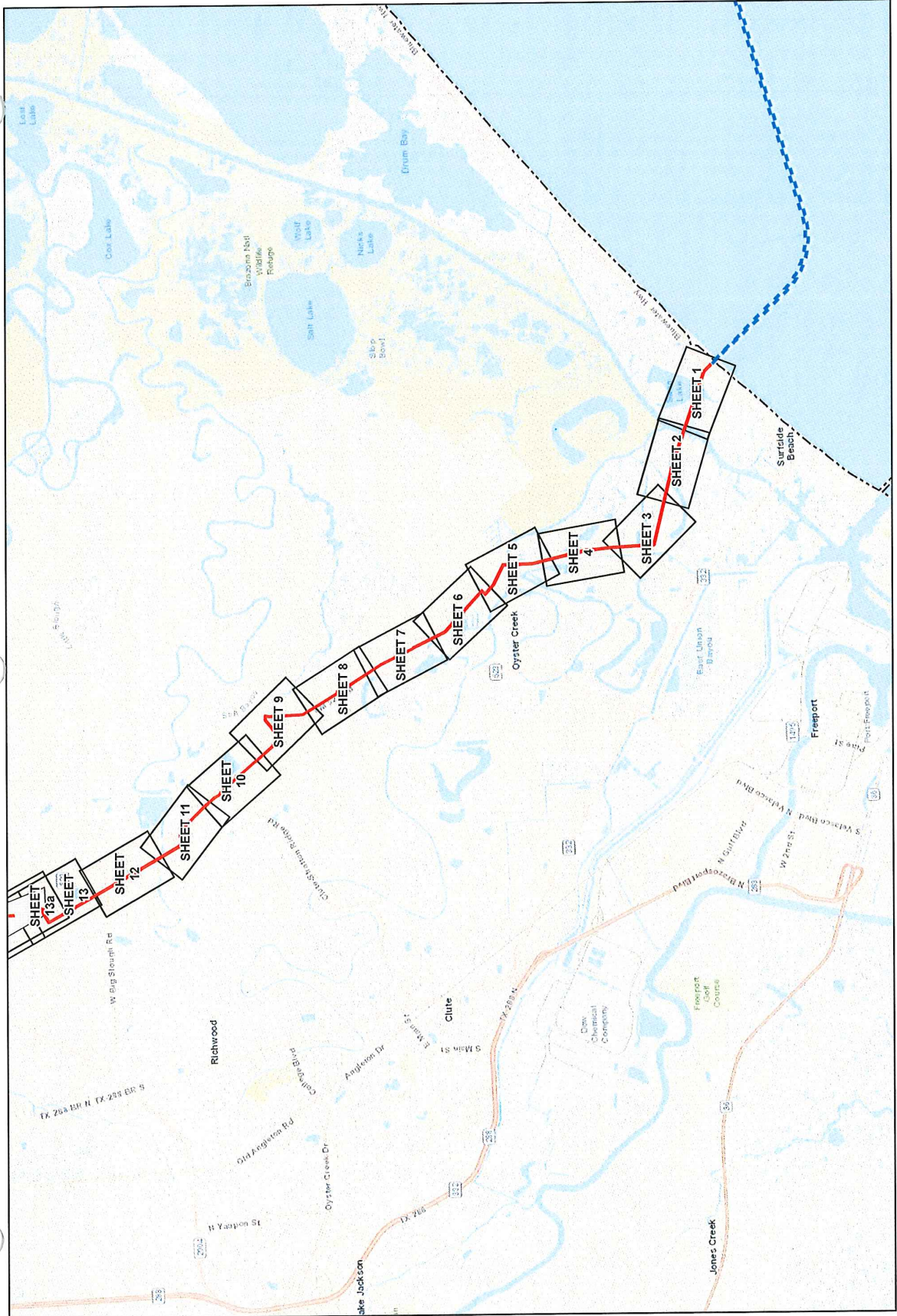
SEA PORT OIL TERMINAL PROJECT
 USAGE NO. SWG-2018-00751
 VICINITY MAP
 BRAZORIA & HARRIS COUNTIES, TEXAS

1:750,000
 Created By: A. Shields
 Date: 7/20/2018
 Job: 1803 SeaPort Oil Terminal Project Vicinity Map

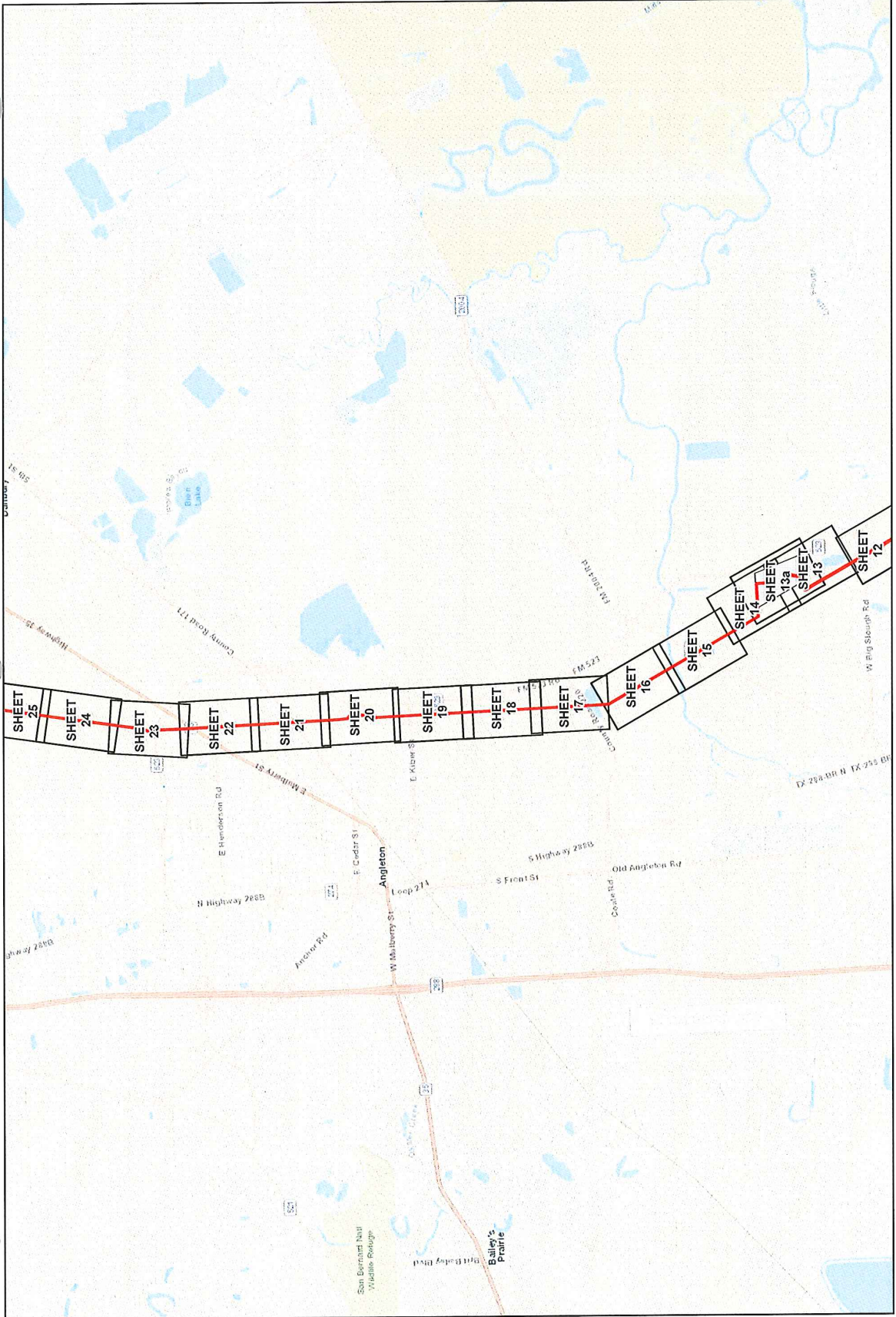
SWCA
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FIGURE 1

— Proposed Onshore Centerline
 — Proposed Offshore Centerline
 County Boundary
▲ Proposed Deepwater Port
 Proposed Oyster Creek Terminal Site



	<p>SEA PORT OIL TERMINAL PROJECT USACE NO. SWG-2018-00751 ONSHORE COMPONENTS INDEX MAP BRAZORIA COUNTY, TEXAS</p>		<p>FIGURE 4 SHEET 1 OF 5</p>
	<p>Proposed Onshore Centerline Proposed Offshore Centerline Proposed Oyster Creek Terminal Site</p>	<p>Mapbook Index County Boundary</p>	



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 ONSHORE COMPONENTS INDEX MAP
 BRAZORIA COUNTY, TEXAS

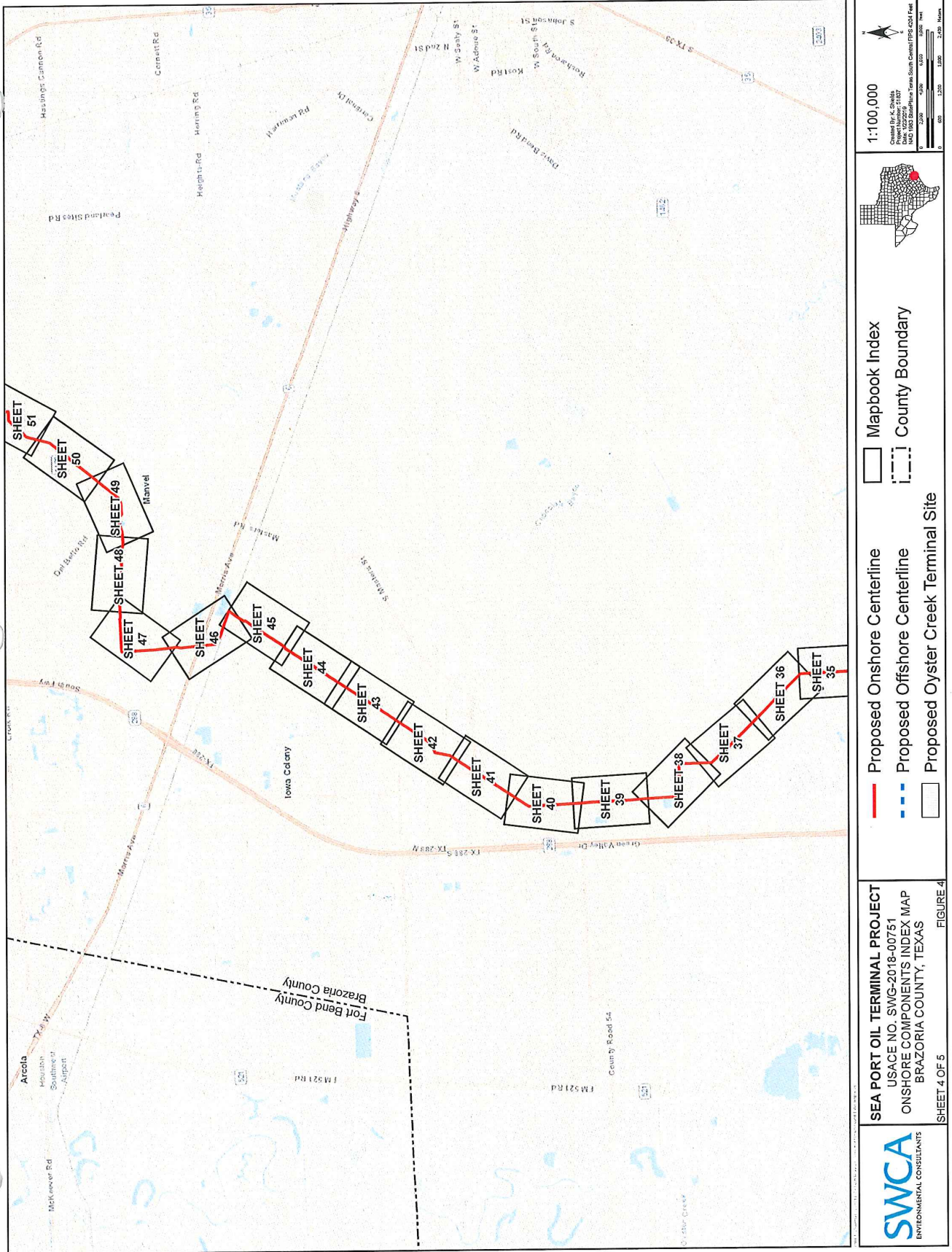
SWCA
 ENVIRONMENTAL CONSULTANTS

1:100,000
 Created by: J. Smith
 Date: 03/20/18
 Scale: 1" = 8,333.33 Feet

Mapbook Index
 County Boundary

Proposed Onshore Centerline
 Proposed Offshore Centerline
 Proposed Oyster Creek Terminal Site

FIGURE 4
SHEET 2 OF 5



1:100,000
 Project No. SWG-2018-00751
 Project Name: SEA PORT OIL TERMINAL PROJECT
 Project Location: Brazoria County, Texas
 Date: 10/20/18
 Scale: 1" = 1000 Feet

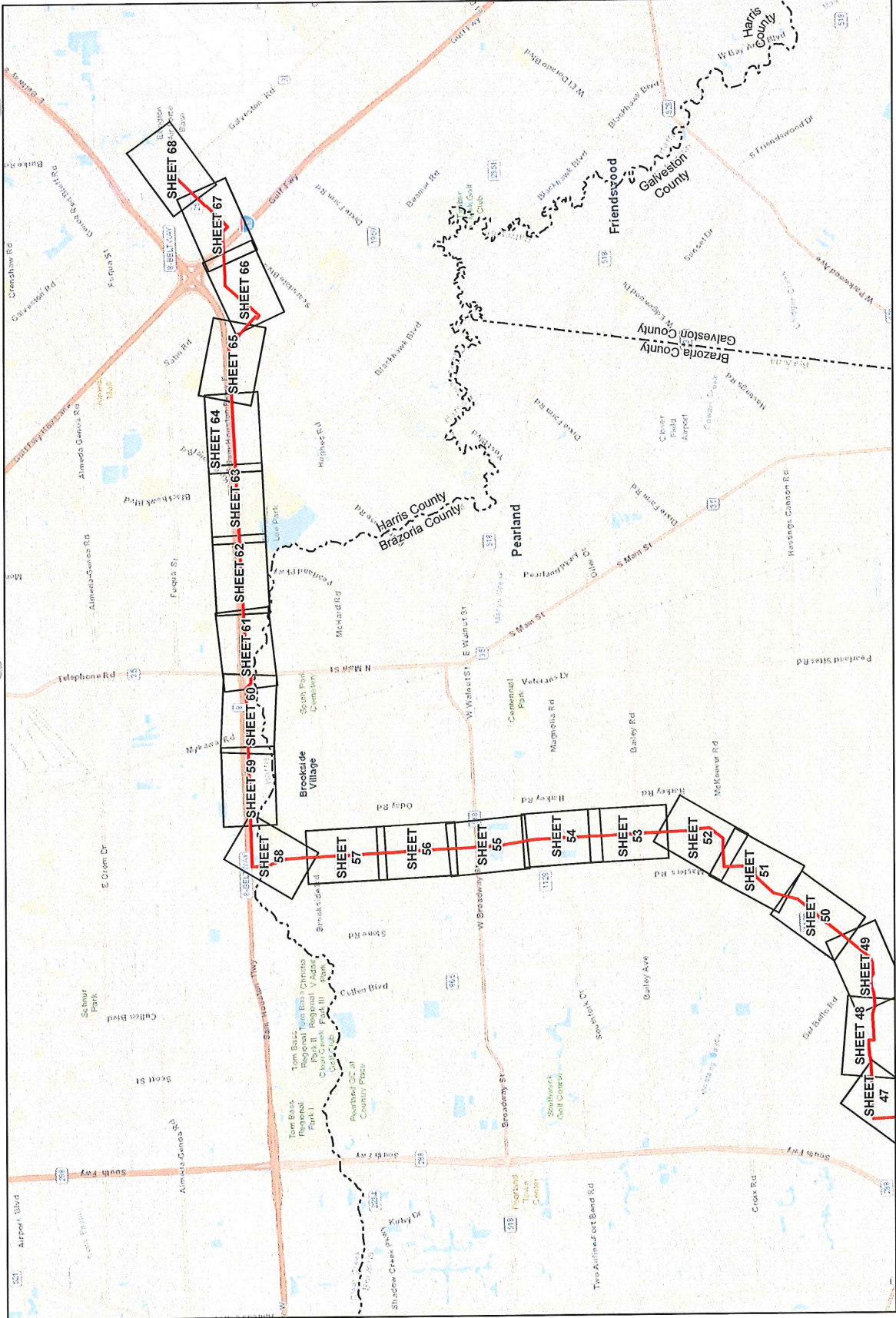


Mapbook Index
 County Boundary

Proposed Onshore Centerline
 Proposed Offshore Centerline
 Proposed Oyster Creek Terminal Site

SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 ONSHORE COMPONENTS INDEX MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 4 OF 5
 FIGURE 4





SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
ONSHORE COMPONENTS INDEX MAP
 BRAZORIA & HARRIS COUNTIES, TEXAS

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1:100,000
 Created By: A. Shields
 Date: 10/20/19
 Title: Onshore Components Index Map
 Scale: 1" = 100,000'

Mapbook Index
 County Boundary

Proposed Onshore Centerline
 Proposed Offshore Centerline
 Proposed Oyster Creek Terminal Site

FIGURE 4
 SHEET 5 OF 5





SEA PORT OIL TERMINAL PROJECT
 USAGE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

1:6,000
 Created By: J. Shields
 Date: 10/27/19
 Title: Aquatic Resources Impact Study
 Scale: 1" = 500 Feet

Legend

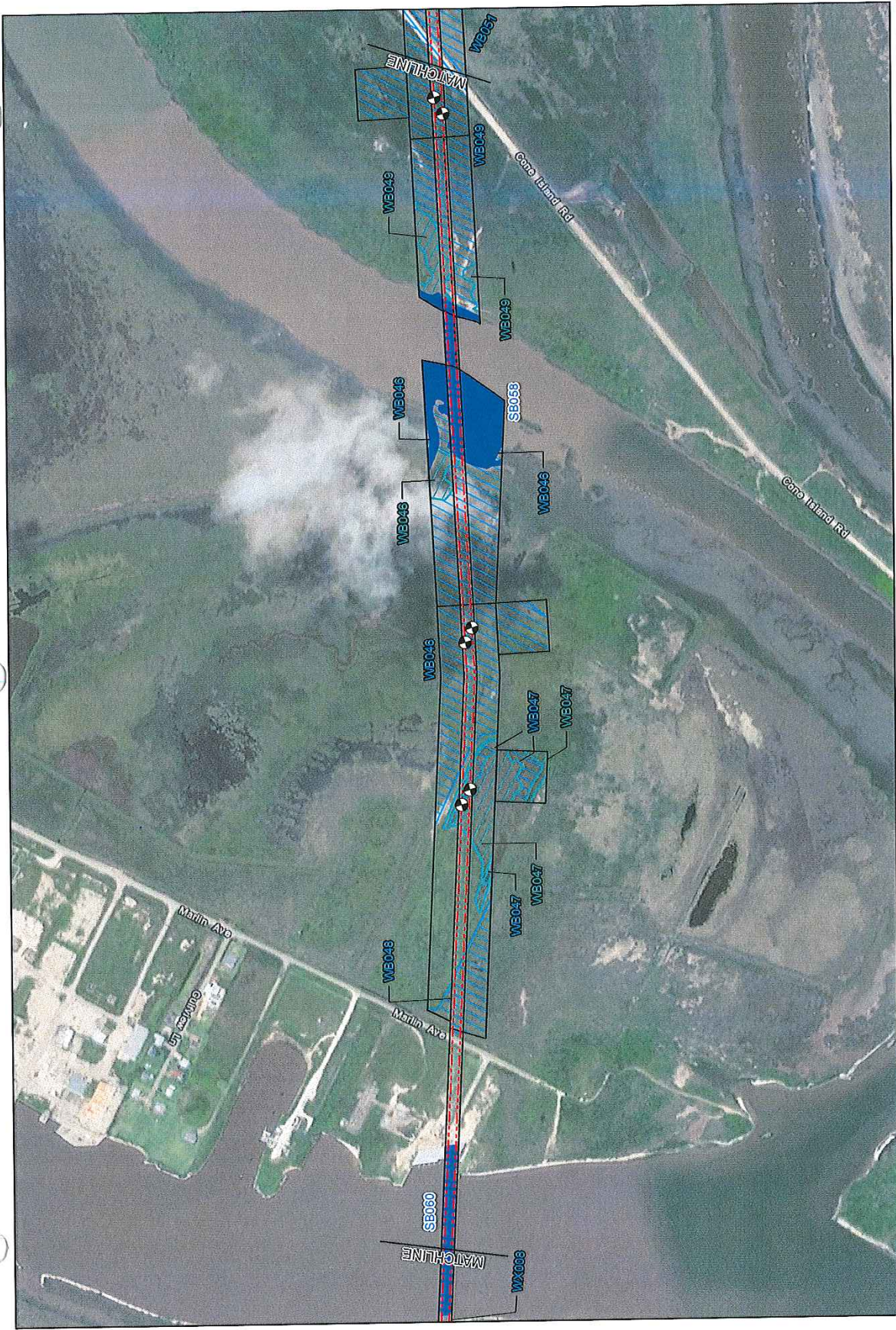
- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit

Wetland and Resource Legend

- █ HDD Entry/Exit
- █ Ephemeral Waterbody
- █ Intermittent Waterbody
- █ Perennial Waterbody
- █ Estuarine Emergent Wetland
- █ Estuarine Scrub-shrub Wetland
- █ Palustrine Emergent Wetland
- █ Palustrine Scrub-shrub Wetland
- █ Palustrine Forested Wetland
- County Boundary

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FIGURE 5
 SHEET 1 OF 68



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 2 OF 68

SWCA
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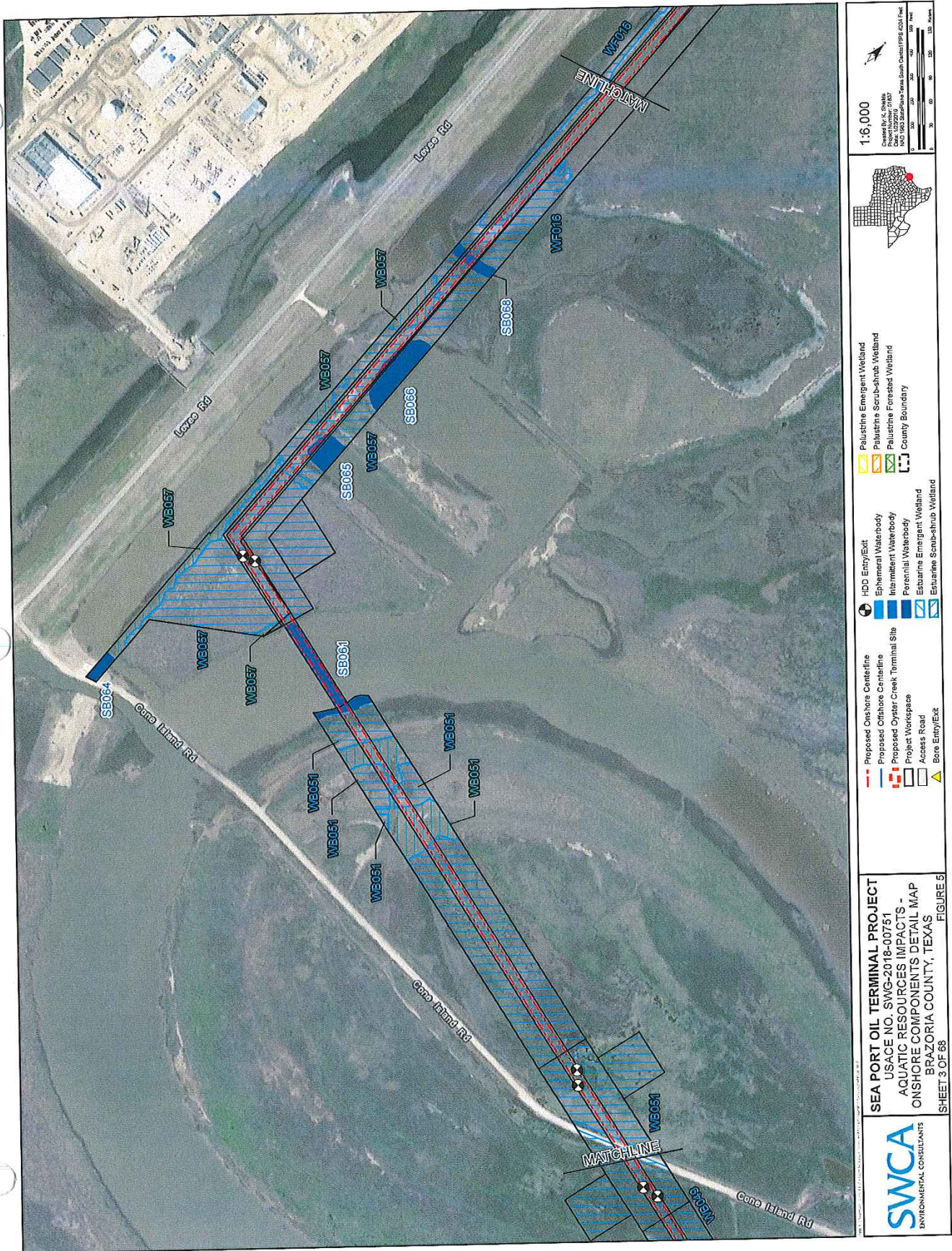
1:6,000
 Project No. SWG-2018-00751
 Project Name: SEA PORT OIL TERMINAL PROJECT
 Date: 08/20/2018
 Scale: 1" = 6,000'

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Crank Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 0 30 60 90 120 150 Feet
 0 30 60 90 120 Meters

FIGURE 5





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SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENT'S DETAIL MAP
BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 4 OF 68

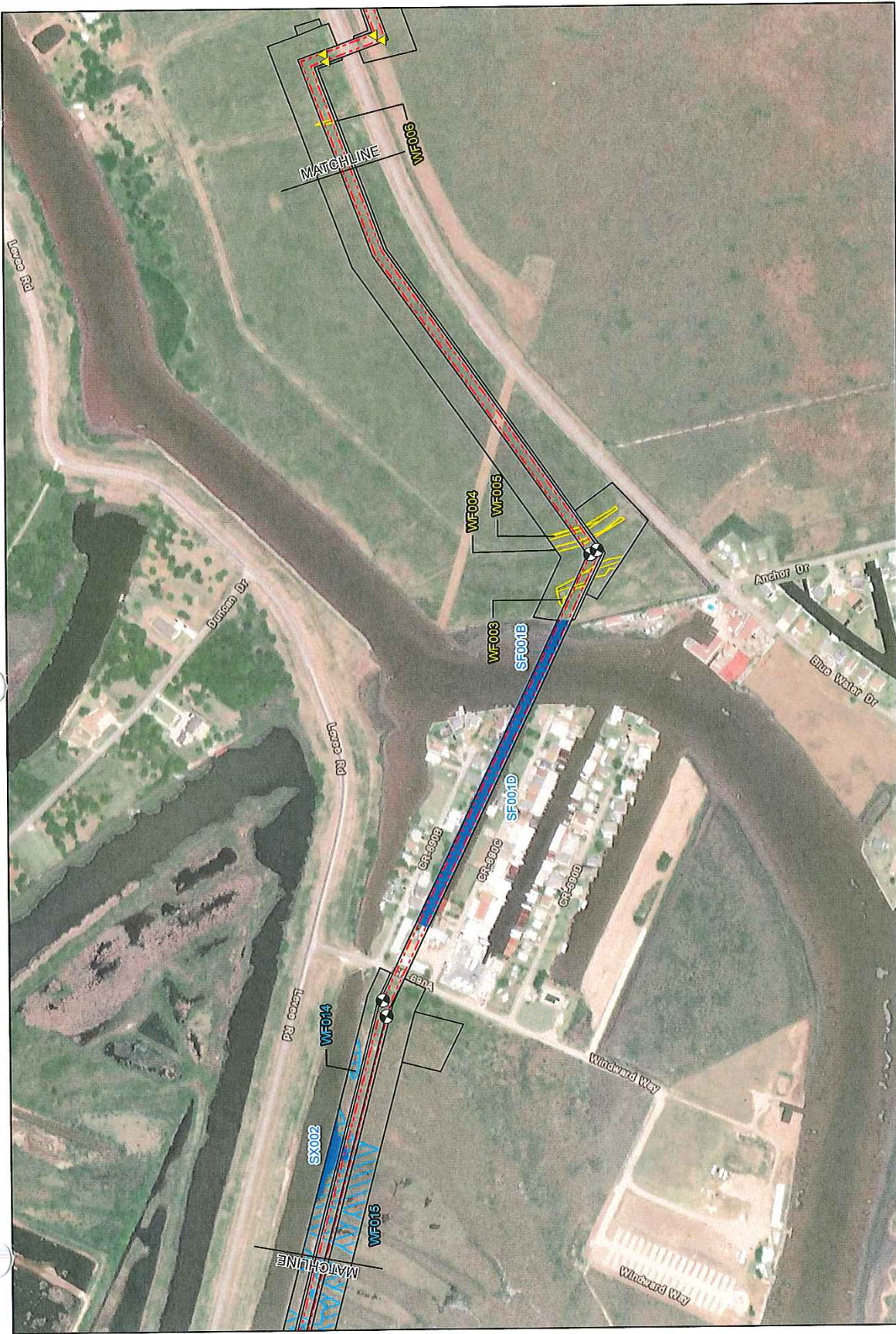
--- Proposed Offshore Centerline
--- Proposed Oyster Creek, Terminal Site
--- Project Workspace
--- Access Road
▲ Bore Entry/Exit

■ HDD Entry/Exit
■ Ephemeral Waterbody
■ Intermittent Waterbody
■ Perennial Waterbody
■ Estuarine Emergent Wetland
■ Estuarine Scrub-shrub Wetland

■ Palustrine Emergent Wetland
■ Palustrine Scrub-shrub Wetland
■ Palustrine Forested Wetland
--- County Boundary

1:6,000
 Created by: K. Shivers
 Date: 10/20/18
 Project: Sea Port Oil Terminal (2018)

0 50 100 150 200 250 300 350 400 450 500
 Feet
 0 15 30 45 60 75 90 105 120 135 150
 Meters



SWCA
ENVIRONMENTAL CONSULTANTS

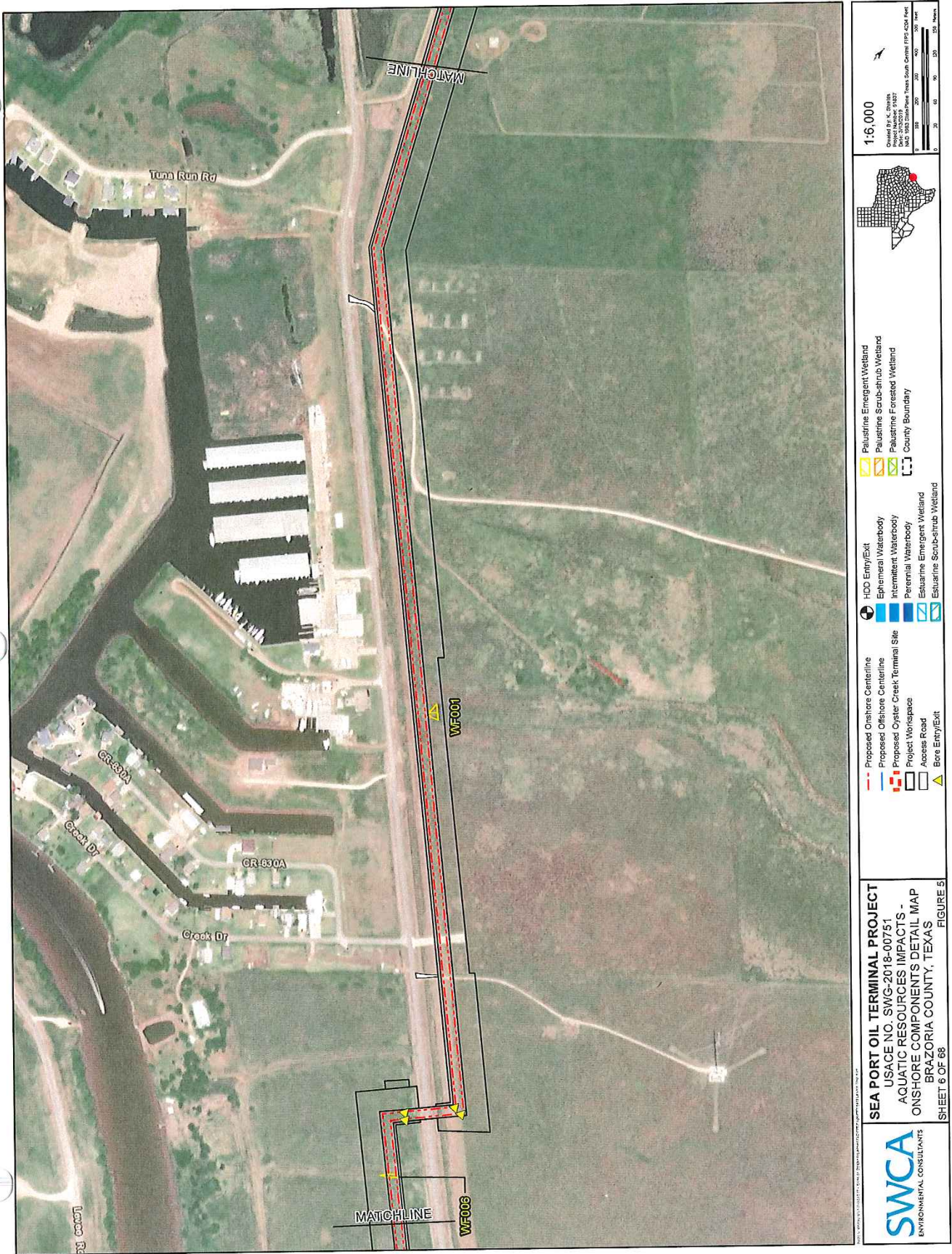
SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 5 OF 68

1:6,000

Created By: J. Smith
Project Number: 00337
Map Date: 08/2018
Map Scale: 1" = 600 Feet

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bare Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary



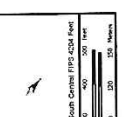
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENT'S DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 6 OF 68

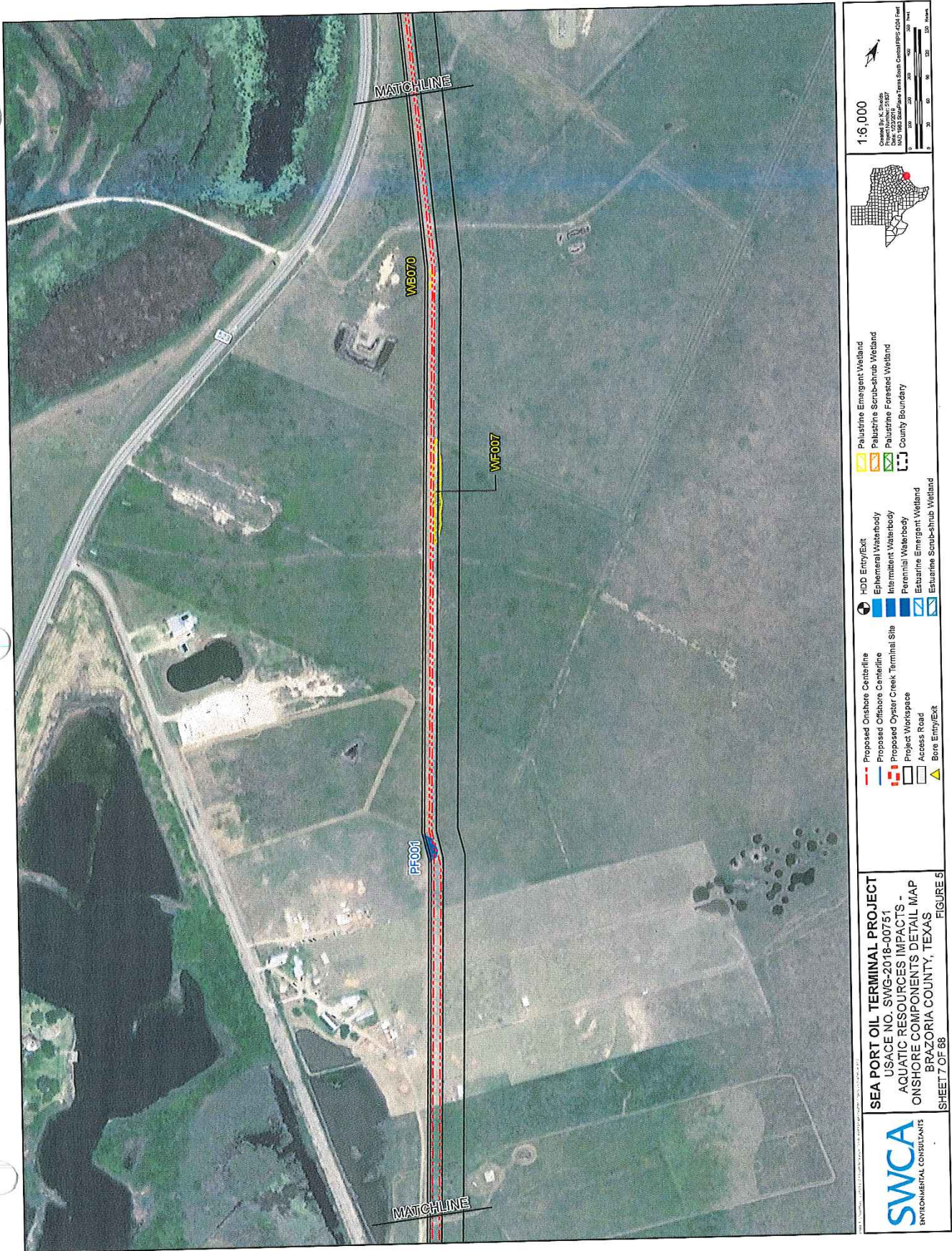


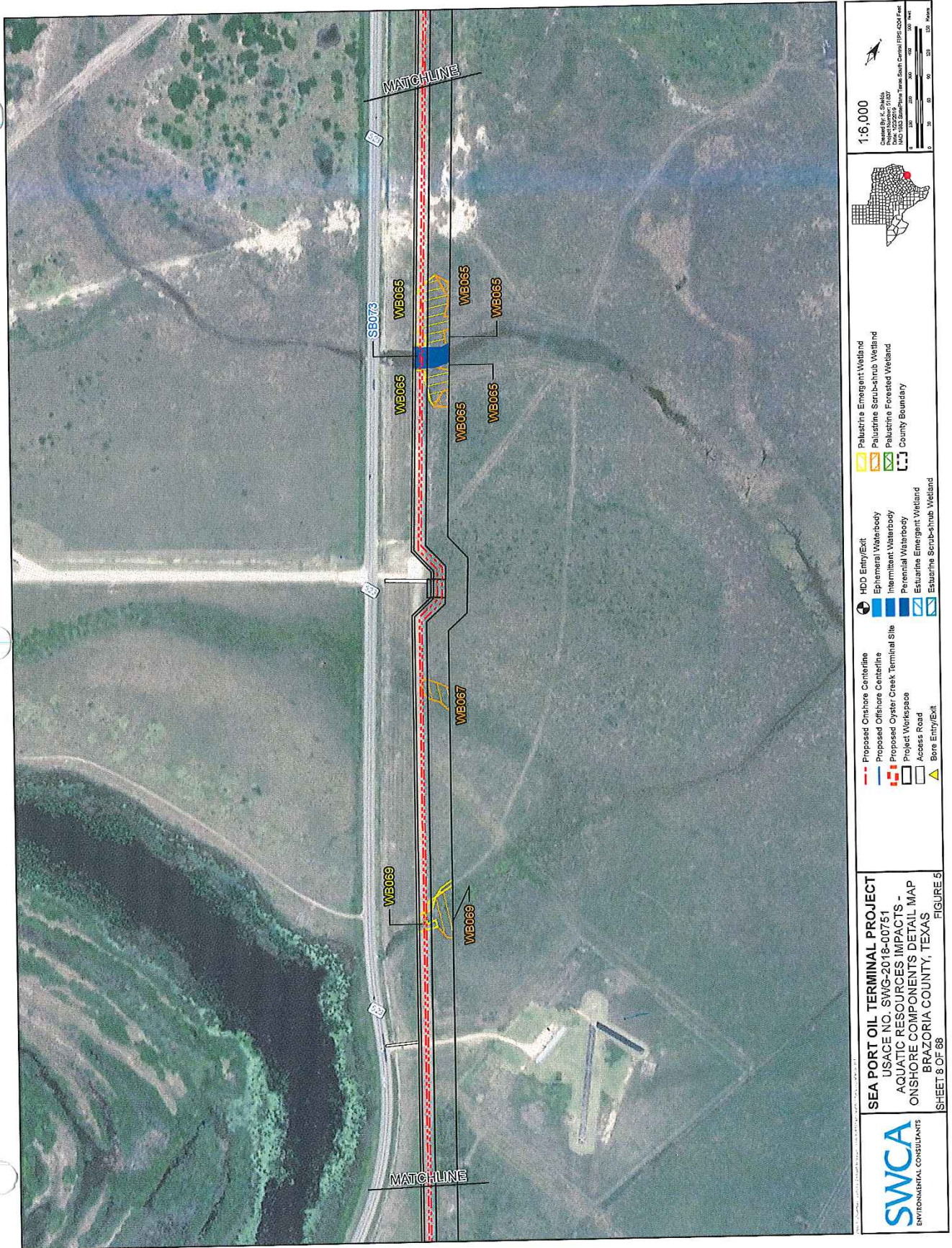
- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HCO Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

1:6,000

Created by: S. Shanks
 Project Number: 01827
 Date: 08/20/2018
 NAD 83 Contour Lines South Corner FIPS 5004 Feet







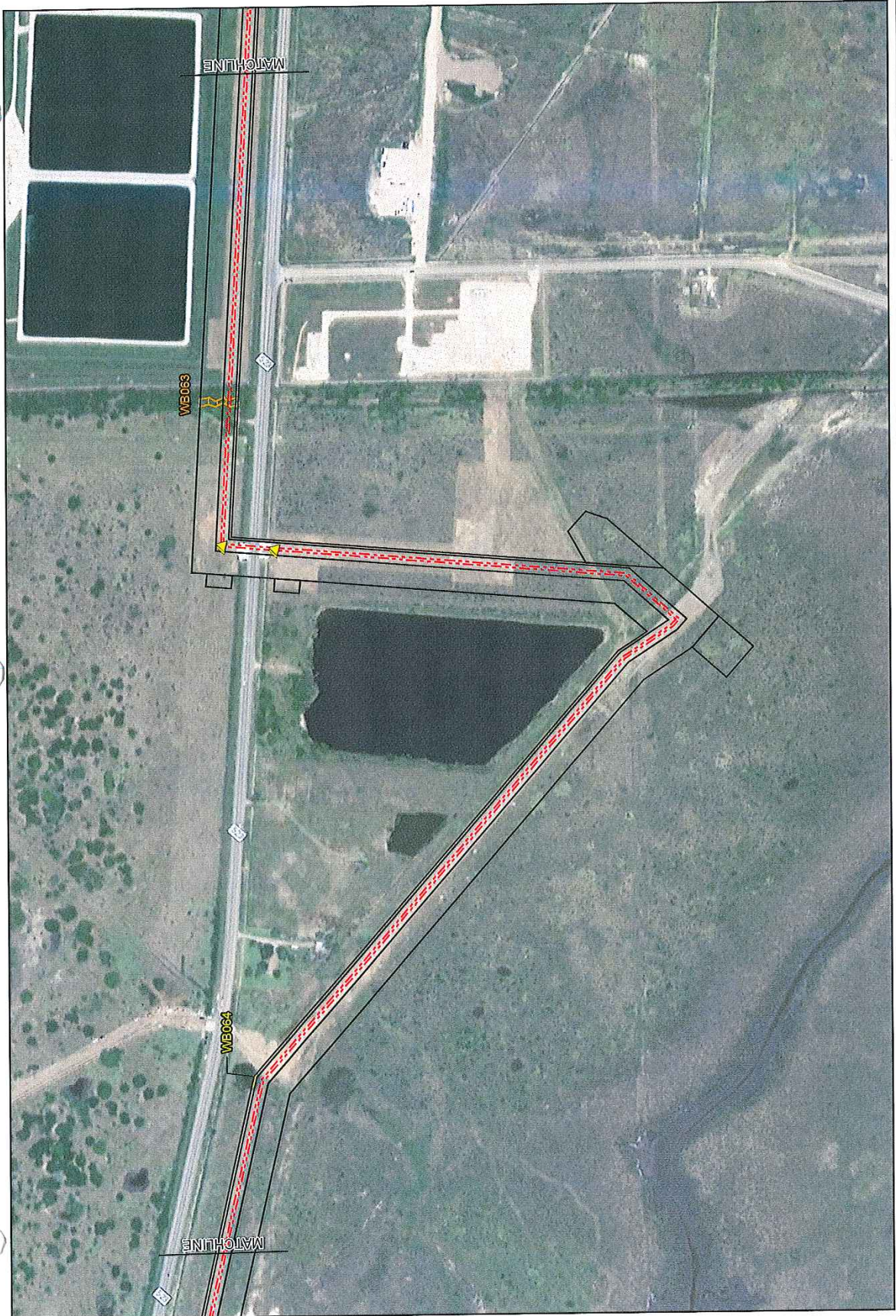
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SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 8 OF 88

<ul style="list-style-type: none"> Proposed Onshore Centerline Proposed Offshore Centerline Proposed Oyster Creek, Terminal Site Project Workspace Access Road Bore Entry/Exit 	<ul style="list-style-type: none"> HDD Entry/Exit Epifaunal Waterbody Infaunal Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> Palustrine Emergent Wetland Palustrine Scrub-shrub Wetland Palustrine Forested Wetland County Boundary
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1:6,000
 Created by: K. J. 2/1/2017
 Date: 10/20/2018
 File: SWG2018-00751_Plan_South Central FIPS (LDB) File
 Scale: 1:6,000
 Units: Feet
 0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 9 OF 68

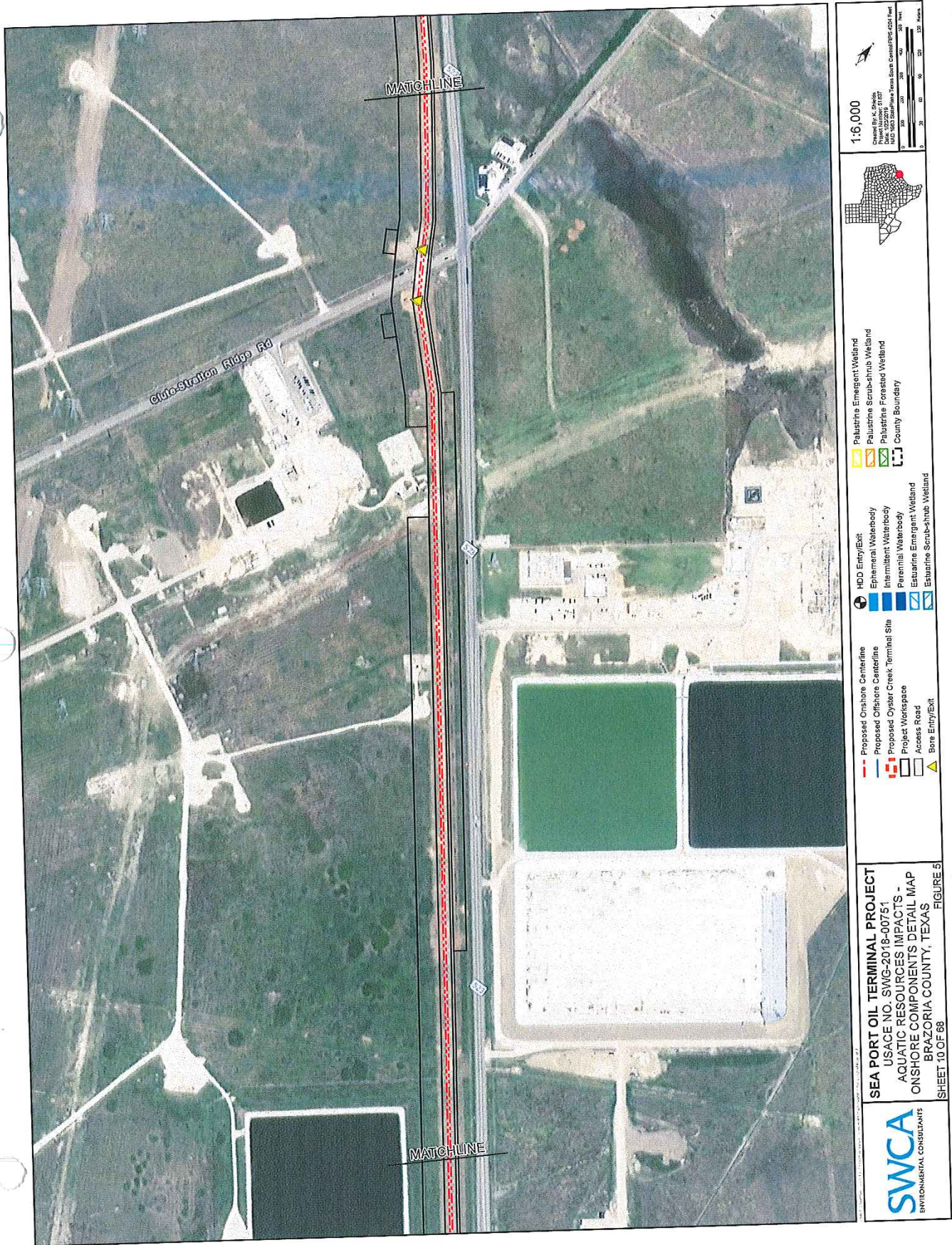
FIGURE 5

1:6,000
 Created by: J. Shields
 Project Number: 01-027
 NAD 83 StatePlane, Texas South Central FIPS 4204 Feet

--- Proposed Onshore Centerline
--- Proposed Offshore Centerline
 Proposed Oyster Creek Terminal Site
 Project Workspace
 Access Road
▲ Bore Entry/Exit

■ HDD Entry/Exit
■ Epiemeral Waterbody
■ Intermittent Waterbody
■ Perennial Waterbody
■ Estuarine Emergent Wetland
■ Estuarine Scrub-hub Wetland

■ Palustrine Emergent Wetland
■ Palustrine Scrub-hub Wetland
■ Palustrine Forested Wetland
 County Boundary



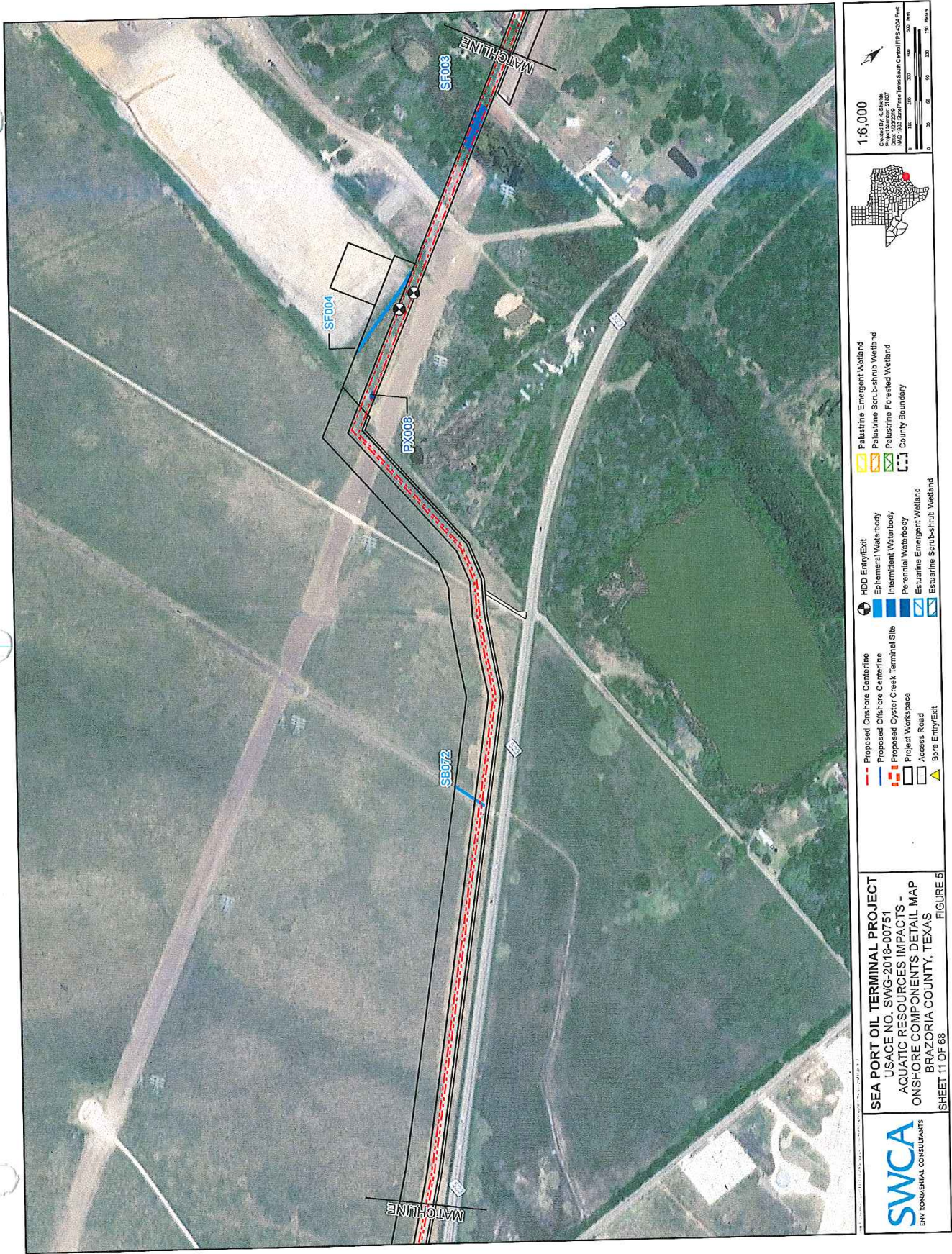
SEA PORT OIL TERMINAL PROJECT
 USAGE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 10 OF 68



1:6,000
 Created By: K. Jenkins
 Date: 12/28/2017
 File: SWG-2018-00751.dwg
 Plot Date: 12/28/2017
 Plot Time: 10:58 AM
 Scale: 1" = 6000'



- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary
- HDD Entry/Exit
- Epifaunal Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

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- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

1:6,000

North Arrow

Scale: 0 50 100 150 200 250 300 Feet

Scale: 0 50 100 150 200 250 300 Meters

USACE No. SWG-2018-00751
 Project Name: 11037
 Date: 11/15/2018
 Map Scale: 1:6,000
 Map Projection: NAD 83 StatePlane Texas South Central FIPS 4201 Feet

FIGURE 5
 SHEET 11 OF 68



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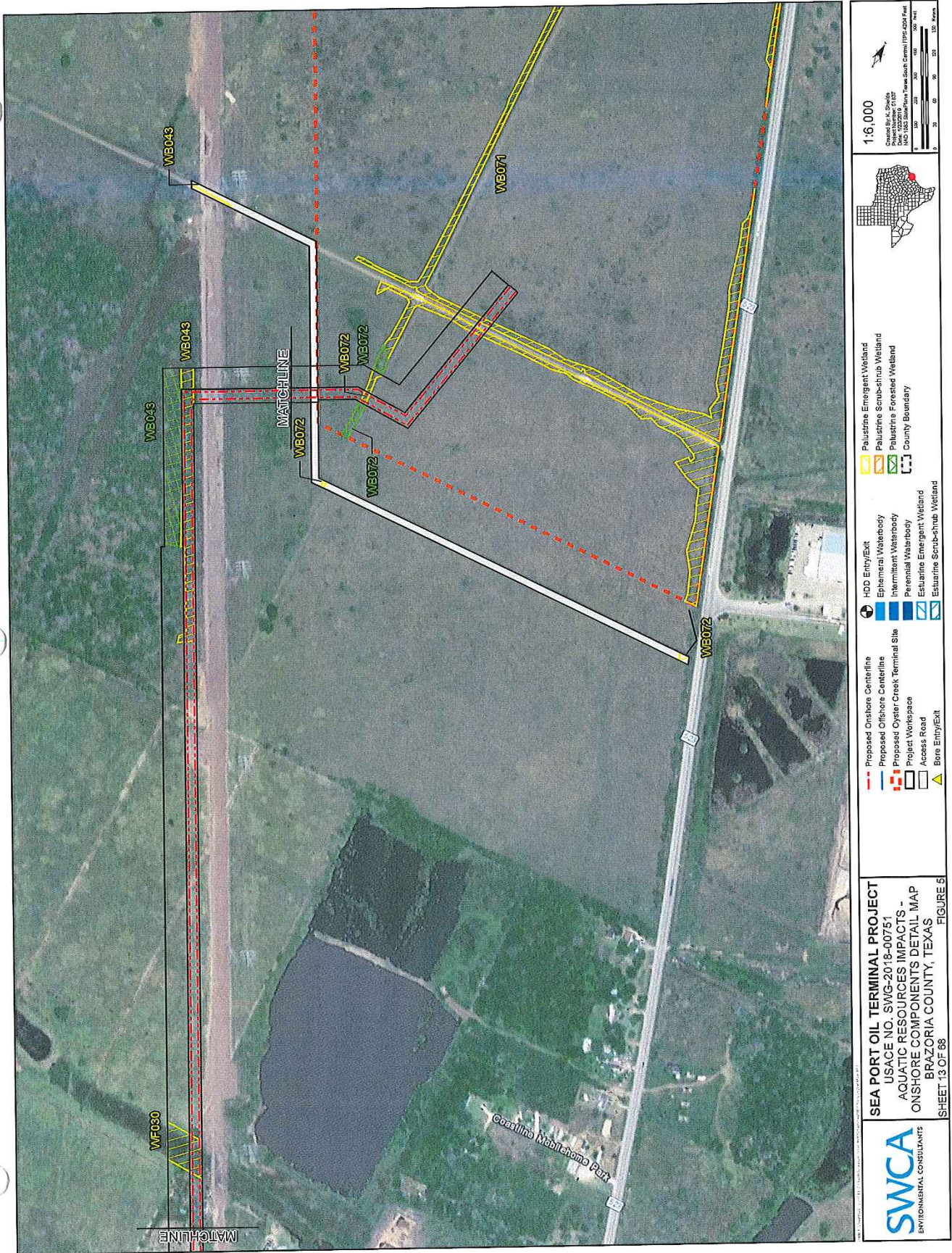
SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

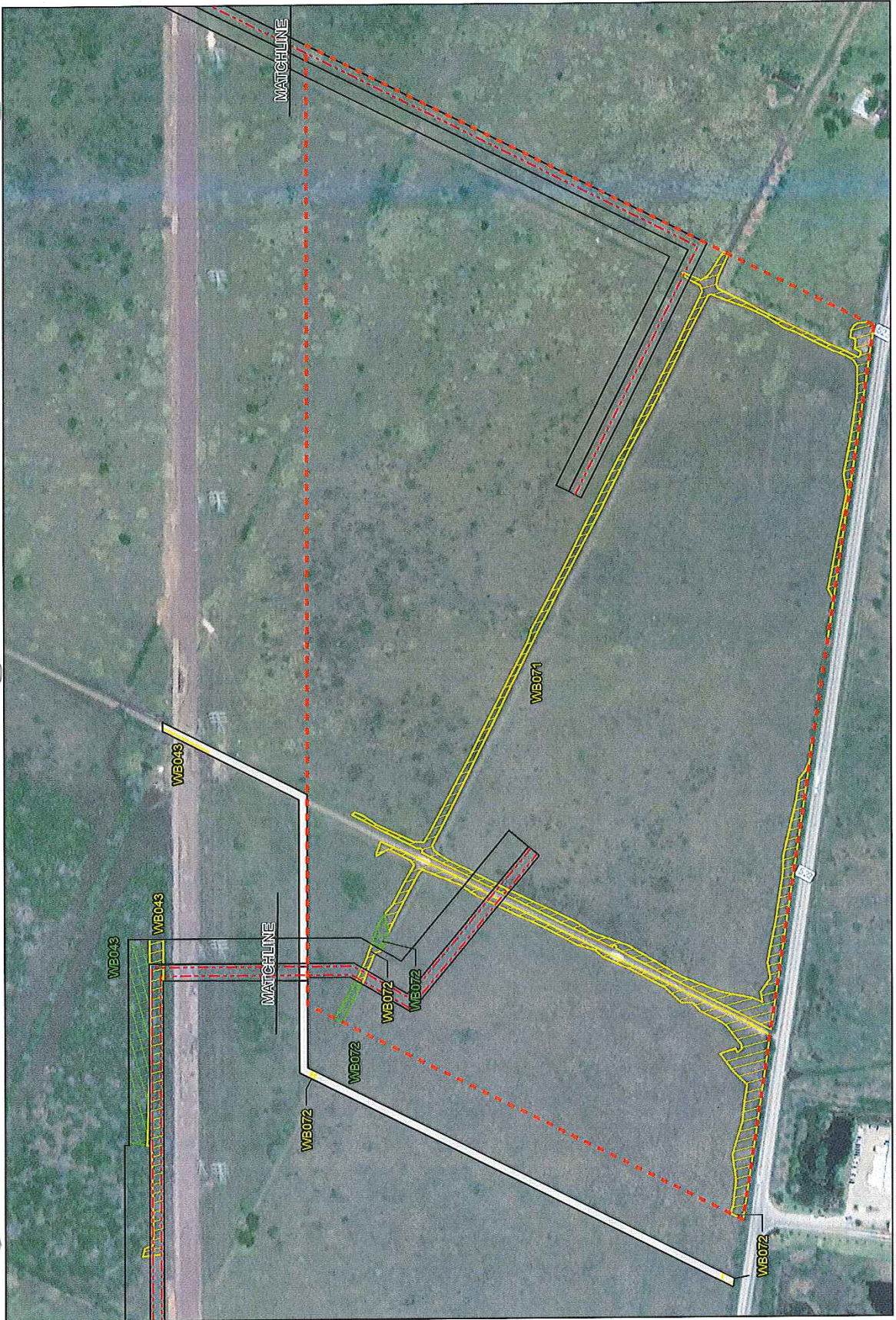
FIGURE 5
SHEET 12 OF 68

1:6,000
Scale
North Arrow
Graphic Scale: 0 to 300 Feet

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Work Area
- Access Road
- Bore Entry/Exit
- H2O Entry/Exit
- Estuarine Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary





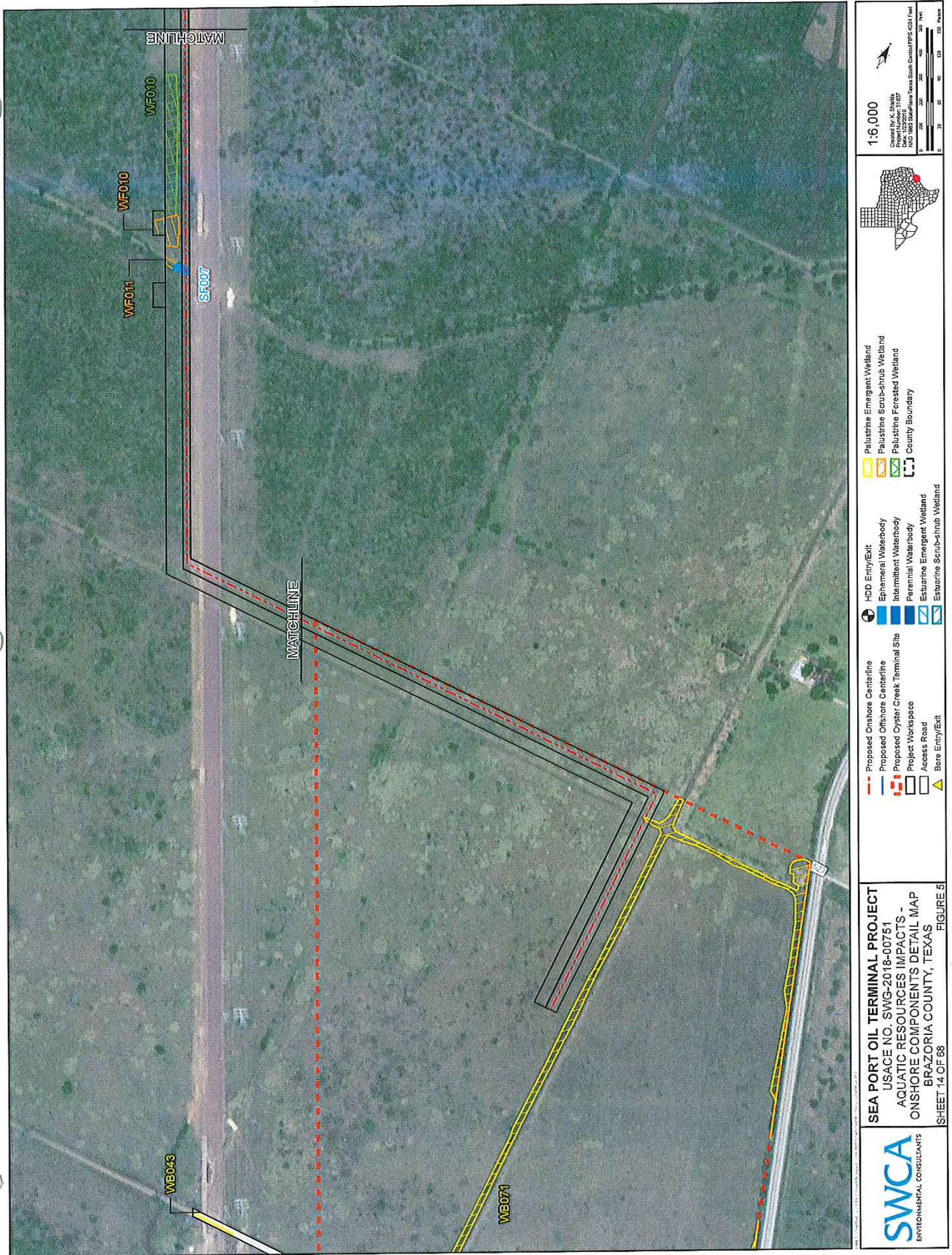
SWCA
ENVIRONMENTAL CONSULTANTS

SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 13A OF 88

1:5,500
Scale: 1" = 5,500'
North Arrow
Project: SWG-2018-00751
Date: 08/20/2018
Map: SWG-2018-00751-13A.dwg

	Proposed Onshore Centerline		HDD Entry/Exit		Palustrine Emergent Wetland
	Proposed Offshore Centerline		Ephemeral Waterbody		Palustrine Scrub-shrub Wetland
	Proposed Oyster Creek Terminal Site		Intermittent Waterbody		Palustrine Forested Wetland
	Project Workspace		Perennial Waterbody		County Boundary
	Access Road		Estuarine Emergent Wetland		
	Bore Entry/Exit		Estuarine Scrub-shrub Wetland		



1:6,000
 Date of Issue: 11/15/2018
 Project Number: 21027
 Scale: 1" = 200 Feet
 NAD 83 StatePlane Texas South Central FIPS 4201 Feet
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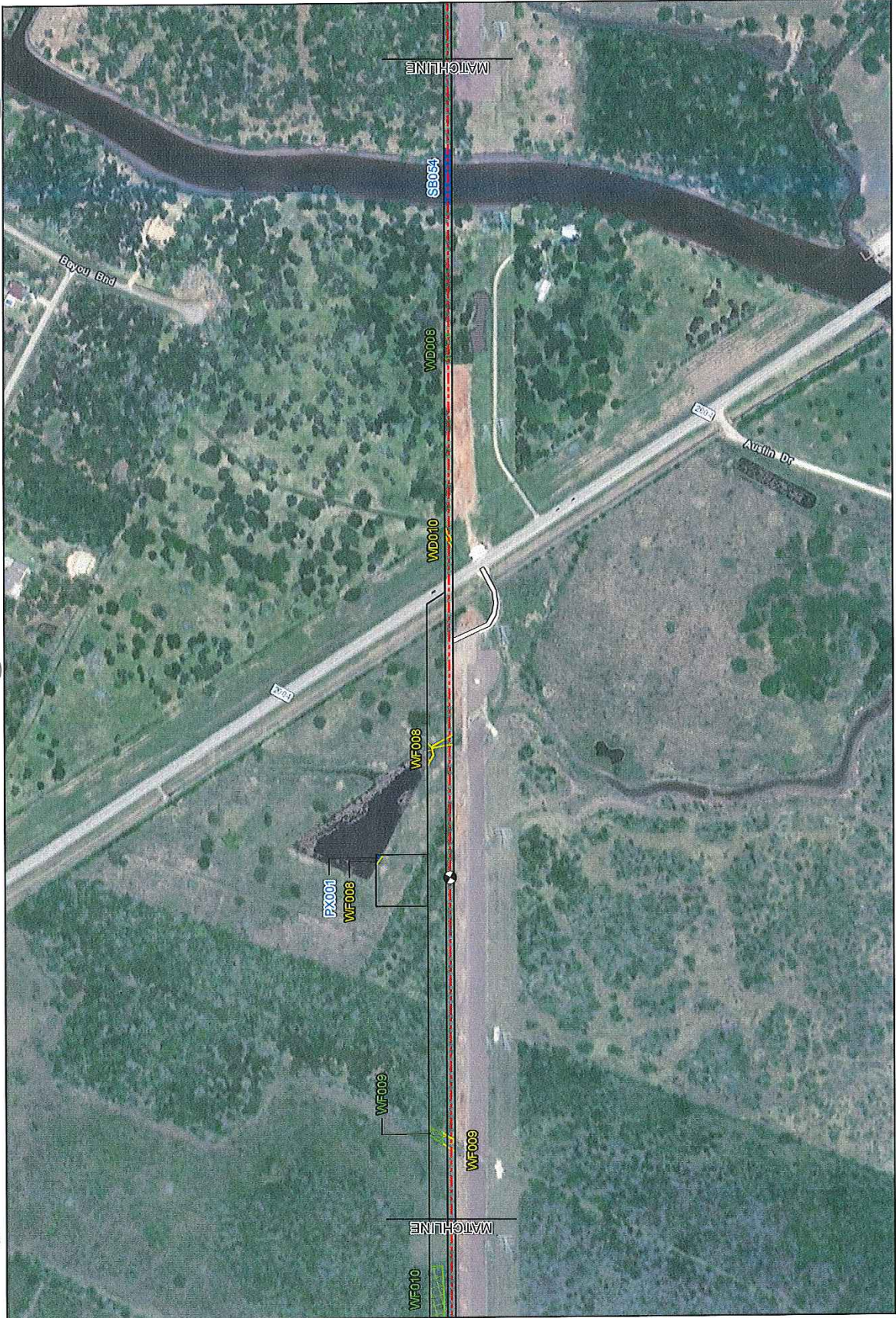


- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- - - Proposed Onshore Centerline
- - - Proposed Offshore Centerline
- - - Proposed Oyster Creek Terminal Site
- - - Project Workspace
- Access Road
- ▲ Bare Entry/Exit

SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 14 OF 88





SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

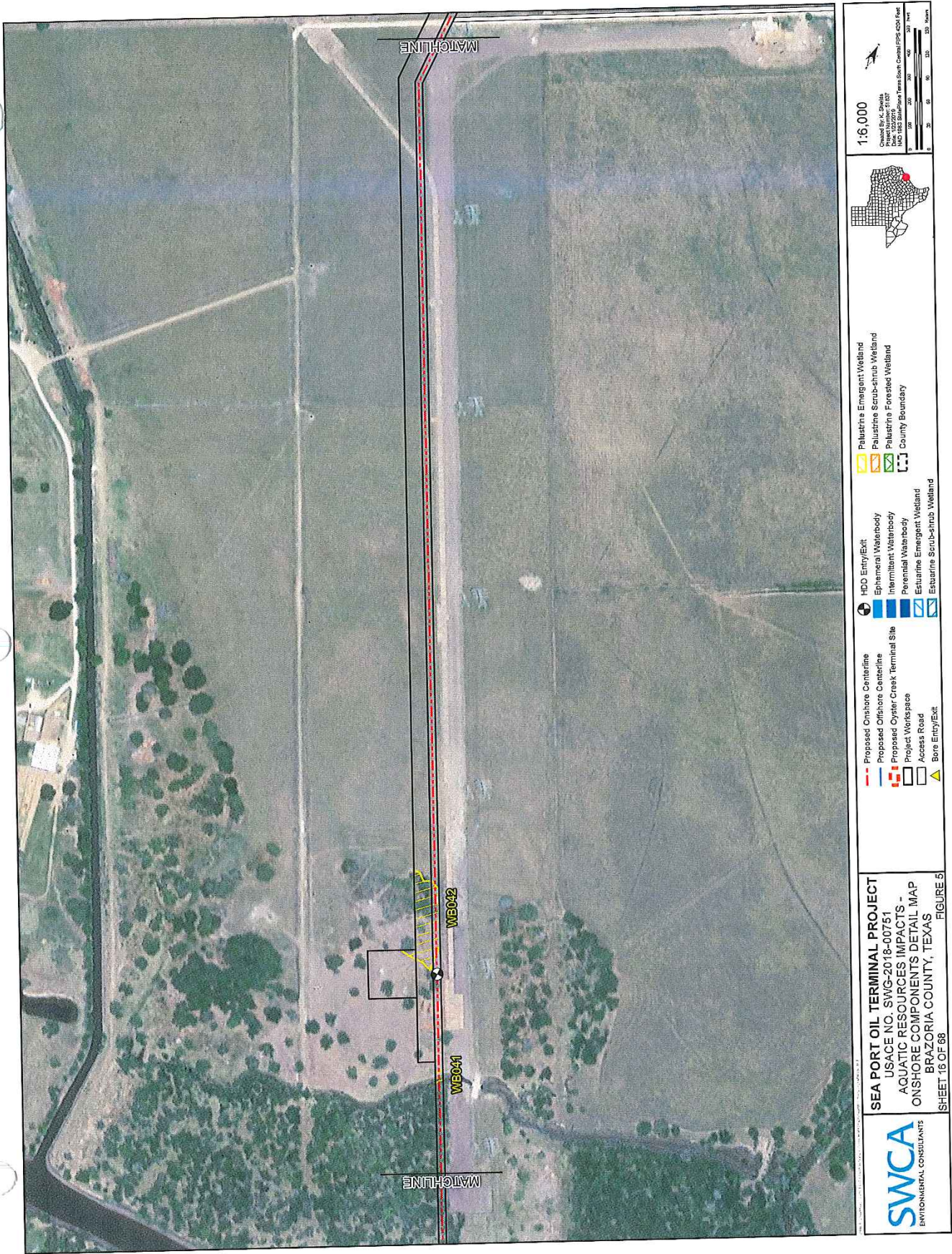
FIGURE 5
 SHEET 15 OF 88

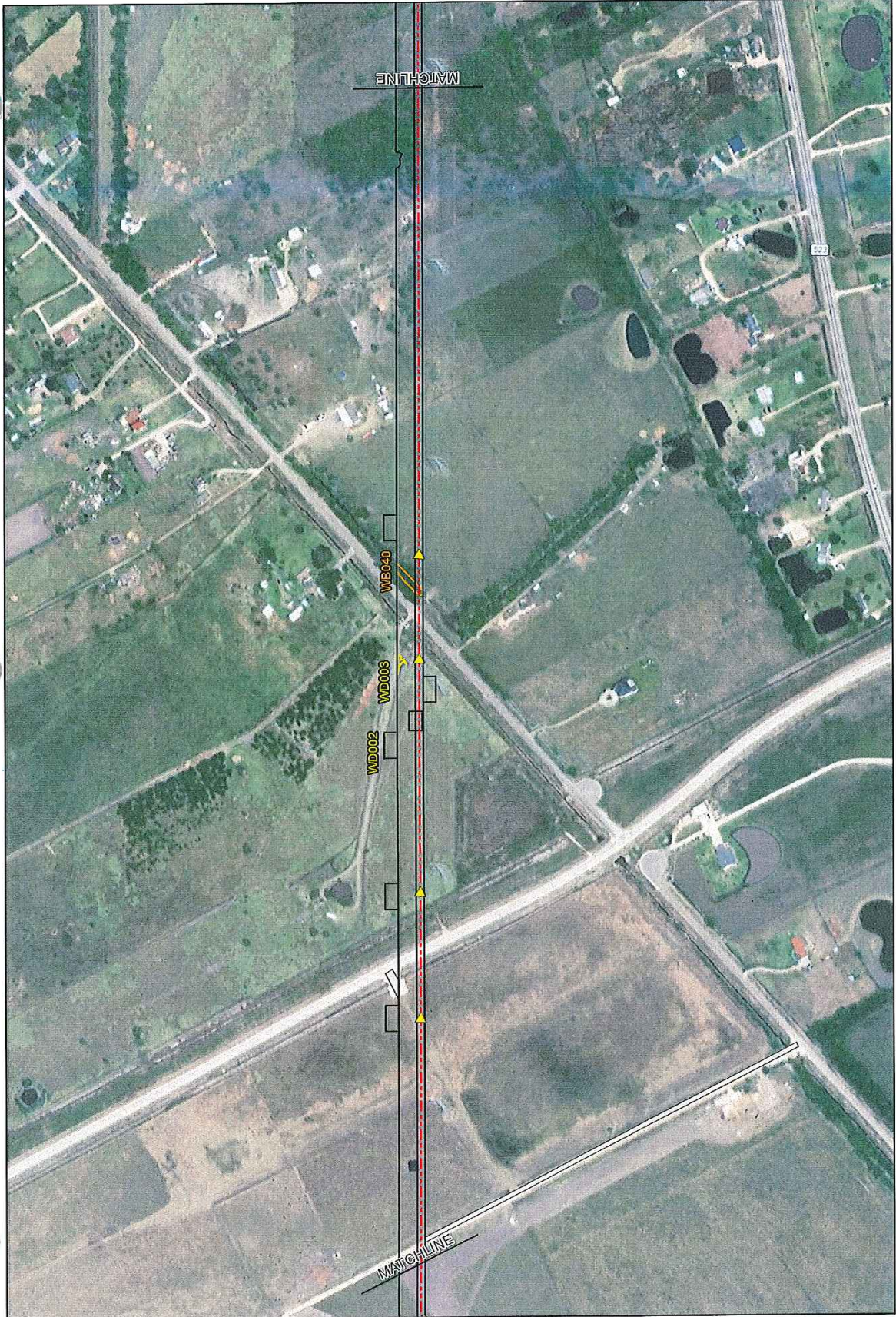
SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created by: J. Priddy
 Date: 10/22/2019
 Data: Wetland Data from South Central IPRE-2014 Final

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Epifaunal Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary





SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 17 OF 68

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Legend:

- Proposed Onshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- ⊕ HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Created by: J. Smith
 Date: 10/22/2019
 File: USACE_SWG-2018-00751-Fig17.dwg



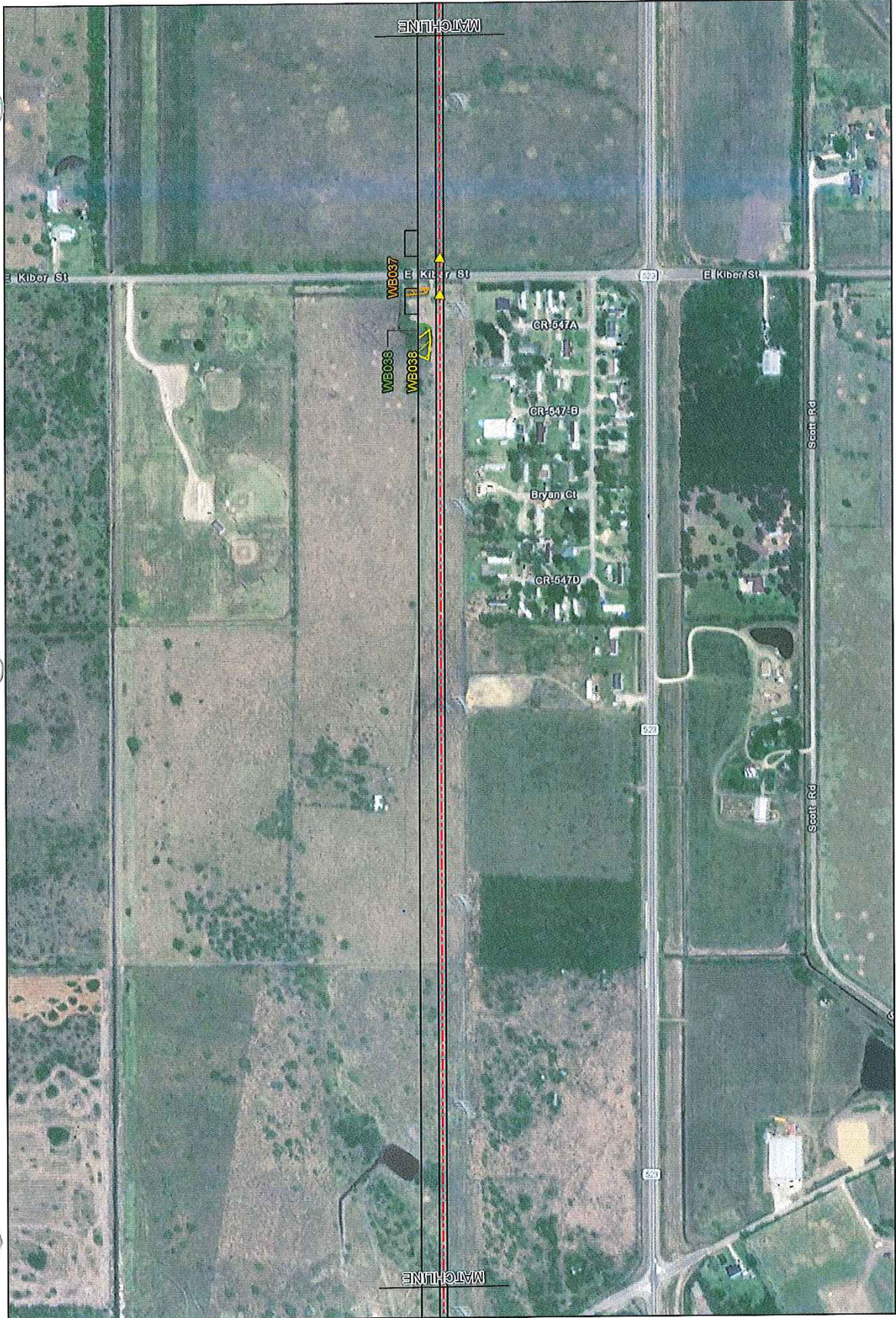
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 18 OF 68

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FIGURE 5

	Proposed Onshore Centerline		Palustrine Emergent Wetland
	Proposed Offshore Centerline		Palustrine Scrub-shrub Wetland
	Proposed Creek Terminal Site		Palustrine Forested Wetland
	Project Workspace		County Boundary
	Access Road		
	Bore Entry/Exit		
	HDD Entry/Exit		
	Ephemeral Waterbody		
	Intermittent Waterbody		
	Perennial Waterbody		
	Estuarine Emergent Wetland		
	Estuarine Scrub-shrub Wetland		

1:6,000
 Project File: SWG-2018-00751-18.dwg
 Date: 10/13/2018
 User: jsmith
 Scale: 1:6,000



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 19 OF 68

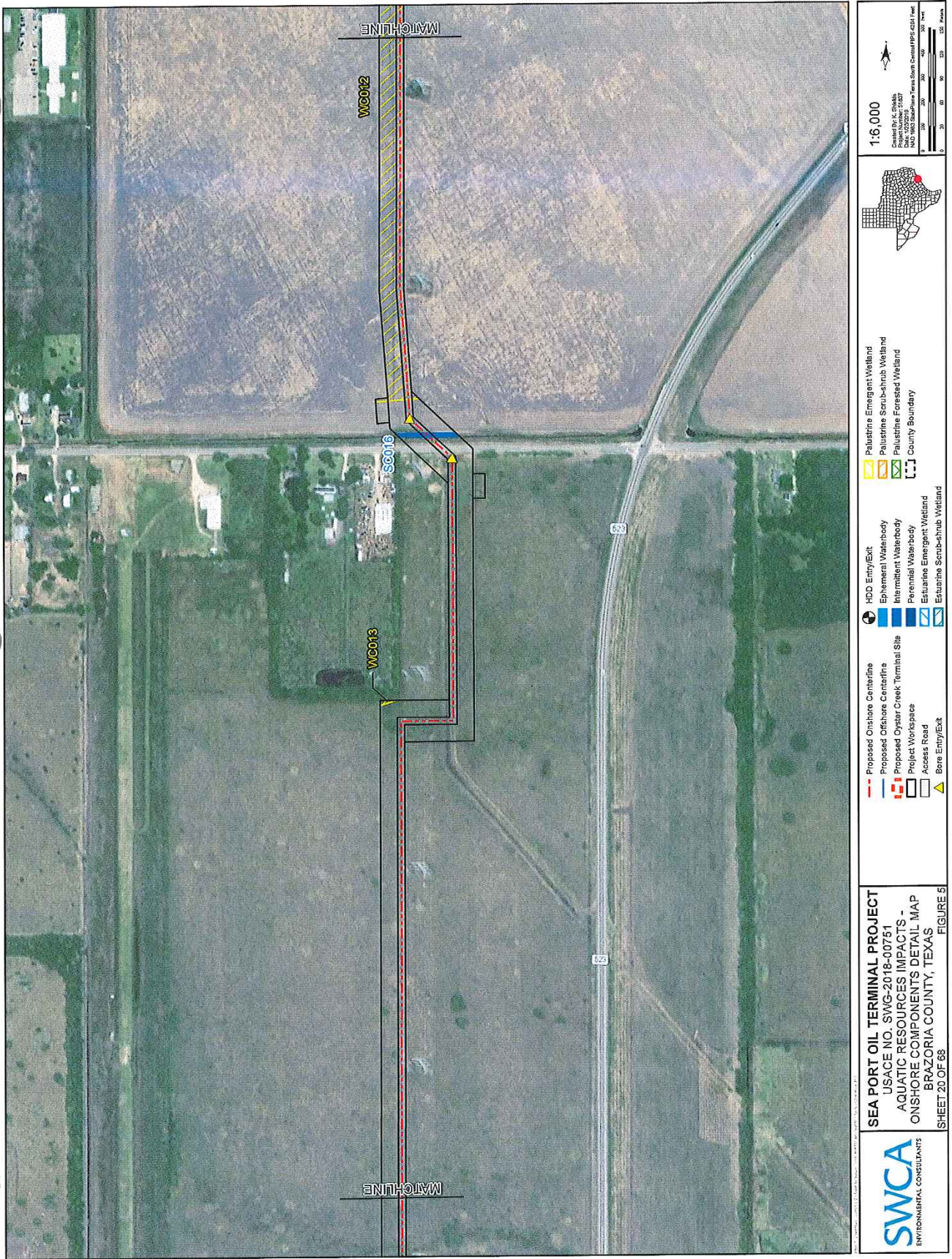
SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- + HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Created By: K. Strider
 Date: 10/20/18
 Drawn By: K. Strider
 Date: 10/20/18
 Title: Sea Port Oil Terminal Project

Inset Map: A small map of Texas with a red dot indicating the project location in Brazoria County.

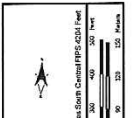


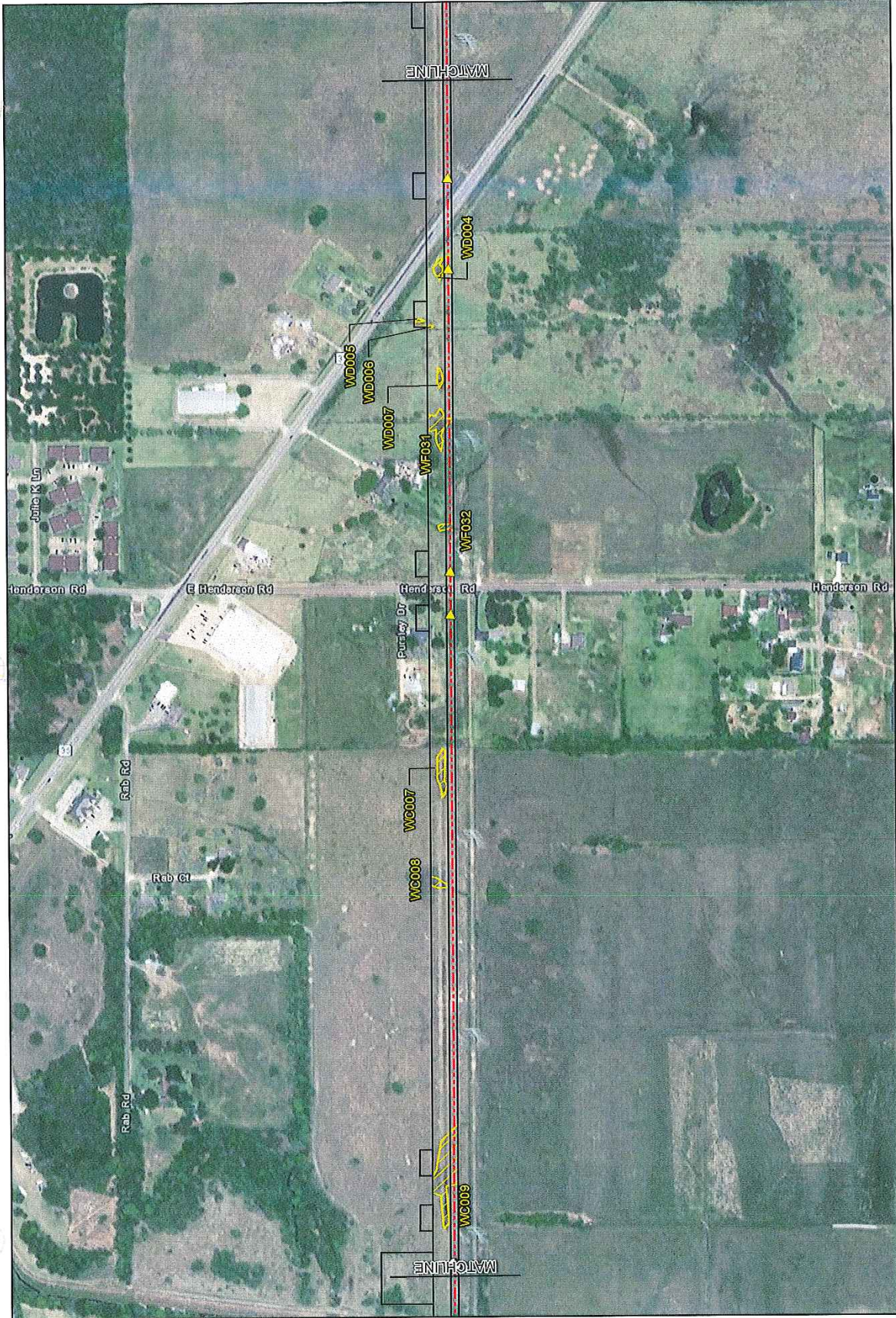
SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS
SHEET 20 OF 68
FIGURE 5



- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

1:6,000
Created by: E. Shultz
Date: 10/20/2019
SWCA - 10/20/2019 - From Sea Port Oil Terminal Project



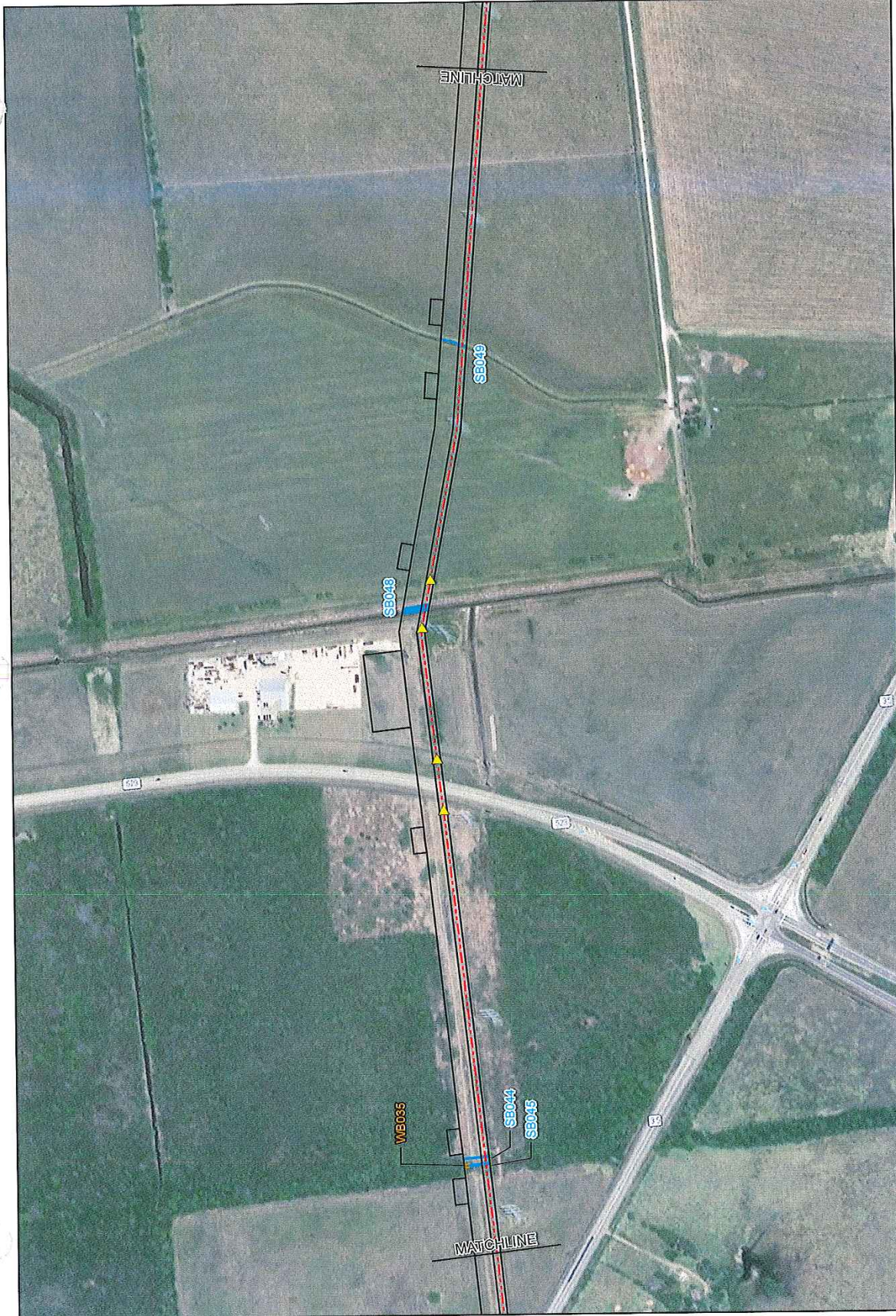


SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 22 OF 68

1:6,000
 Created by: K. B. Miller
 Date: 02/20/18
 Project: Sea Port Oil Terminal South Camp FPS, USCF, Inc.

<ul style="list-style-type: none"> Proposed Onshore Centerline Proposed Offshore Centerline Proposed Oyster Creek Terminal Site Project Workspace Access Road Bore Entry/Exit 	<ul style="list-style-type: none"> HDD Entry/Exit Ephemeral Waterbody Intermittent Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> Palustrine Emergent Wetland Palustrine Scrub-shrub Wetland Palustrine Forested Wetland County Boundary
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SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 23 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created by: K. Shreves
 Date: 10/20/18
 Project: SeaPort Oil Terminal South Central (SPSC) Gulf East

<ul style="list-style-type: none"> Proposed Onshore Centerline Proposed Offshore Centerline Proposed Oyster Creek Terminal Site Project Workspaces Access Road Bore Entry/Exit 	<ul style="list-style-type: none"> HDD Entry/Exit Ephemeral Waterbody Intermittent Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> Palustrine Emergent Wetland Palustrine Scrub-shrub Wetland Palustrine Forested Wetland County Boundary
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SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS' DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 24 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit

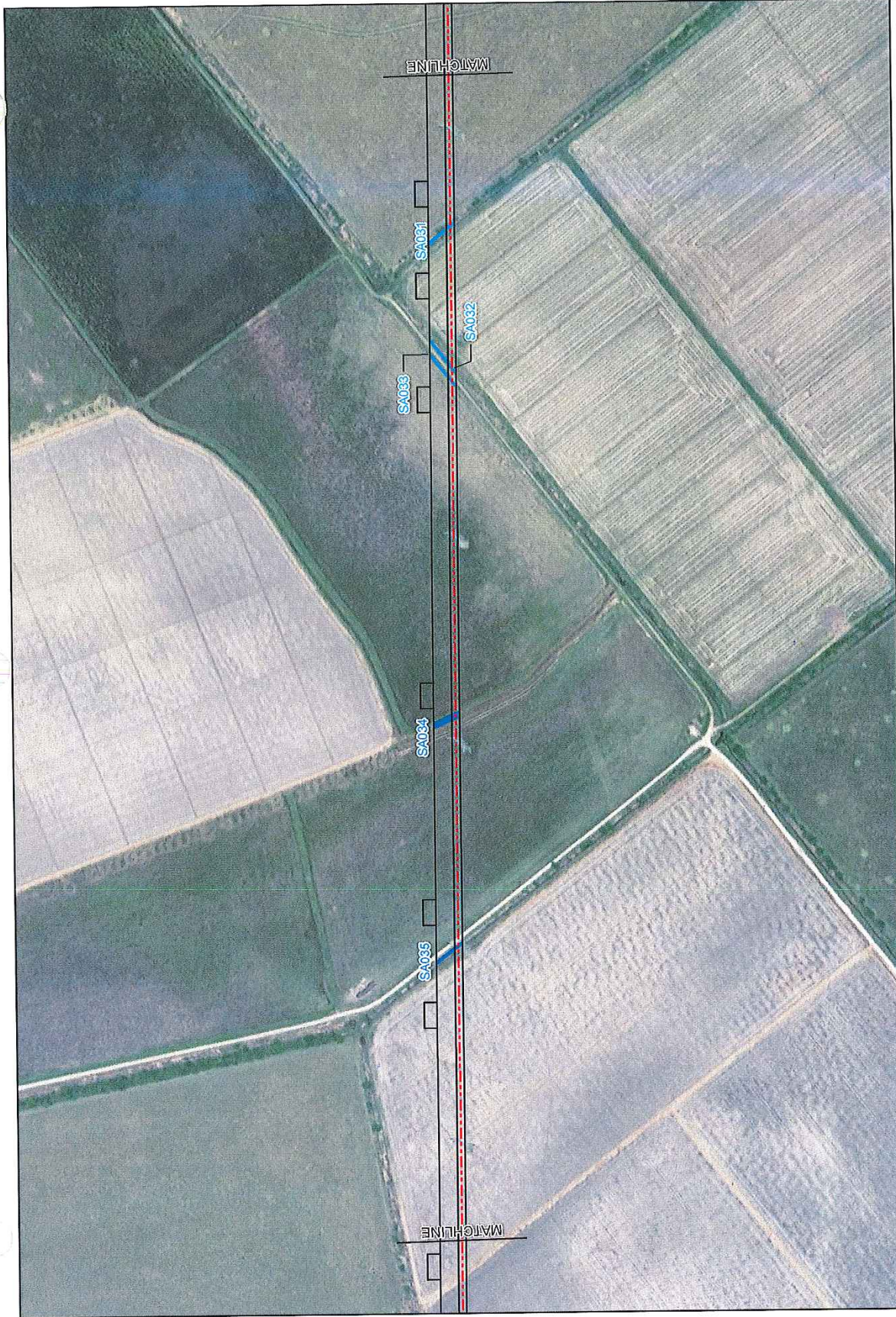
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Palustrine Forested Wetland
- Palustrine Emergent Wetland
- Palustrine Forested Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-strub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000

Created By: K. Ghella
 Date: 12/20/18
 HDD 1833 Submarine Area Storm Current (P) 600 Feet

0 30 60 90 120 150 Feet

Figure 5



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

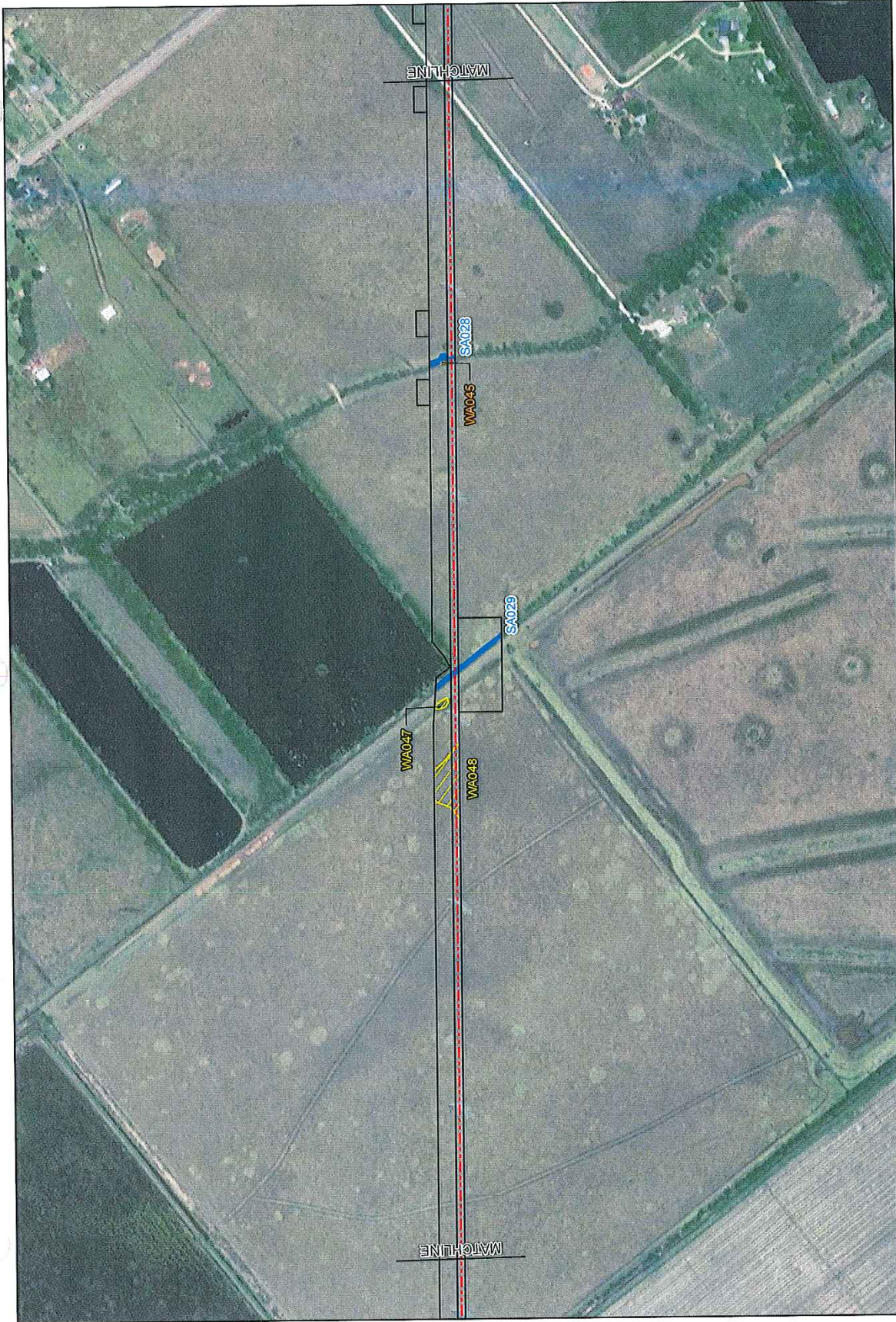
FIGURE 5
 SHEET 28 OF 88

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1" = 6,000'

Created by: K. P. [unreadable]
 Date: 10/20/2018
 File: SWG-2018-00751 - Onshore Components Detail Map.dwg
 Project: Sea Port Oil Terminal Project, Brazoria County, Texas
 Scale: 1" = 6,000'



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

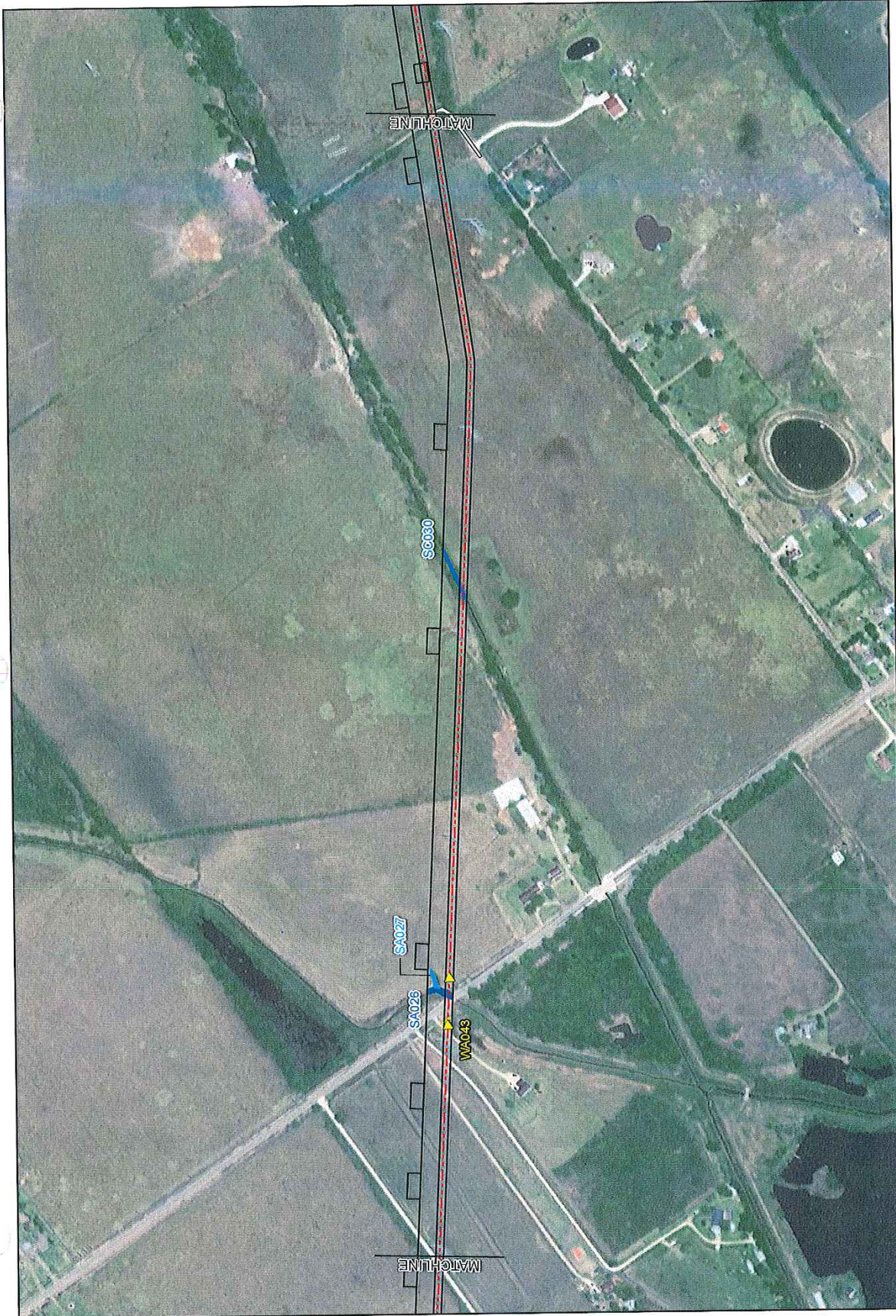
FIGURE 5
 SHEET 26 OF 88

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1" = 6,000'

Created By: K. Zivady
 Date: 12/20/18
 Title: Aquatic Resources Impacts Detail Map
 Project: Sea Port Oil Terminal Project



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

SWCA
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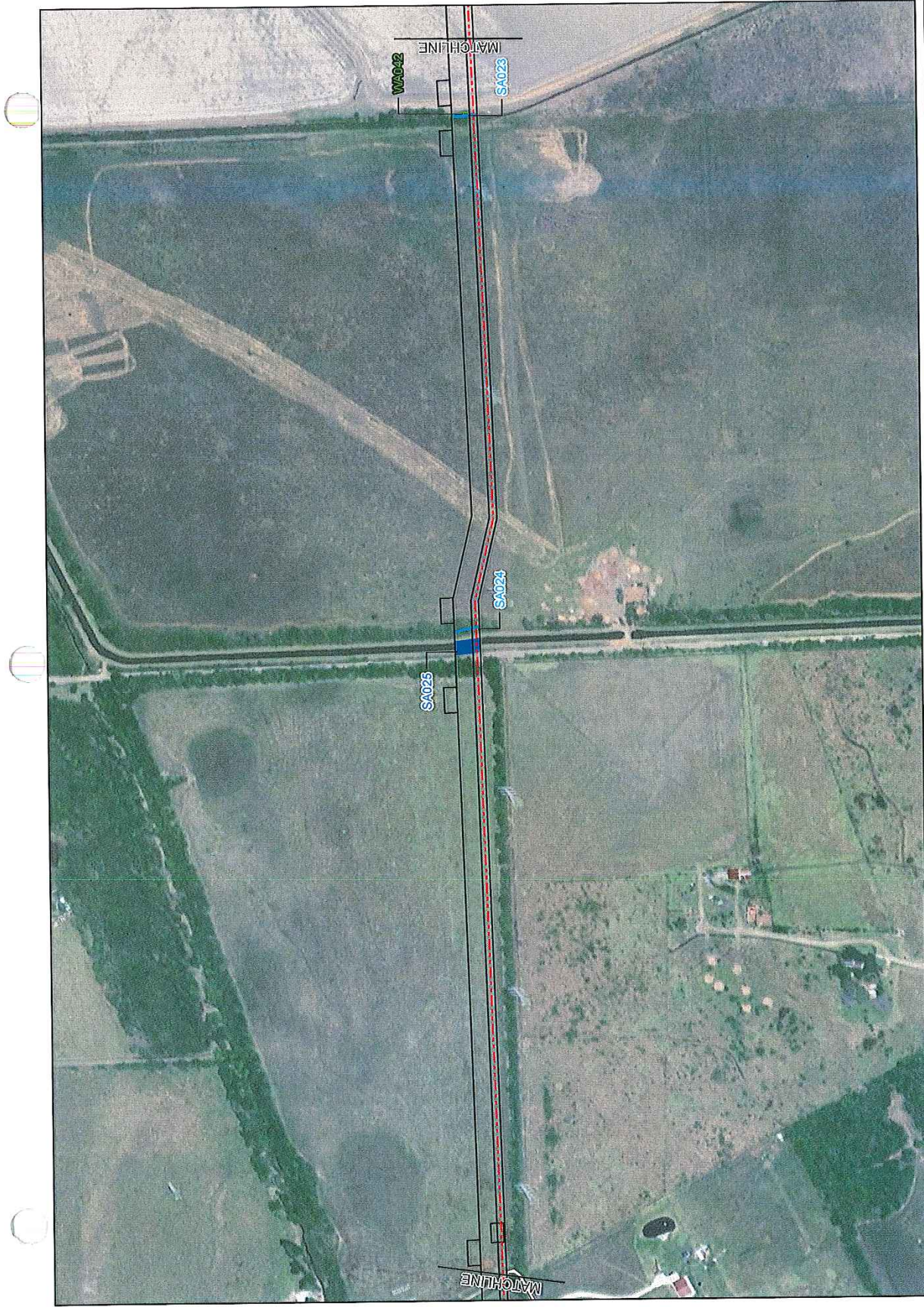
1:6,000
 Created By: K. Shields
 Date: 12/20/17
 File: 180302018 - Sea Port Oil Terminal - Aquatic Resources Impact - Onshore Components Detail Map

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Epifaunal Waterbody
- Infaunal Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Palustrine Emergent Wetland
- Palustrine Forested Wetland
- Palustrine Scrub-shrub Wetland
- County Boundary

Scale: 0 25 50 75 100 125 150 Feet

FIGURE 5
 SHEET 27 OF 68



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created By: K. Shuler
 Date: 12/22/2017
 Project Number: 2018-00751
 Title: Sea Port Oil Terminal

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-Hub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-Hub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 0 30 60 90 120 150 Feet
 0 30 60 90 120 Meters

FIGURE 5
 SHEET 28 OF 68



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

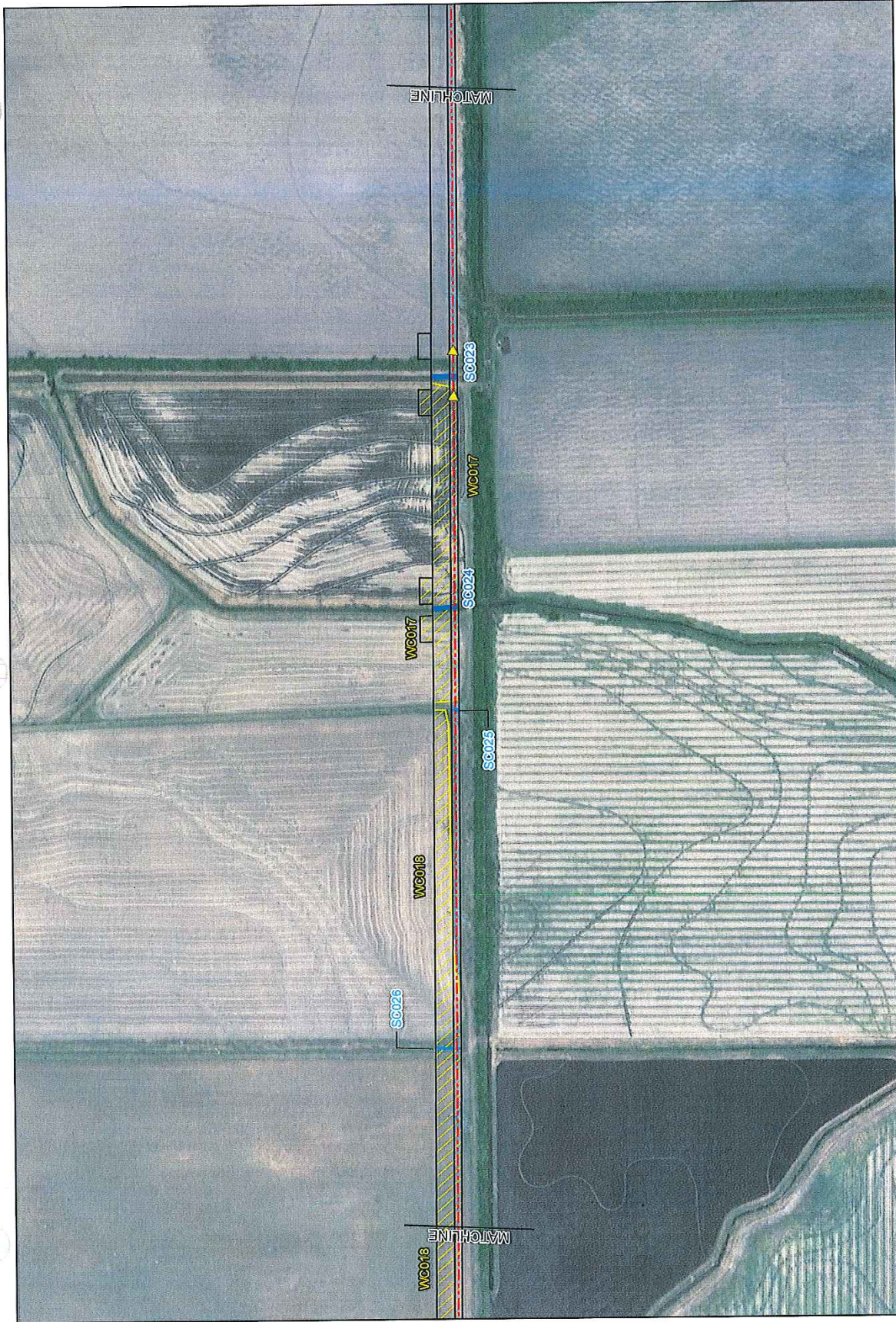
FIGURE 5
 SHEET 28 OF 68

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000

Created By: J. Ables
 Date: 12/27/18
 Project: SWG-2018-00751



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SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

Legend:

- Proposed Onshore Centerline
- Proposed Onshore Centerline Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1" = 6,000'

Created By: K. Shields
Drawn By: J. Smith
Date: 12/20/18 11:27
MID 1000 Barriers in Area South, Center, ESRW, Old Field

Figure 5
SHEET 30 OF 68



SWCA
ENVIRONMENTAL CONSULTANTS

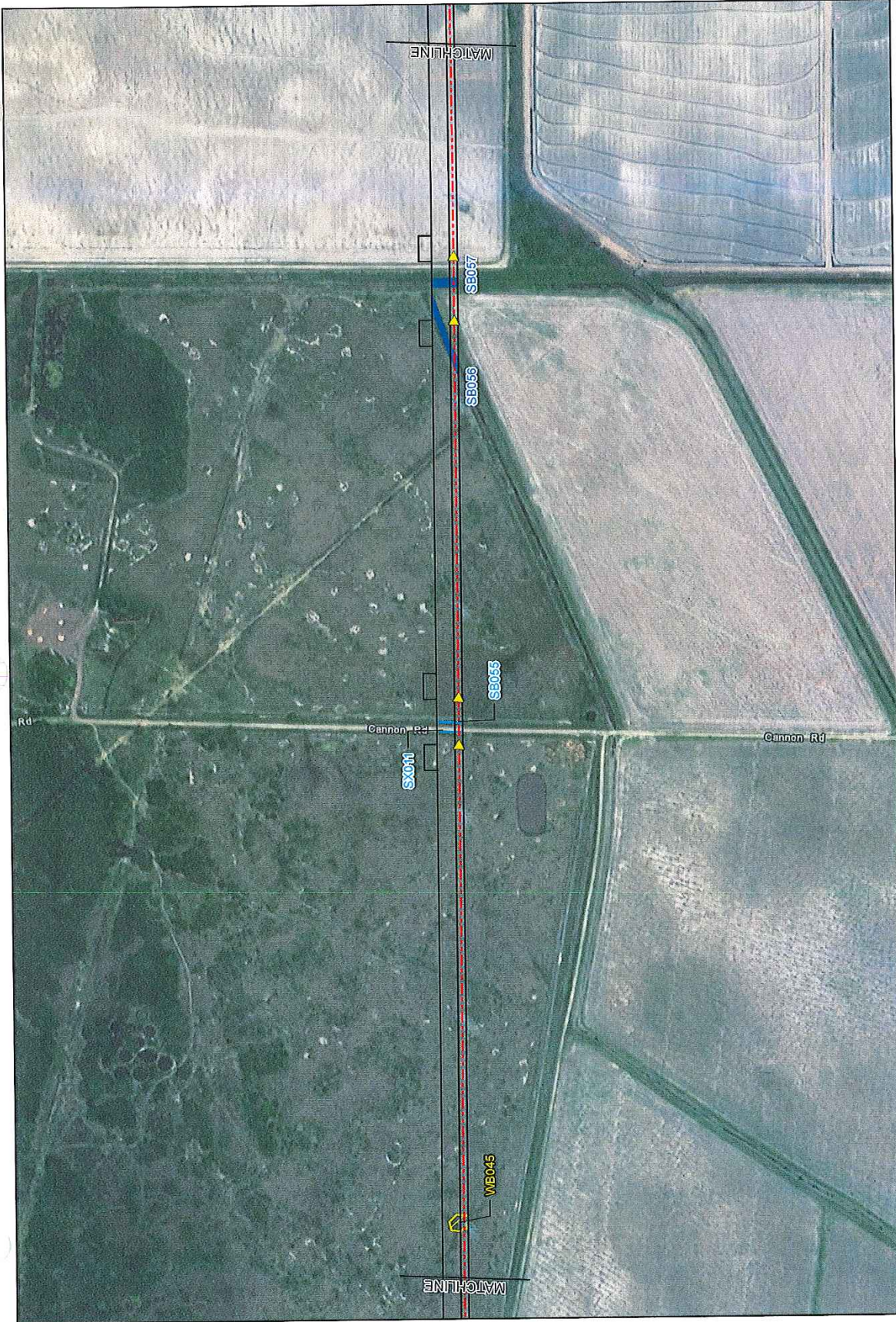
SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 31 OF 88

	Proposed Onshore Centerline		HDD Entry/Exit		Palustrine Emergent Wetland		County Boundary
	Proposed Onshore Centerline		Ephemeral Waterbody		Palustrine Scrub-shrub Wetland		County Boundary
	Proposed Onshore Centerline		Intermittent Waterbody		Palustrine Forested Wetland		
	Proposed Onshore Centerline		Perennial Waterbody				
	Proposed Onshore Centerline		Estuarine Emergent Wetland				
	Proposed Onshore Centerline		Estuarine Scrub-shrub Wetland				
	Proposed Onshore Centerline		Access Road				
	Proposed Onshore Centerline		Bore Entry/Exit				

1:6,000

Created By: K. Smith
Date: 10/20/19
Title: Aquatic Resource Terms, Sub-Component (FWS, CWS) Map



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 32 OF 88

1:6,000
 Created By: K. Phelan
 Date: 02/20/17
 Project: USACE, Texas South Central PRRS, 0204, E&C

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Cyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 33 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000

Created by: K. Shields
 Date: 12/22/2017
 HD 100 Base Map File: SWG-2018-00751-F05.dwg
 HD 100 Base Map File: SWG-2018-00751-F05.dwg

0 25 50 75 100 125 150 Feet



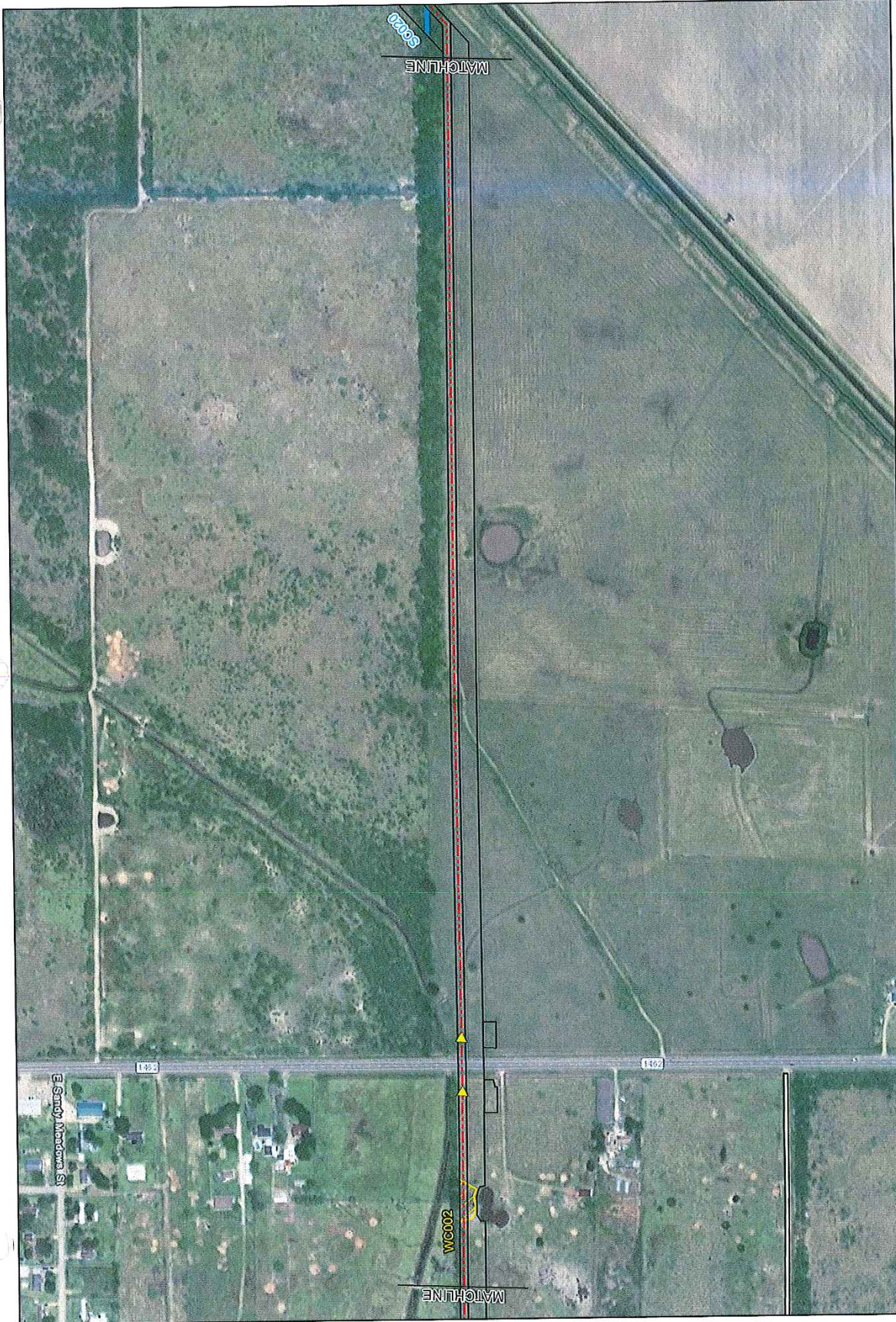
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 34 OF 68

1:6,000
 Created By: K. Schmitt
 Date: 12/20/18
 Project: Sea Port Oil Terminal Project
 Scale: 1" = 500 Feet

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Epimeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 35 OF 68

Legend

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Sills
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

1:6,000

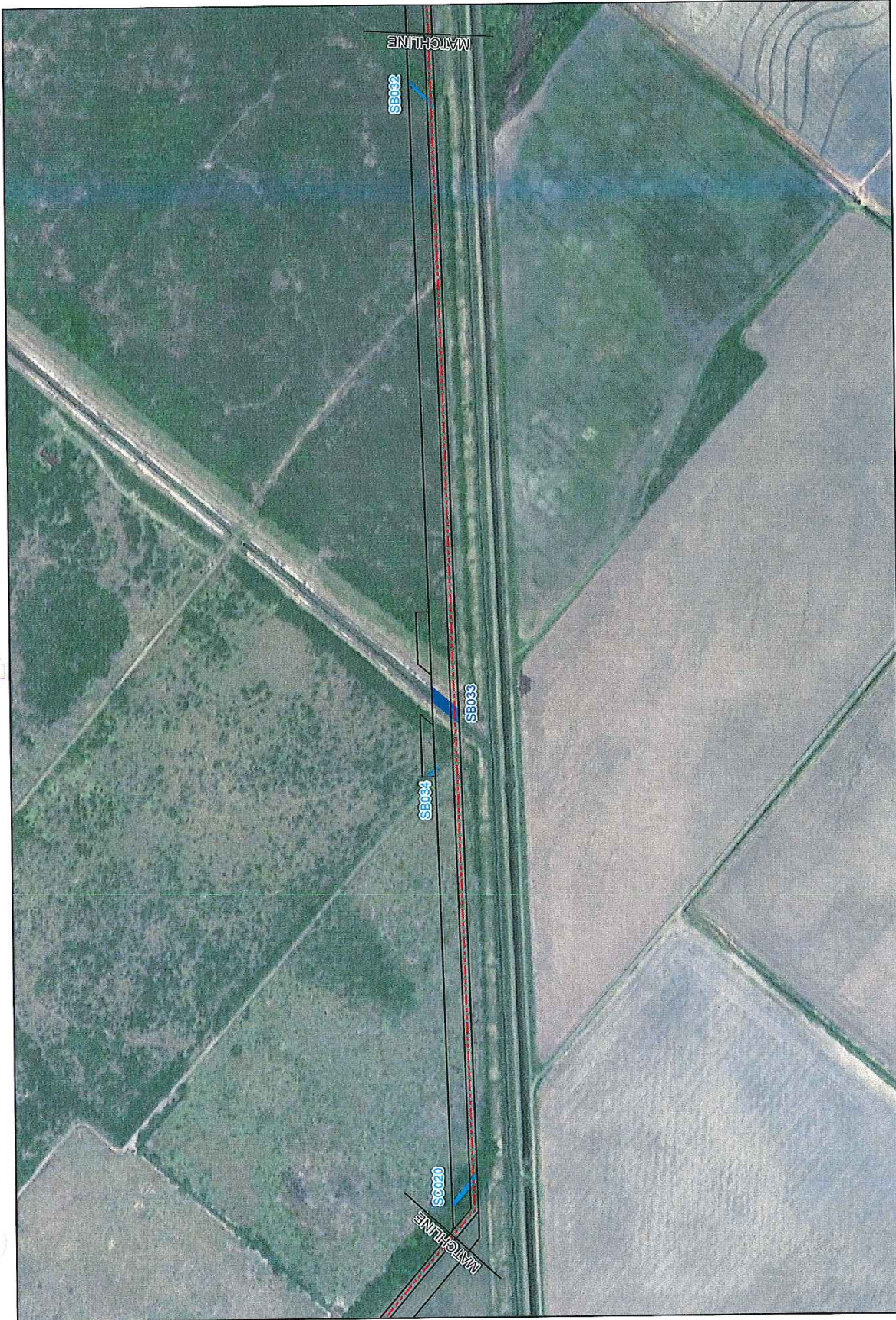
Checked By: K. Shively
 Date: 11/22/2017
 Project Number: 2018-00751
 Title: Sea Port Oil Terminal Project

Scale: 1" = 6000'

0 30 60 90 120 150 Feet

Scale: 1" = 6000'

0 30 60 90 120 150 Feet



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SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS
SHEET 36 OF 68

1:6,000
Checked By: K. Shields
Date: 12/20/18
SWCA 100% Scale/Plan View/Scale/Plan View

Legend:

- Proposed Offshore Centerline (Red dashed line)
- Proposed Oyster Creek Terminal Site (Red dashed line)
- Project Workspaces (Black outline)
- Access Road (Black outline)
- Bore Entry/Exit (Yellow triangle)
- HDD Entry/Exit (Blue circle)
- Ephemeral Waterbody (Blue hatched)
- Intermittent Waterbody (Light blue hatched)
- Perennial Waterbody (Dark blue hatched)
- Estuarine Emergent Wetland (Blue hatched)
- Estuarine Scrub-shrub Wetland (Blue hatched)
- Palustrine Emergent Wetland (Green hatched)
- Palustrine Scrub-shrub Wetland (Yellow hatched)
- Palustrine Forested Wetland (Green hatched)
- County Boundary (Black dashed line)

Scale:
0 30 60 90 120 150 Feet

FIGURE 6



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SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

Proposed Onshore Centerline
Proposed Offshore Centerline
Proposed Oyster Creek Terminal Site
Project Workspace
Access Road
Bore Entry/Exit

HDD Entry/Exit
Ephemeral Waterbody
Intermittent Waterbody
Perennial Waterbody
Estuarine Emergent Wetland
Estuarine Scrub-shrub Wetland

Palustrine Emergent Wetland
Palustrine Scrub-shrub Wetland
Palustrine Forested Wetland
County Boundary

Scale: 1:6,000
Created by: K. J. ...
Date: 12/20/2017
Project: ...

FIGURE 5
SHEET 37 OF 68

FIGURE 5
SHEET 37 OF 68



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 38 OF 88

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend

	Proposed Onshore Centerline		HDD Entry/Exit
	Proposed Onshore Centerline		Estuarine Waterbody
	Proposed Oyster Creek Terminal Site		Intermittent Waterbody
	Project Workspaces		Perennial Waterbody
	Access Road		Palustrine Emergent Wetland
	Bare Entry/Exit		Estuarine Emergent Wetland
			Palustrine Emergent Wetland
			Palustrine Scrub-shrub Wetland
			Palustrine Forested Wetland
	County Boundary		

Scale: 1:6,000
 Created by: K. Shanks
 Date: 12/20/18
 HDD USGS StatePlane Texas North Central FIPS 5002 Feet
 1" = 500 Feet



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 38 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created By: K. Shields
 Date: 12/20/18
 D:\01 2018\Brazoria Area\SWG-2018-00751\Fig 5 Det Map.dwg

Legend:

- Proposed Offshore Centerline
- Proposed Onshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Estuarine Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale:
 0 20 40 60 80 100 120 Feet
 0 20 40 60 80 100 120 Meters



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

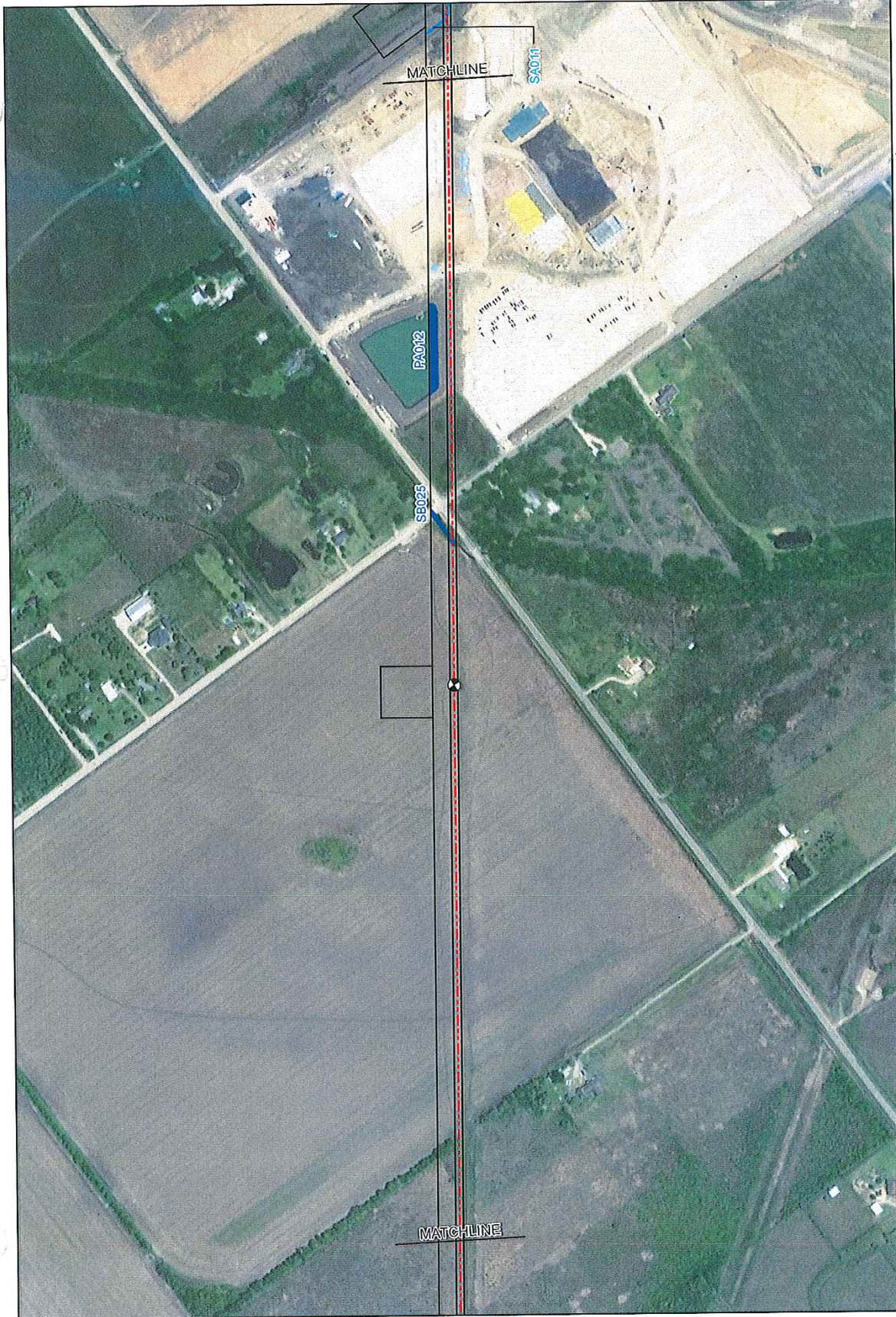
FIGURE 5
 SHEET 40 OF 88

SWCA
 ENVIRONMENTAL CONSULTANTS

1:8,000
 Created By: K. Shively
 Date: 12/20/18
 File Path: \\swca\Projects\2018\SWG-2018-00751\Map_Series\Map_Series_South_Center_Flags_GDD_Fish

Legend:

- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary
- HDD Entry/Exit
- Emergent Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 41 OF 68

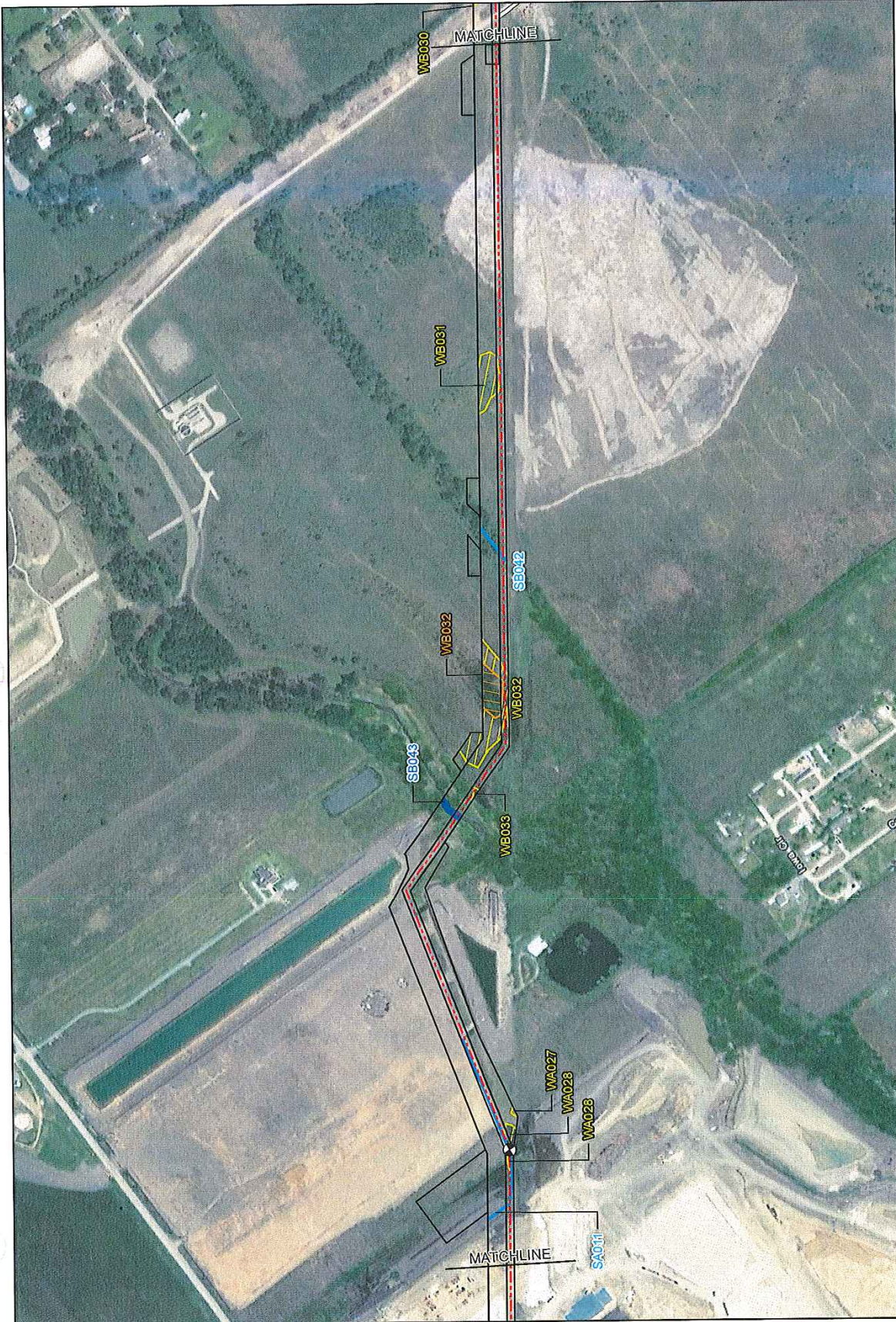
SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created by: K. Shields
 Date: 10/20/18
 User: K. Shields
 Project: Sea Port Oil Terminal Project

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 0 30 60 90 120 150 Feet



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

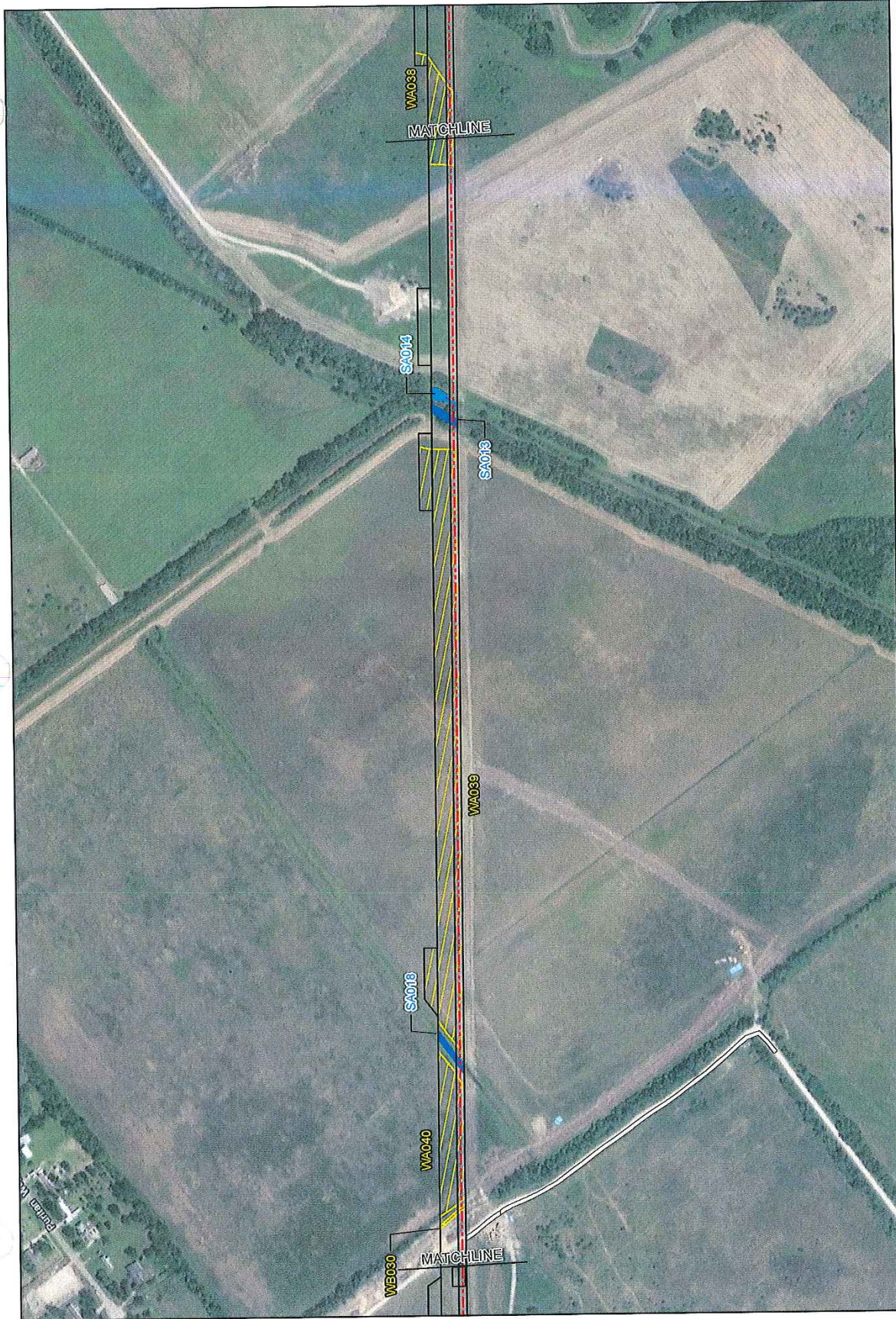
FIGURE 5
 SHEET 42 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Created By: K. Shields
 Date: 12/27/17
 Scale: 1" = 500'
 NAD 83 StatePlane Texas South Central FIPS 5002 Feet



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

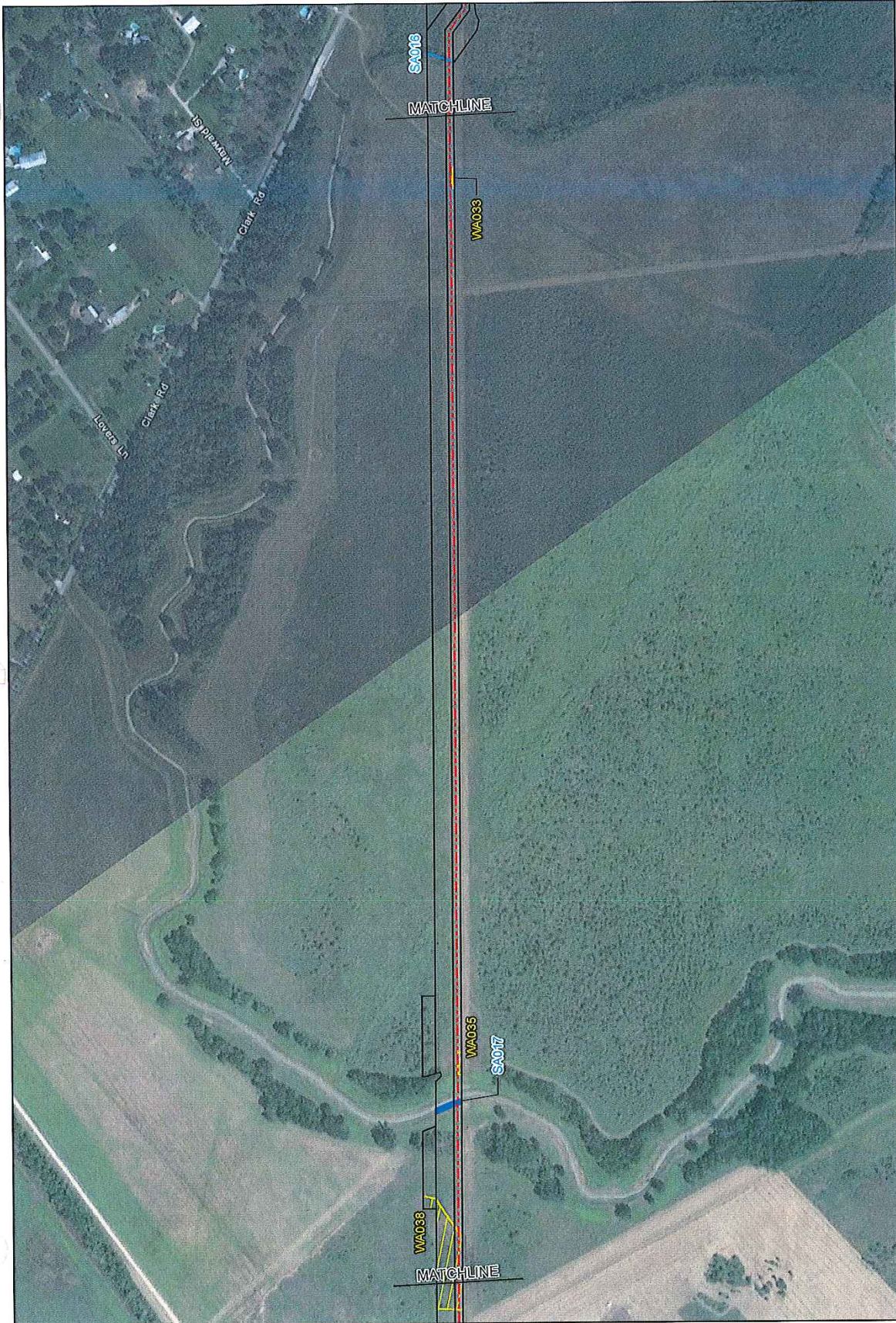
FIGURE 5
 SHEET 49 OF 88

SWCA
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1:6,000
 Created by: K. P. Smith
 Date: 12/22/18
 Title: Aquatic Resources Impact Study
 Project: Sea Port Oil Terminal Project
 Scale: 1:6,000

Legend:

- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Project Workspaces
- Access Road
- Bores Entry/Exit



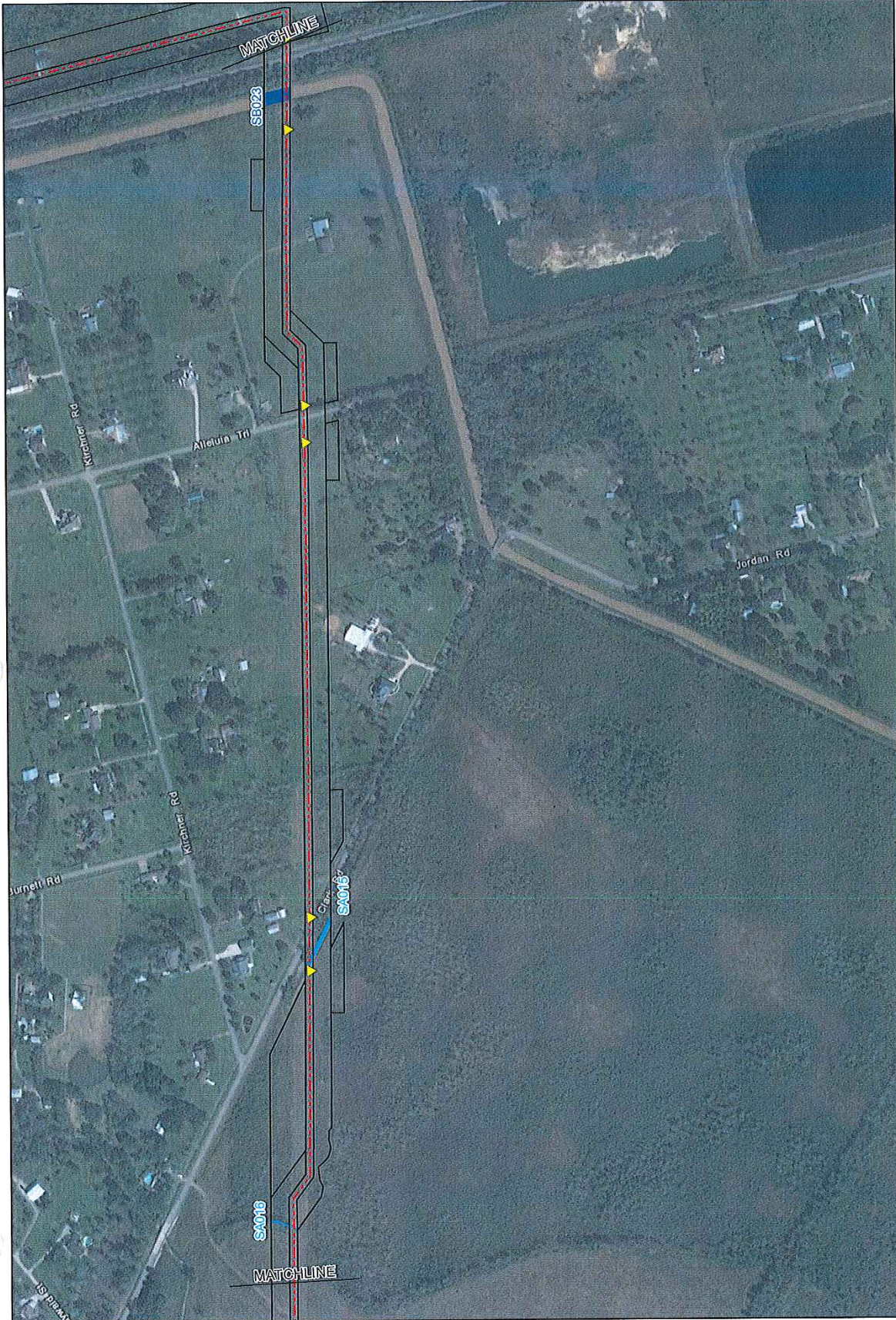
SWCA
ENVIRONMENTAL CONSULTANTS

SEA PORT OIL TERMINAL PROJECT
USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 44 OF 68

<ul style="list-style-type: none"> Proposed Onshore Centerline Proposed Offshore Centerline Proposed Oyster Creek Terminal Site Project Workspace Access Road Bore Entry/Exit 	<ul style="list-style-type: none"> H2O Entry/Exit Ephemeral Waterbody Intermittent Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> Palustrine Emergent Wetland Palustrine Scrub-shrub Wetland Palustrine Forested Wetland County Boundary
---	---	---

1:6,000
Created by: K. Shields
Date: 11/22/18
Scale: 1:6,000
North Arrow



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

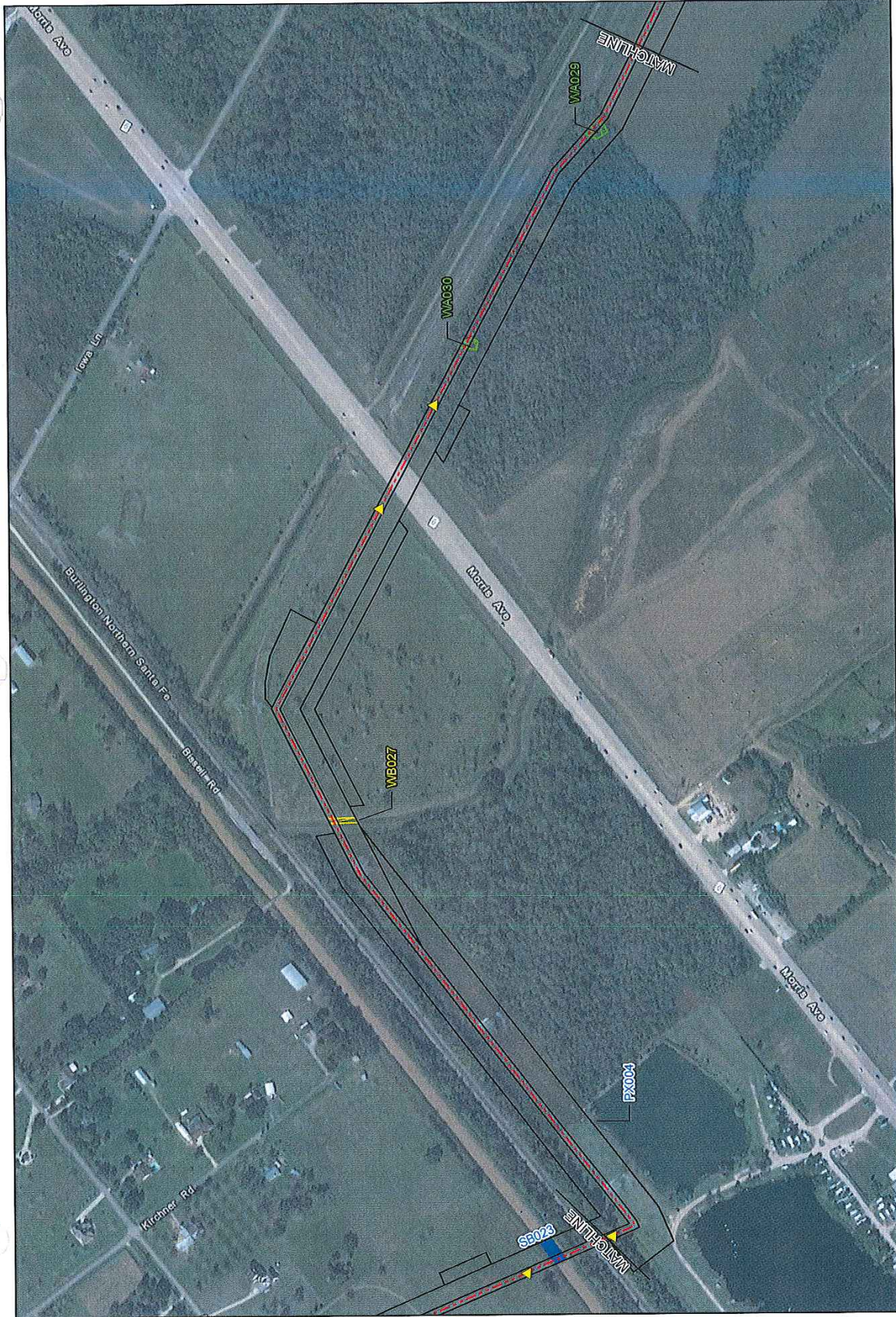
SWCA
 ENVIRONMENTAL CONSULTANTS

LEGEND

- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Created By: K. Shelle
 Date: 12/22/2017
 HDD 100% Sand/Shell News Source Consent/PPS/CCP Fee

FIGURE 5
 SHEET 45 OF 68



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 46 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created by: K. Elliott
 Date: 11/22/2018
 Project: Sea Port Oil Terminal
 Scale: 1" = 600 Feet

Legend:

- Proposed Onshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

1:6,000
Created By: A. Shields
 Date: 10/20/2018
 User: ashields
Project: Sea Port Oil Terminal Project
 Scale: 1:6,000
 Units: Feet

SWCA
 ENVIRONMENTAL CONSULTANTS

FIGURE 5
 SHEET 47 OF 88

Legend:

- - - Proposed Onshore Centerline
- - - Proposed Offshore Centerline
- - - Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 6
 SHEET 47 OF 88

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend

- Proposed Onshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Estuarine Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

1:6,000

Coastal Bay, K. Shells
 Project Number: 01837
 SWCA Field Station: Texas South County PRRS-0001 Feet



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 48 OF 68

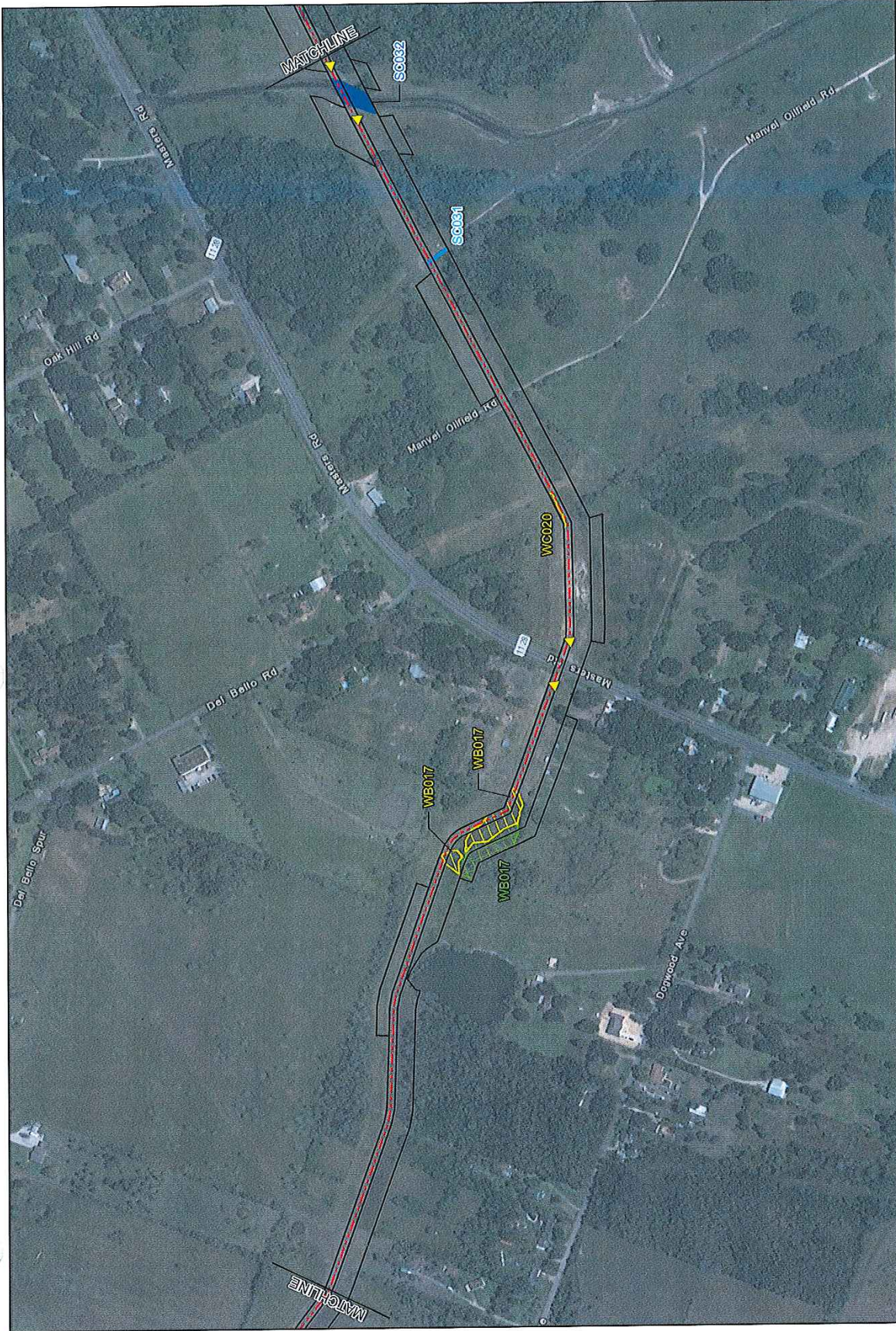
SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspaces
- Access Road
- ▲ Bore Entry/Exit
- HDD Entry/Exit
- Epifaunal Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000

Created by: K. Shible
 Project Number: 01837
 Date: 11/15/18
 SWG 2018 SeaPort Oil Terminal Project



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

1:6,000

Created By: K. Shields
 Project Number: 01827
 Date: 01/20/2018
 HDD 1000 Surface Water South Coast (FWF) Local Field

Proposed Onshore Centerline
 Proposed Offshore Centerline
 Proposed Outer Creek Terminal Site
 Project Workspaces
 Access Road
 Bore Entry/Exit

HDD Entry/Exit
 Ephemeral Waterbody
 Intermittent Waterbody
 Perennial Waterbody
 Estuarine Emergent Wetland
 Estuarine Scrub-shrub Wetland

Palustrine Emergent Wetland
 Palustrine Scrub-shrub Wetland
 Palustrine Forested Wetland
 County Boundary

Palustrine Emergent Wetland
 Palustrine Scrub-shrub Wetland
 Palustrine Forested Wetland
 County Boundary

FIGURE 5
 SHEET 48 OF 68



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 50 OF 88

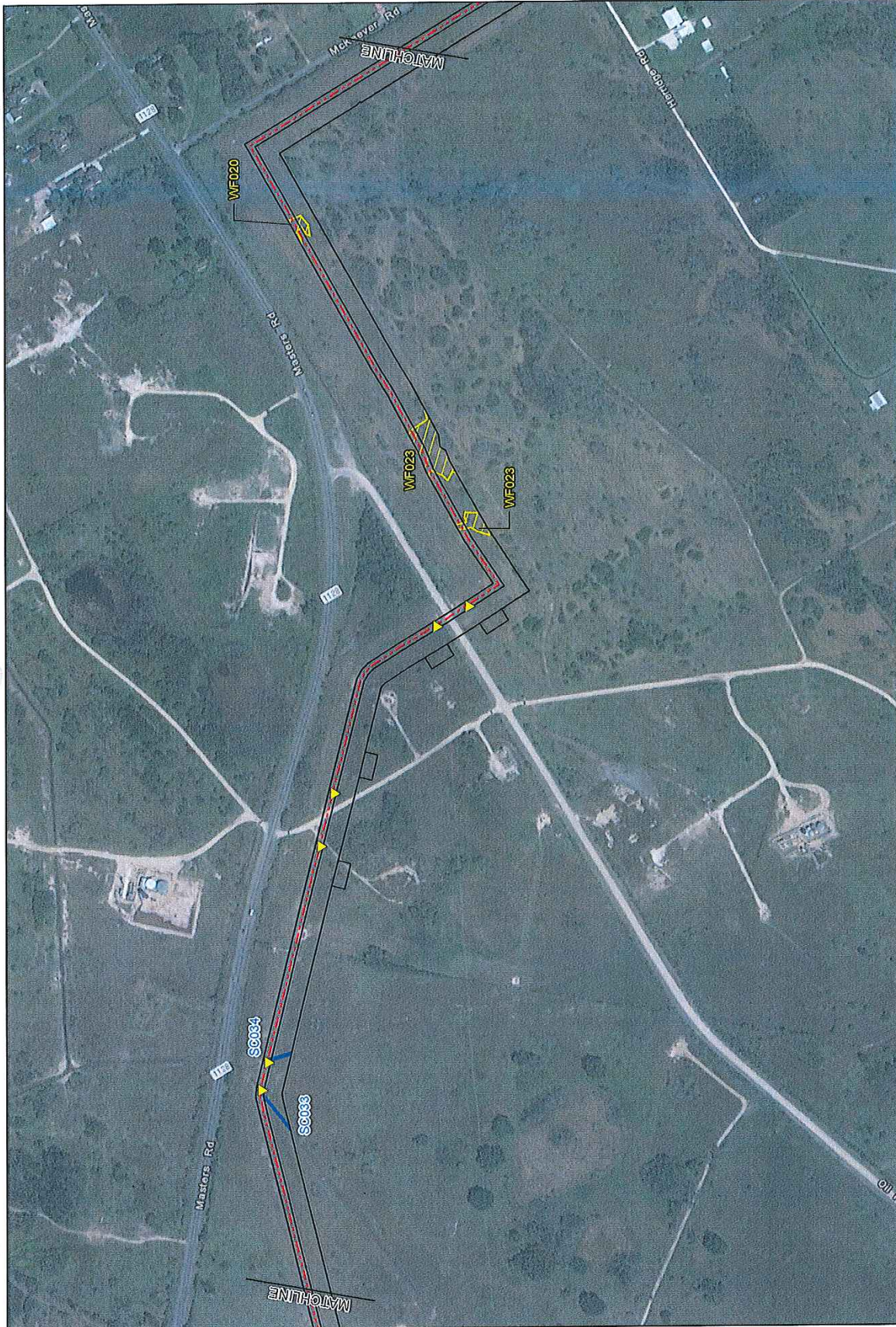
SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000

Created by: K. Chubb
 Project Number: 01027
 NAD 83 StatePlane Texas South Central FIPS 4304 Feet
 0 20 40 60 80 100 120 140 160 180 200 Feet

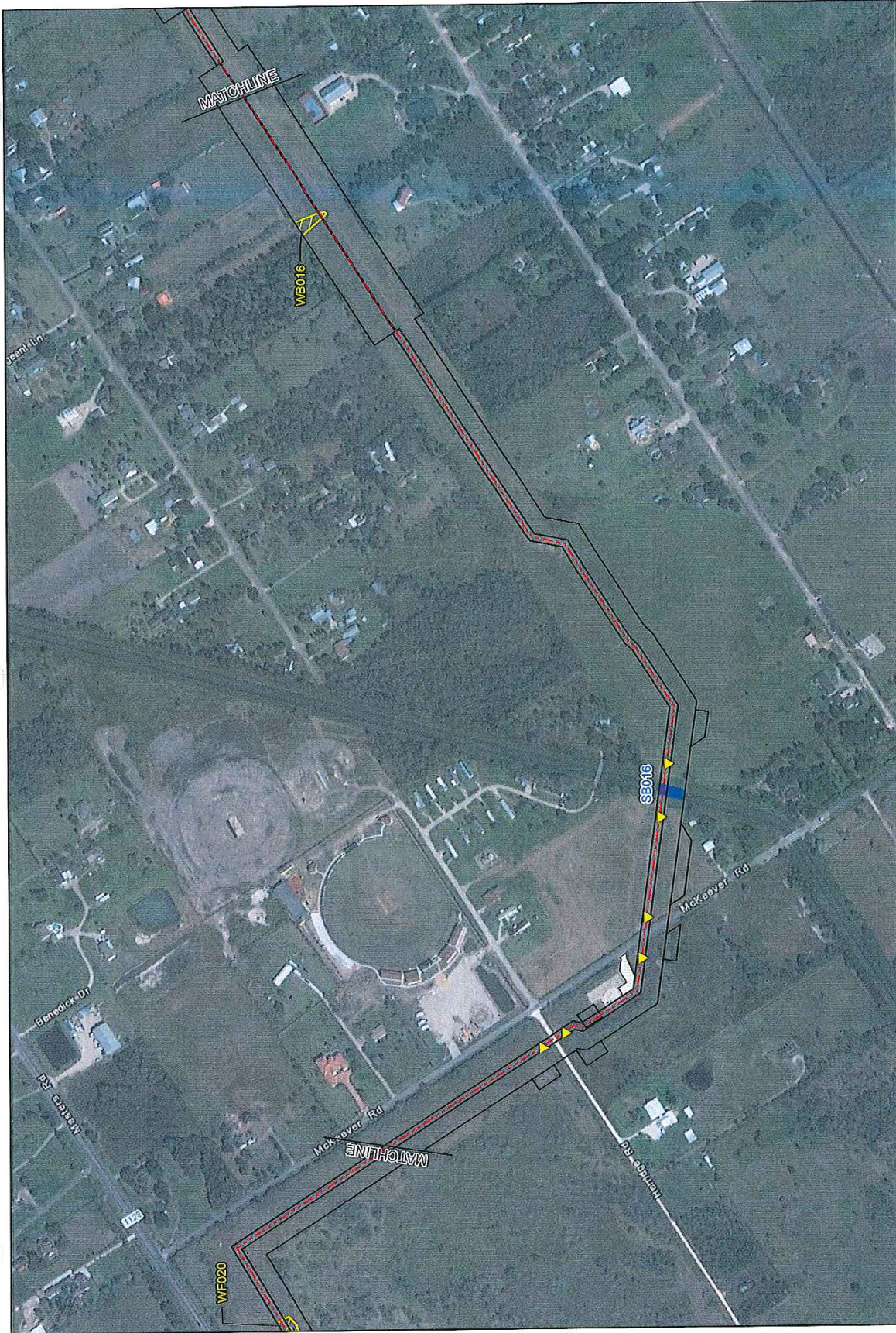
Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bars Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrubs Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrubs Wetland
- Palustrine Forested Wetland
- County Boundary

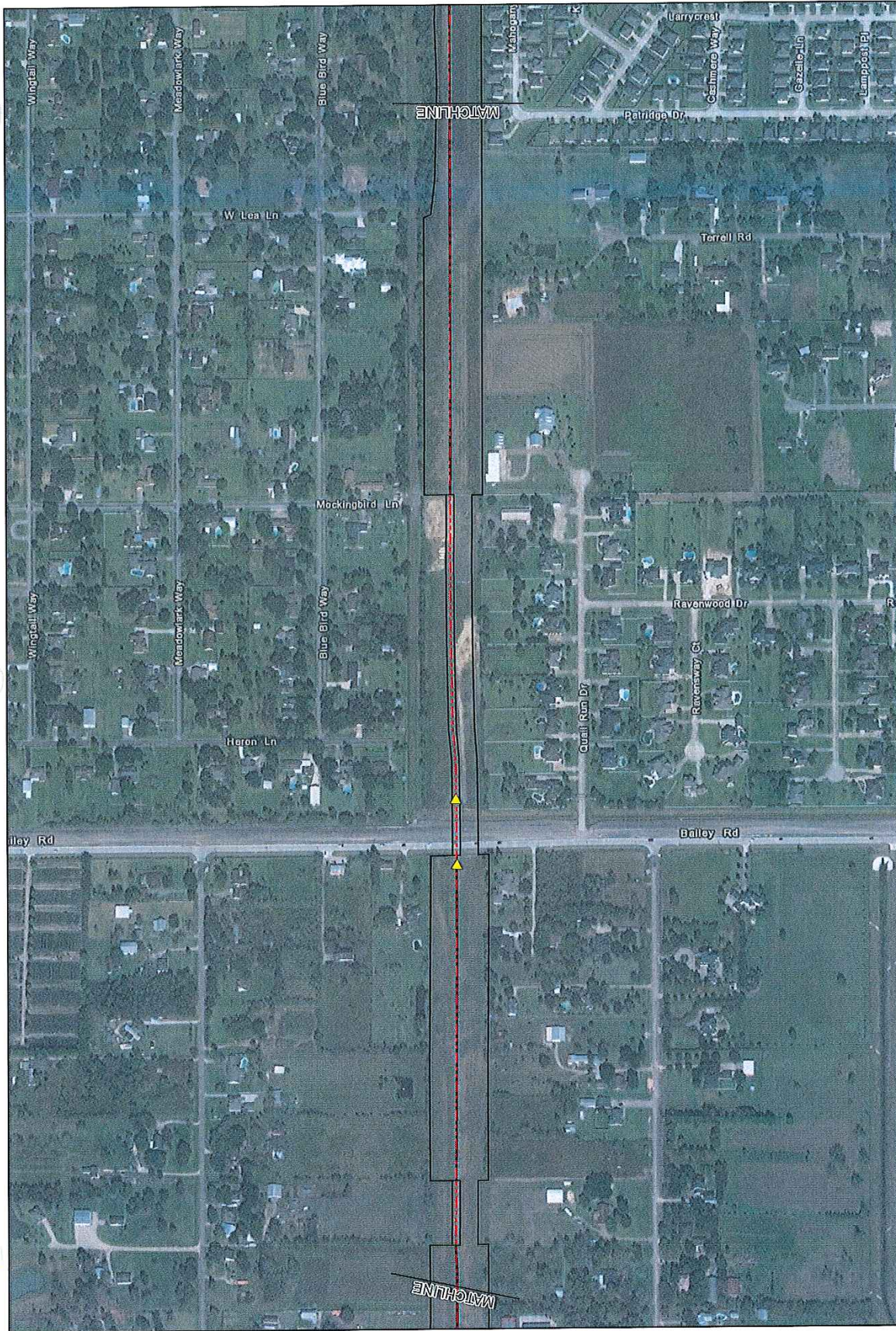


	<p>SEA PORT OIL TERMINAL PROJECT USACE NO. SWG-2018-00751 AQUATIC RESOURCES IMPACTS - ONSHORE COMPONENTS DETAIL MAP BRAZORIA COUNTY, TEXAS</p>	<p>1:6,000</p> <p>Checked by: K. Shanks Project Number: 11807 Date: 08/14/2018 SWCA Environmental Consultants</p>
	<p>Proposed Onshore Centerline Proposed Oyster Creek Terminal Site Project Workspace Access Road Bore Entry/Exit</p> <p>HDD Entry/Exit Epifaunal Waterbody Intermittent Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland</p> <p>Palustrine Emergent Wetland Palustrine Scrub-shrub Wetland Palustrine Forested Wetland County Boundary</p>	

FIGURE 5
 SHEET 51 OF 88



		<p>1:6,000</p> <p>Charles B. K. Shadle Project Number: 51827 NAD 83 UTM Zone 16N South Central EPSG: 3147 Feet</p>
<ul style="list-style-type: none"> Proposed Onshore Centerline Proposed Onshore Centerline Proposed Oyster Creek Terminal Site Project Workspace Access Road Boys Entry/Exit 	<ul style="list-style-type: none"> HDD Entry/Exit Epimerial Waterbody Intermittent Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> Pulustrine Emergent Wetland Pulustrine Scrub-shrub Wetland Pulustrine Forested Wetland County Boundary
<p>SEA PORT OIL TERMINAL PROJECT USACE NO. SWG-2018-00751 AQUATIC RESOURCES IMPACTS - ONSHORE COMPONENTS DETAIL MAP BRAZORIA COUNTY, TEXAS</p>		
		<p>FIGURE 5 SHEET 52 OF 88</p>



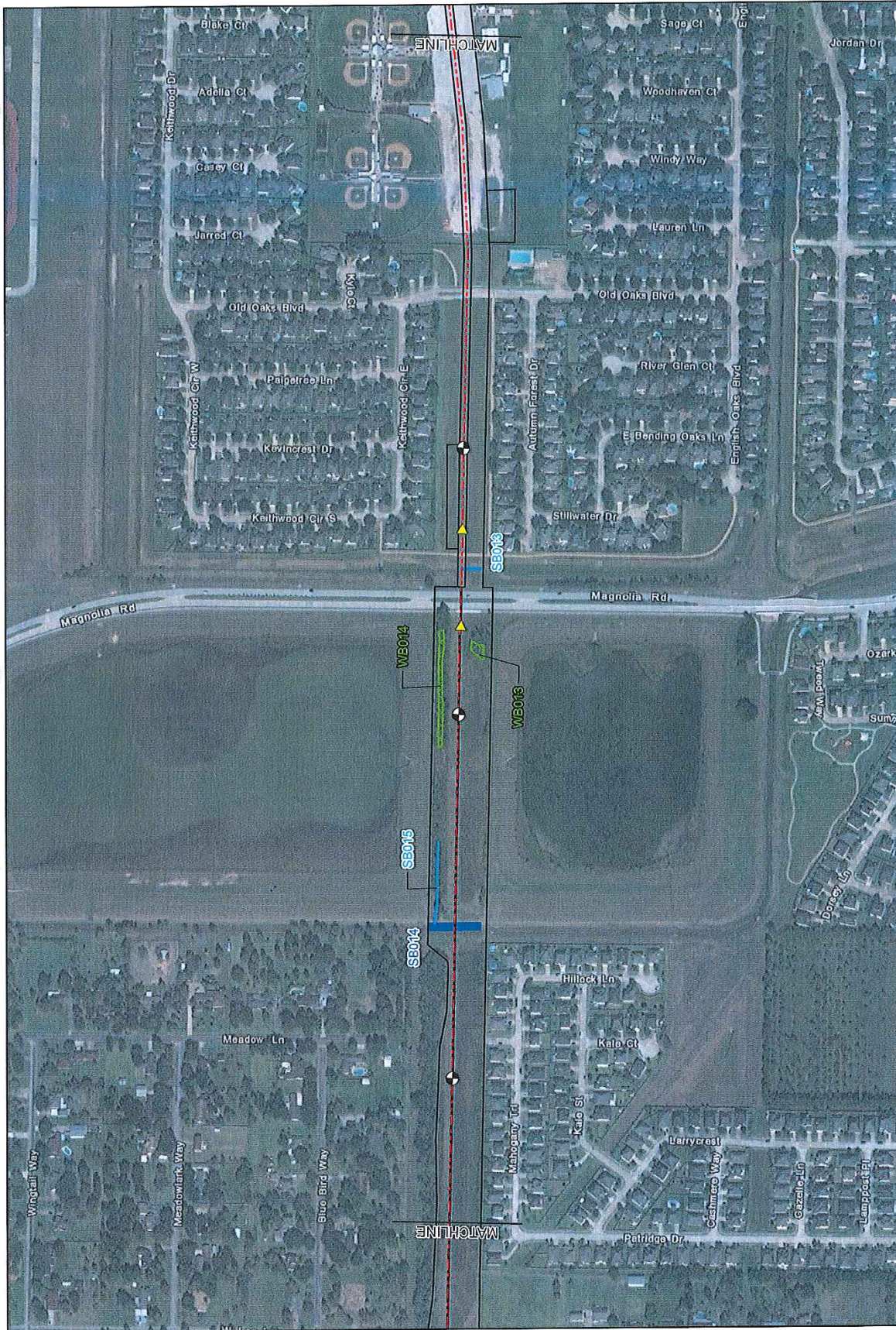
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000

Created by: K. Shanks
 Project Number: 20180751
 Date: 10/23/2018
 File: 1023180751-Terminal-ONSHP-IMPACT-FEIS

Palustrine Emergent Wetland
 Palustrine Scrub-shrub Wetland
 Palustrine Forested Wetland
 County Boundary
 HDD Entry/Exit
 Ephemeral Waterbody
 Intermittent Waterbody
 Perennial Waterbody
 Estuarine Emergent Wetland
 Estuarine Scrub-shrub Wetland
 Proposed Onshore Centerline
 Proposed Onshore Centerline
 Proposed Oyster Creek Terminal Site
 Project Workspace
 Access Road
 Bore Entry/Exit



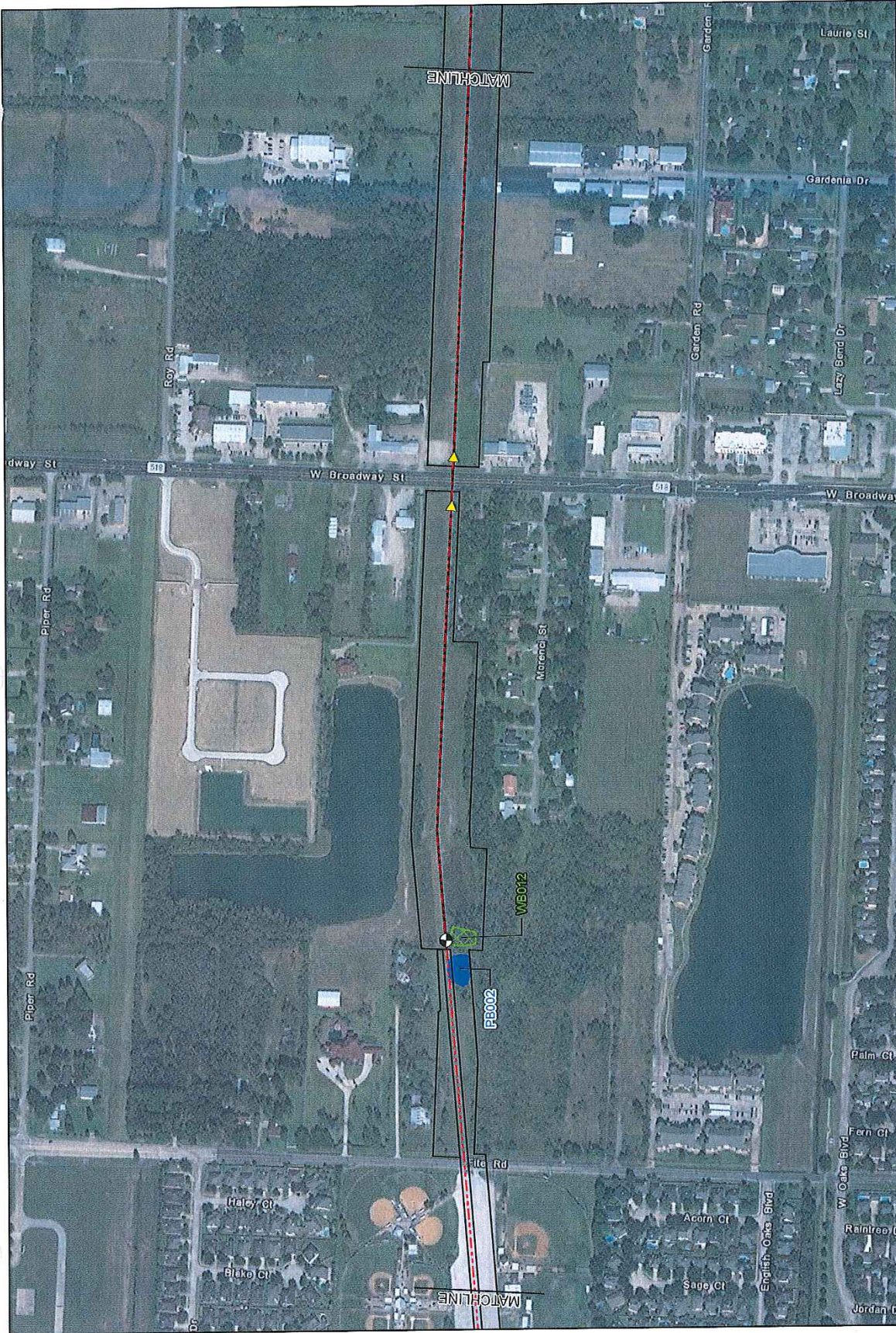
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
 SHEET 54 OF 68

1:6,000

Checked By: M. Shields
 Project Engineer: R. Dyer
 NAD 83 StatePlane Texas South Central FIPS 4201 Feet

	Proposed Onshore Centerline		HDD Entry/Exit
	Proposed Onshore Creek Terminal Site		Ephemeral Waterbody
	Proposed Access Road		Intermittent Waterbody
	Access Road		Perennial Waterbody
	Bore Entry/Exit		Estuarine Emergent Wetland
	Palustrine Emergent Wetland		Palustrine Scrub-shrub Wetland
	Palustrine Forested Wetland		County Boundary



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

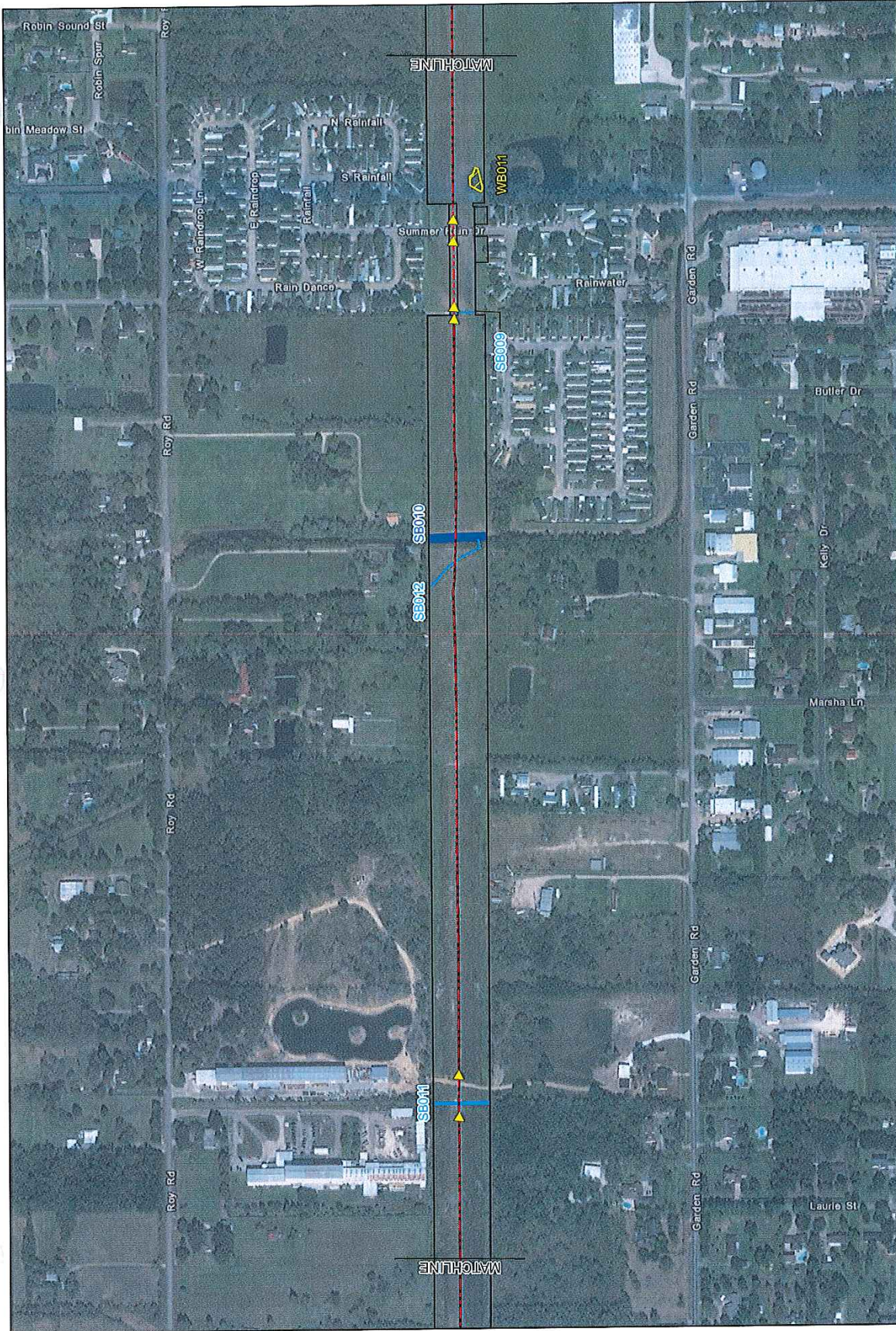
FIGURE 5
 SHEET 55 OF 68

Proposed Offshore Centerline
Proposed Oyster Creek Terminal Site
Project Workspace
Access Road
Bore Entry/Exit

HDD Entry/Exit
Emergent Wetland
Intermittent Wetland
Perennial Wetland
Estuarine Emergent Wetland
Estuarine Scrub-shrub Wetland

Palustrine Emergent Wetland
Palustrine Scrub-shrub Wetland
Palustrine Forested Wetland
County Boundary

1:6,000
 Created By: K. Shields
 Project No: SWG-2018-00751
 Date: 10/26/2018
 Scale: 1" = 600 Feet

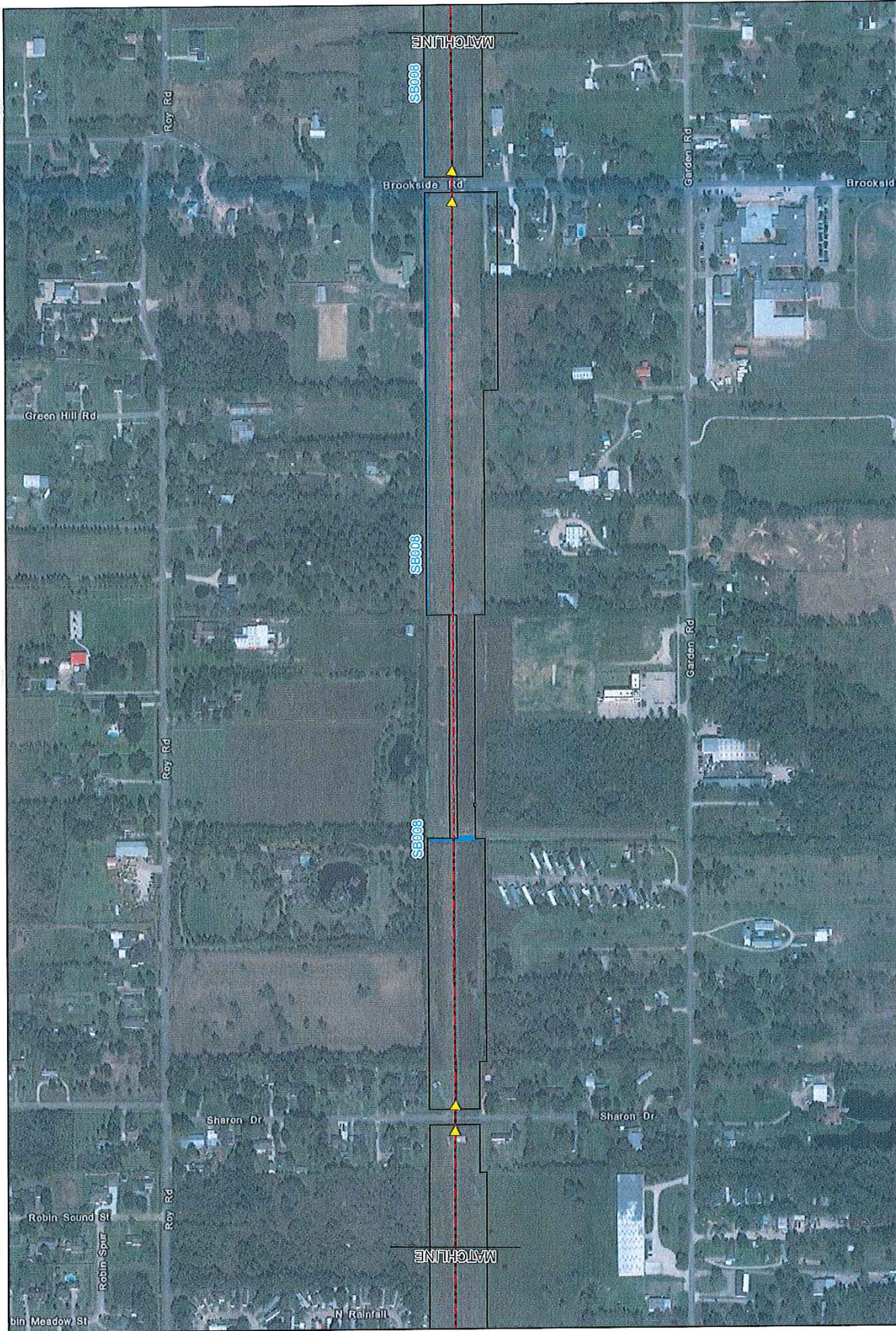


SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS
 SHEET 55 OF 68

1:6,000
 Created By: K. Swade
 Project Number: 01807
 Date: 01/11/2018
 D:\01807_Brazoria\New South County EIR\01807_Fig

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bare Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- Palustrine Emergent Wetland
- County Boundary



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA COUNTY, TEXAS

FIGURE 5
SHEET 57 OF 88

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- Palustrine County Boundary

Scale: 1:6,000

Graphic scale bar showing 0 to 100 feet and 0 to 30 meters.

Inset map of Texas showing the project location in the southeast corner.

Project Information:
 Owner: B.C. Shible
 Project Number: 2018-00751
 NAD 83 Easting/Tween South Central (FIPS) UTM Zone 16N



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA & HARRIS COUNTIES, TEXAS
 SHEET 66 OF 88

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Boat Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Project Number: 5187
 Date: 10/20/18
 Scale: 1" = 500 Feet

Map Information:
 Harris County
 Brazoria County

Figure 5



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA & HARRIS COUNTIES, TEXAS
 SHEET 59 OF 66

1:6,000
Created By: J. Shields
 Project Number: 21-027
 NAD 83 StatePlane Texas South Central FIPS 4303 Feet

<ul style="list-style-type: none"> --- Proposed Onshore Centerline --- Proposed Offshore Centerline --- Proposed Oyster Creek Terminal Site --- Project Workspace --- Access Road --- Bore Entry/Exit 	<ul style="list-style-type: none"> ■ HDD Entry/Exit ■ Ephemeral Waterbody ■ Intermittent Waterbody ■ Perennial Waterbody ■ Estuarine Emergent Wetland ■ Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> ■ Palustrine Emergent Wetland ■ Palustrine Scrub-shrub Wetland ■ Palustrine Forested Wetland ■ County Boundary
---	---	---



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA & HARRIS COUNTIES, TEXAS
 SHEET 80 OF 88

1:6,000

Checked by: J. Shibley
 Project Number: 21807
 Date: 08/20/2018
 NAD 83 StatePlane Texas South Central FIPS 4201 Feet

	Proposed Onshore Centerline		HDD Entry/Exit		Pollutively Emergent Wetland
	Proposed Onshore Creek Terminal Site		Estuarine Emergent Wetland		Pollutively Emergent Wetland
	Proposed Oyster Creek Terminal Site		Estuarine Scrub-shrub Wetland		Pollutively Forested Wetland
	Project Workspace		Estuarine Emergent Wetland		County Boundary
	Access Road		Estuarine Scrub-shrub Wetland		
	Bore Entry/Exit				



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 BRAZORIA & HARRIS COUNTIES, TEXAS
 SHEET 61 OF 66

FIGURE 5

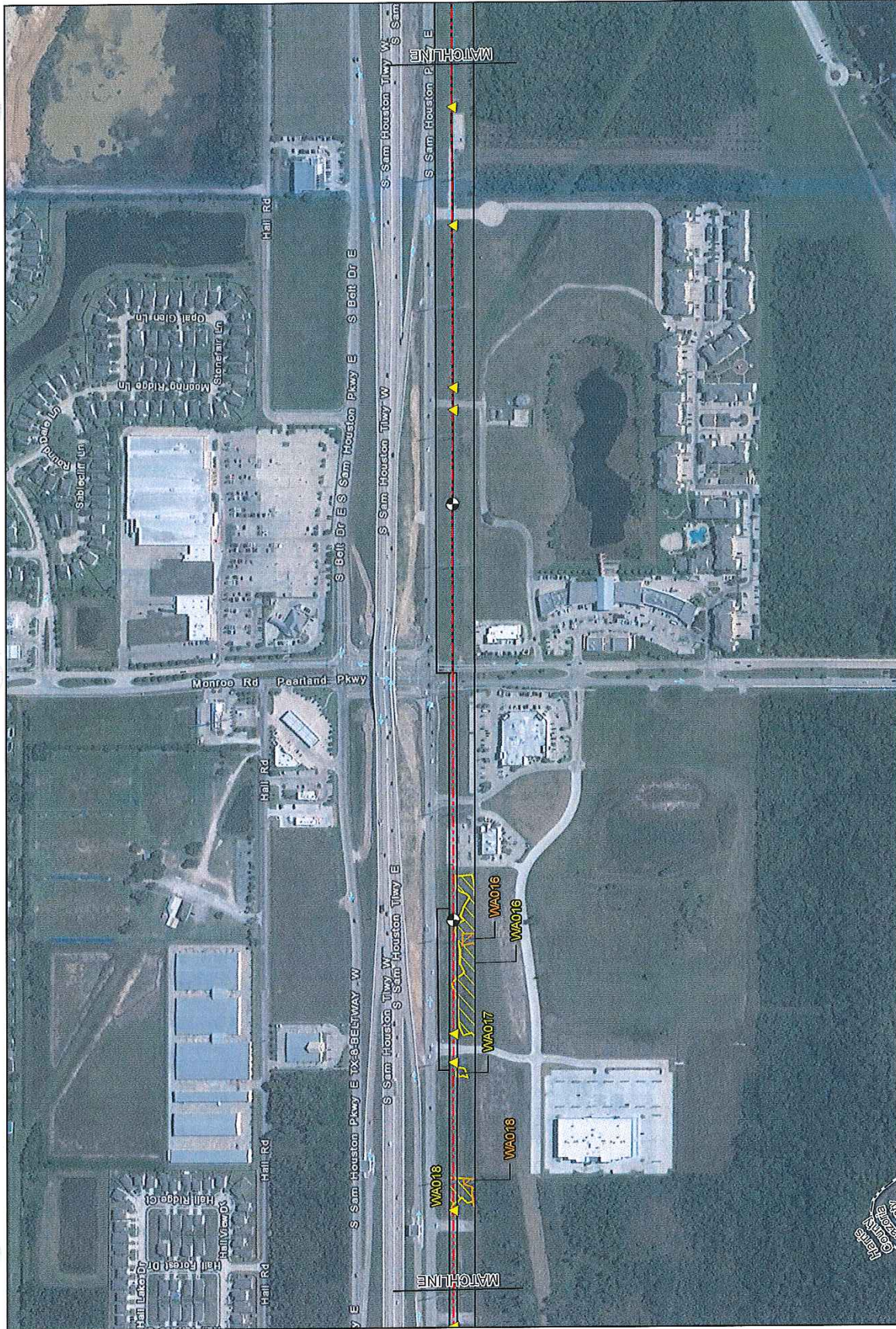
SWCA
 ENVIRONMENTAL CONSULTANTS

Legend

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Emergent Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

1:6,000

Checked By: K. Shields
 Project Number: 01207
 NAD 83 StatePlane Texas South Central FIPS 4202 Feet

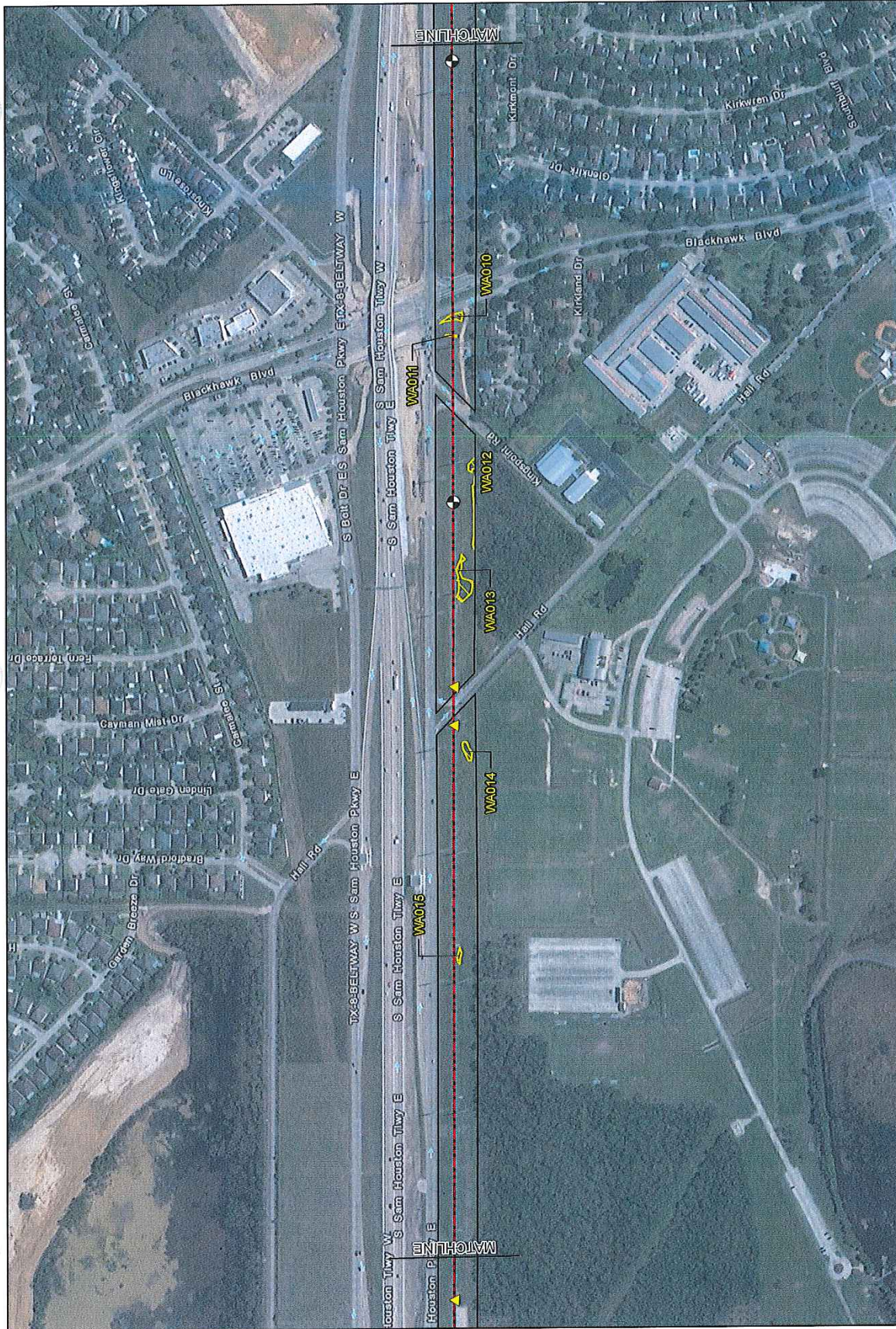


SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS

FIGURE 5
 SHEET 62 OF 68

1:6,000
 Created by: J. Chubb
 Project Number: 21027
 NAD 83 StatePlane Texas South Central FIPS 4202 Feet
 0 100 200 300 400 500 Feet

<ul style="list-style-type: none"> Proposed Onshore Centerline Proposed Offshore Centerline Proposed Oyster Creek Terminal Site Project Workspace Access Road Bore Entry/Exit 	<ul style="list-style-type: none"> HDD Entry/Exit Epifaunal Waterbody Intermittent Waterbody Perennial Waterbody Estuarine Emergent Wetland Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> Palustrine Emergent Wetland Palustrine Scrub-shrub Wetland Palustrine Forested Wetland County Boundary
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SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS

FIGURE 5
 SHEET 88 OF 88

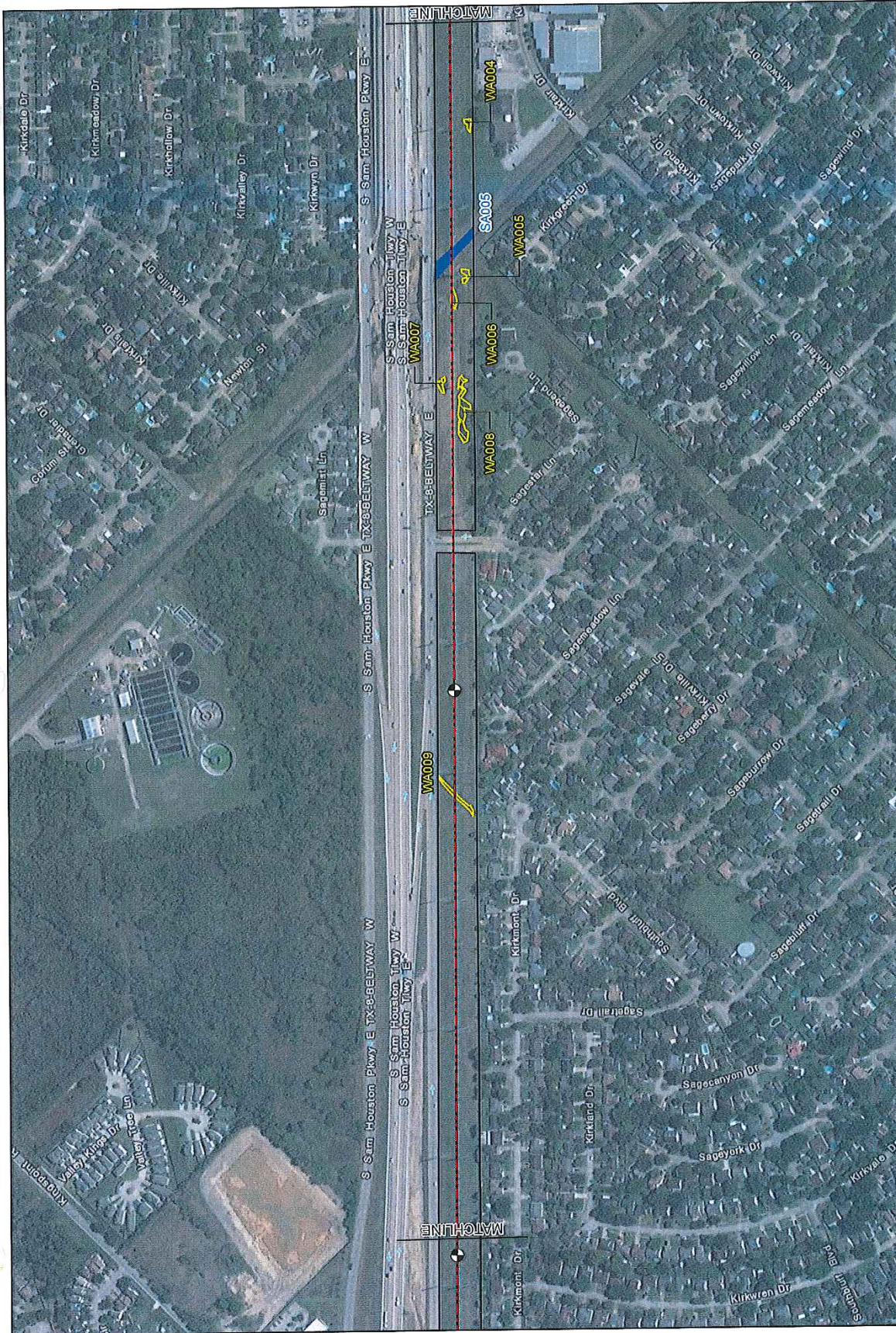
SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- x-x- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Inherently Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000

Checked By: S. Shanks
 Project Number: 01-007
 NAD 83 StatePlane Texas South Central FIPS 4301 Feet



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS

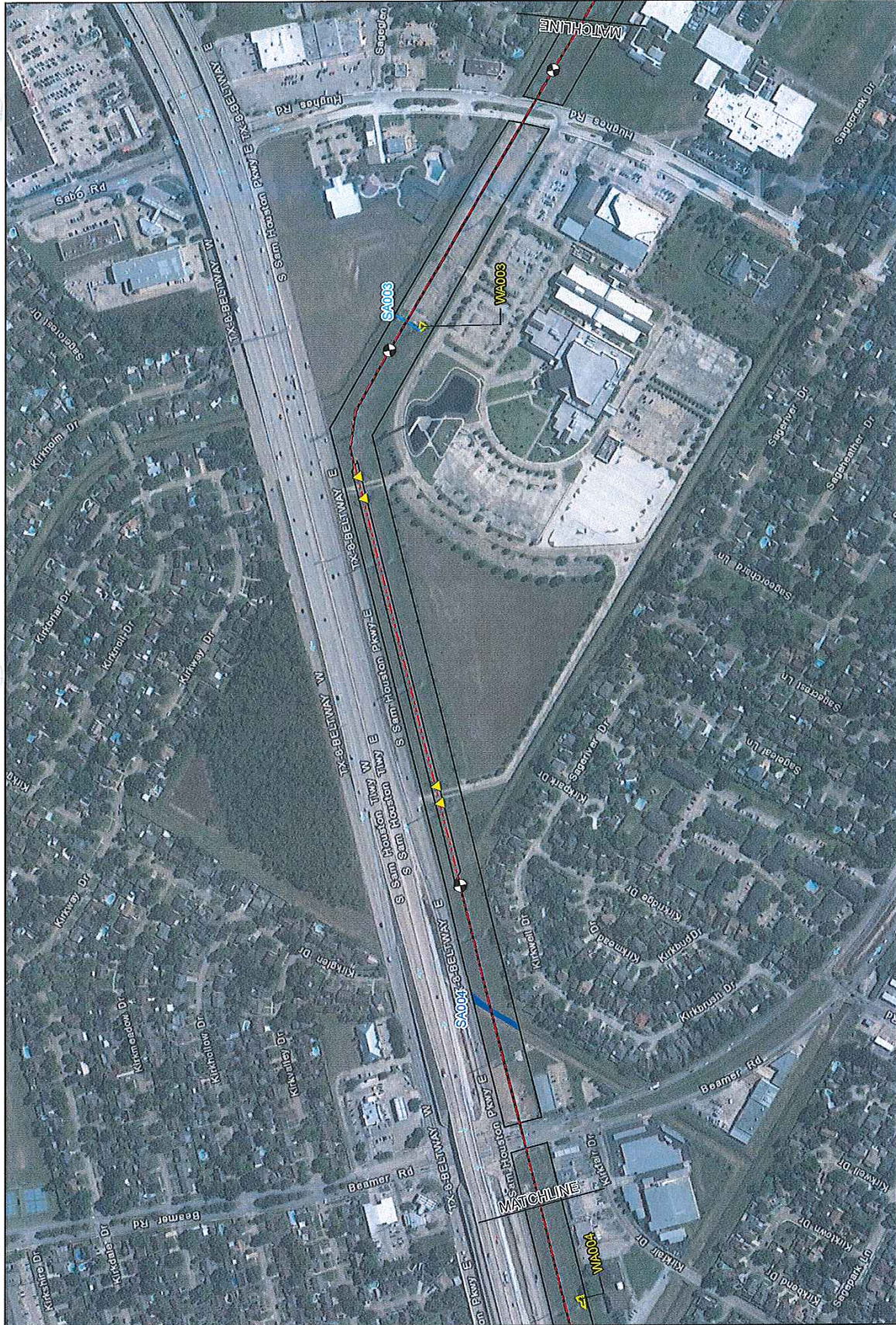
SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- ▲ Bore Entry/Exit
- ▲ HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Created By: SWCA
 Prepared For: USACE
 MD: 1000 State Street, Texas South Central Plaza, Suite 1000
 Houston, Texas 77002

Map Information:
 SHEET 64 OF 68 FIGURE 5



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS

FIGURE 5
 SHEET 65 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000
 Created By: K. Shields
 Project Number: 21037
 MFC 1003 Surface Water Control File.dwg
 0 100 200 300 400 500 600 700 800 900 1000 Feet

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Epifaunal Waterbody
- Infaunal Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-sinub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-sinub Wetland
- Palustrine Forested Wetland
- County Boundary



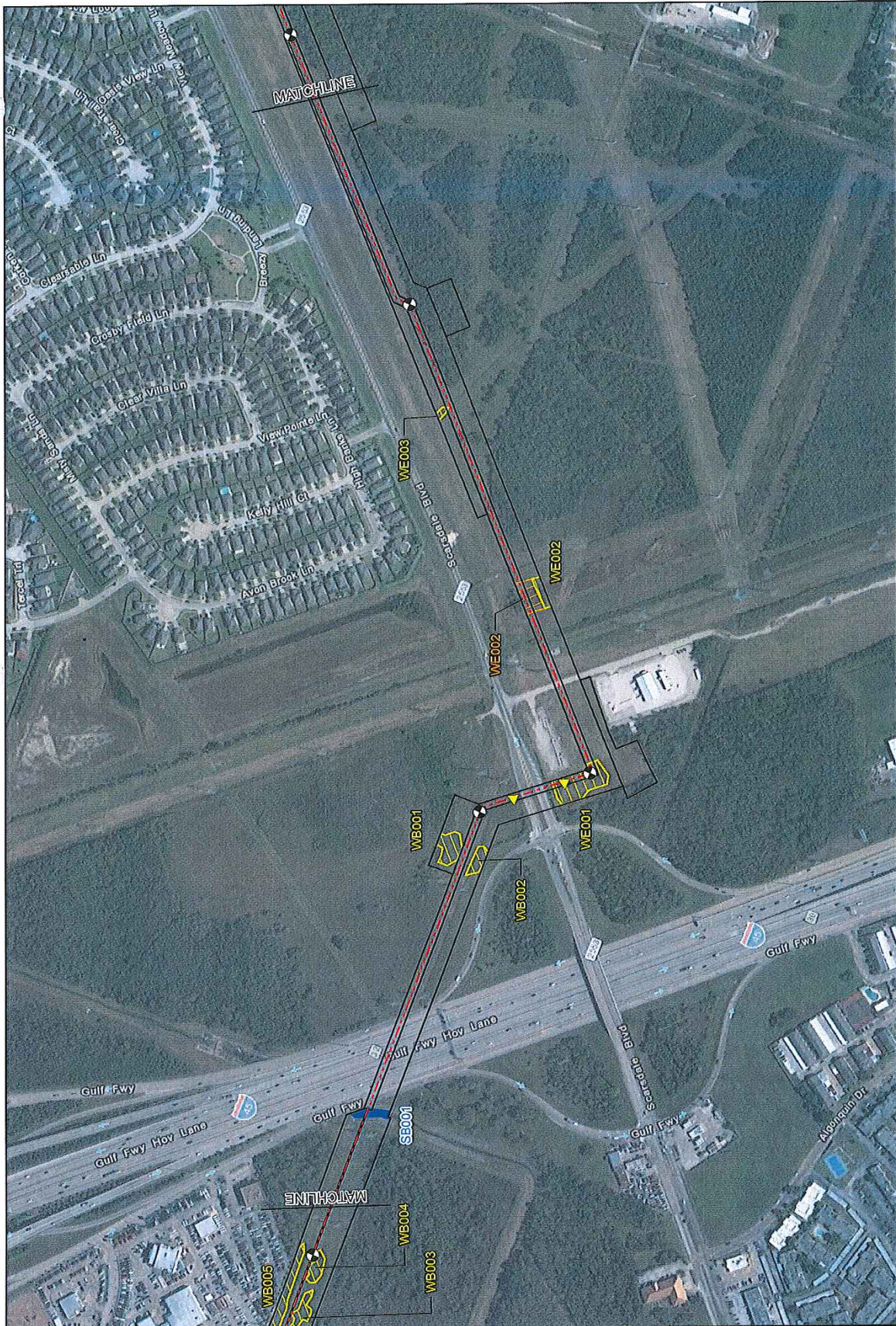
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
AQUATIC RESOURCES IMPACTS -
ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS
 SHEET 66 OF 68

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Epifaunal Waterbody
- Infaunal Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-shrub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-shrub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Project Number: 21807
 NAD 83 StatePlane Texas South Central FIPS 5001 Feet
 0 100 200 300 400 500 600 700 800 900 1000 Feet

FIGURE 5



SEA PORT OIL TERMINAL PROJECT
 USACE NC. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS

FIGURE 5
 SHEET 67 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

Legend:

- Proposed Onshore Centerline
- Proposed Offshore Centerline
- Proposed Oyster Creek Terminal Site
- Project Workspace
- Access Road
- Bore Entry/Exit
- HDD Entry/Exit
- Ephemeral Waterbody
- Intermittent Waterbody
- Perennial Waterbody
- Estuarine Emergent Wetland
- Estuarine Scrub-Hub Wetland
- Palustrine Emergent Wetland
- Palustrine Scrub-Hub Wetland
- Palustrine Forested Wetland
- County Boundary

Scale: 1:6,000
 Created by: J. Shields
 Date: 10/10/2018
 Project Number: 0187
 NAD 83 StatePlane Texas South Central (FIPS 4202) Feet



SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 ONSHORE COMPONENTS DETAIL MAP
 HARRIS COUNTY, TEXAS

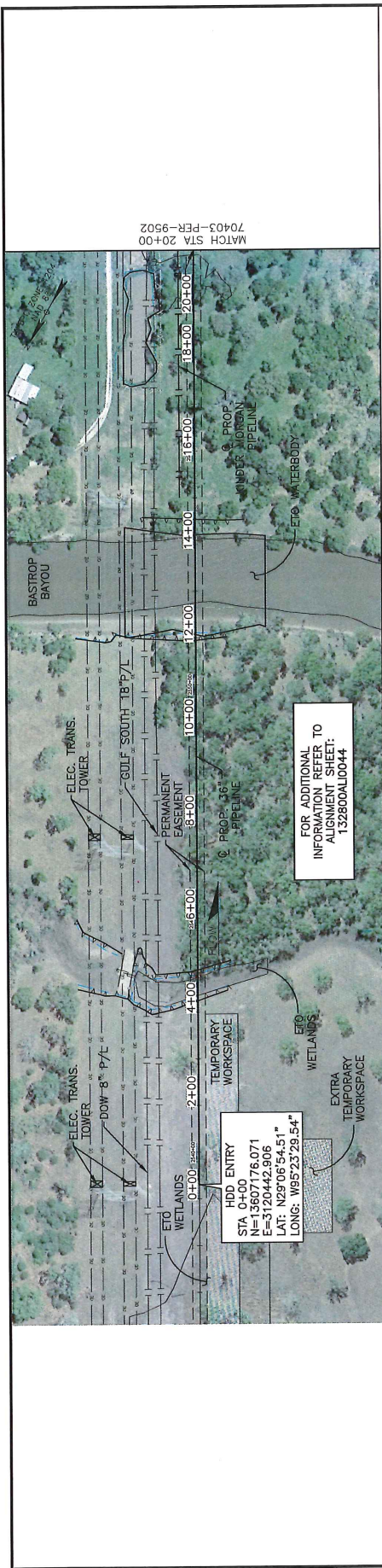
FIGURE 5
 SHEET 68 OF 68

SWCA
 ENVIRONMENTAL CONSULTANTS

1:6,000

Created By: S. Shields
 Project Number: 21027
 Date: 08/20/2018
 NAD 83 StatePlane Texas South Central FIPS 4202 Feet

<ul style="list-style-type: none"> — Proposed Onshore Centerline — Proposed Offshore Centerline — Proposed Oyster Creek Terminal Site — Project Workspace — Access Road — Bore Entry/Exit 	<ul style="list-style-type: none"> — HDD Entry/Exit — Ephemeral Waterbody — Intermittent Waterbody — Perennial Waterbody — Estuarine Emergent Wetland — Estuarine Scrub-shrub Wetland 	<ul style="list-style-type: none"> — Palustrine Emergent Wetland — Palustrine Scrub-shrub Wetland — Palustrine Forested Wetland — County Boundary
---	---	---



MATCH STA 20+00
70403-PER-9502

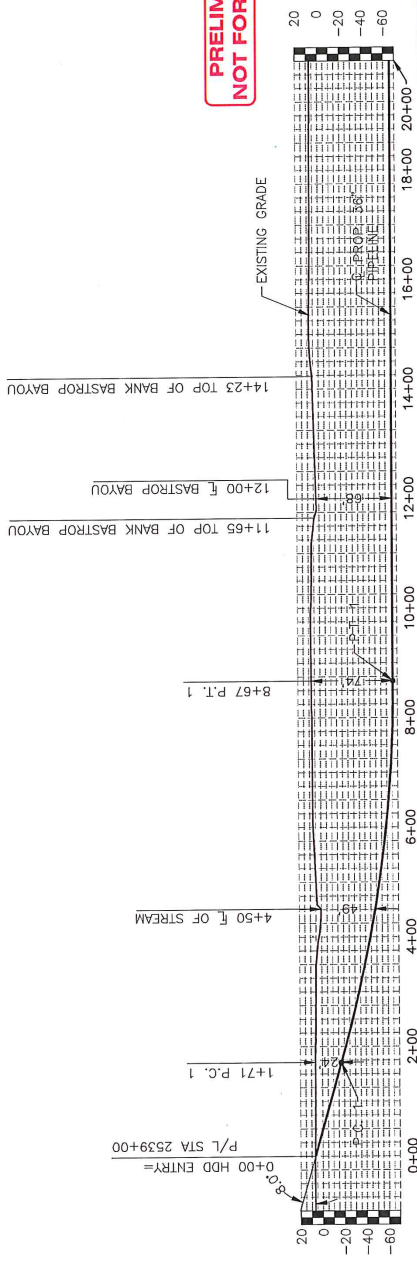
FOR ADDITIONAL INFORMATION REFER TO ALIGNMENT SHEET: 132800AL0044

HDD ENTRY
STA 0+00
N=1560776.071
E=1142044.906
LAT: N28°06'54.51"
LONG: W95°23'29.54"

EXISTING FEATURES AND ELEVATIONS SHOWN ARE BASED ON SURVEY DATA FURNISHED BY MPH, INC. DEC-2018

4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
 5. DESIGN FACTOR: 0.60
 6. DESIGN PRESSURE: 1,480 PSIG
 7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG
 8. MIN 3-JOINT AVG (COMBINED BENDING): 3.60'

- SPECIFICATIONS:
 1. PRODUCT: Crude Oil
 2. CARRIER PIPE: 36,000" O.D., 0.635" W.T. (MIN.), API 5L X70, PS12 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
 3. SEAM JOINT FACTOR: 1.0



PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HORIZONTAL SCALE=FEET
 0 100 200 400
 VERTICAL SCALE=FEET
 0 50 100 200
 [ON 8.5"x11" SHEET HOR. 1"=±100' VER. 1"=±10']

LEGEND

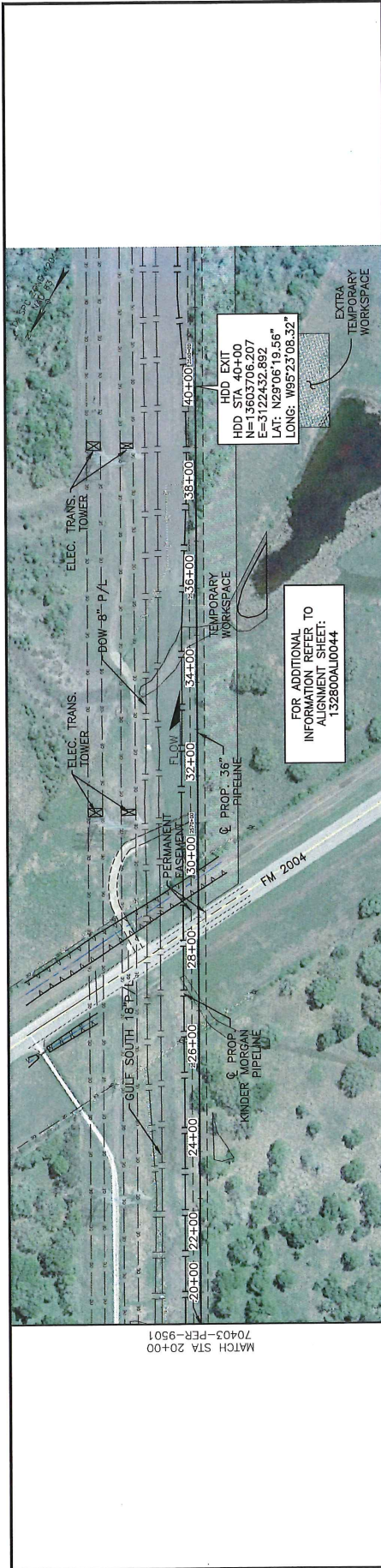
PROPERTY LINE	---
EXISTING ROAD	---
TOP OF BANK	---
EXISTING FENCE	---
UNDERGROUND TELECOM	---
WATERLINE	---
ETD WETLANDS	---
ADJAC. TEMPORARY WORKSPACE	---
ADJAC. TEMPORARY WORKSPACE	---
ETD WETLANDS	---
ETD WETLANDS	---

RE-ISSUED FOR PERMIT
12-DEC-2018

NORTHSTAR AN ARCADIA SERVICES COMPANY		ECHO TO OYSTER CREEK P/L HDD EXHIBIT BASTROP BAYOU BRAZORIA COUNTY, TEXAS	
NO.	REV.	DATE	BY
1	B	01-NOV-2018	SEA
2	B	01-NOV-2018	SEA
3	B	01-NOV-2018	SEA
4	B	12-DEC-2018	SEA

DATE PREPARED	12-DEC-2018	APPROVED BY	SEA
DATE CHECKED	01-NOV-2018	APPROVED BY	SEA
DATE ISSUED FOR REVIEW	01-NOV-2018	APPROVED BY	SEA
DATE ISSUED FOR CONSTRUCTION	12-DEC-2018	APPROVED BY	SEA

SPOT
Sea Port Oil Terminal
70403-PER-1801



MATCH STA 20+00
70403-PER-9501

FOR ADDITIONAL
INFORMATION REFER TO
ALIGNMENT SHEET:
132800AL0044

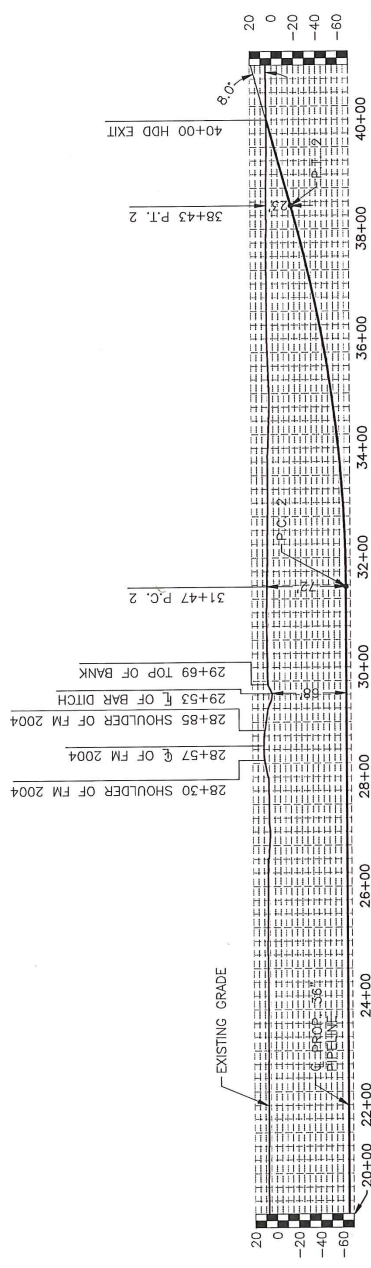
HDD EXIT
HDD STA 40+00
N=13603706.207
E=3122432.892
LAT: N29°06'19.56"
LONG: W95°23'08.32"

EXTRA
TEMPORARY
WORKSPACE

- SPECIFICATIONS:**
1. PRODUCT: Crude Oil
 2. CARRIER PIPE: 36.000" O.D., 0.635" W.T. (MIN.), API 5L X70, PS12 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
 3. SEAM JOINT FACTOR: 1.0
 4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
 5. DESIGN FACTOR: 0.60
 6. DESIGN PRESSURE: 1,480 PSIG
 7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG

8. MIN 3-JOINT AVG (COMBINED BENDING): 3.600'

EXISTING FEATURES AND ELEVATIONS SHOWN ARE BASED ON SURVEY DATA FURNISHED BY SUNBELT, INC. DEC-2018



**PRELIMINARY DESIGN
NOT FOR CONSTRUCTION**

RE-ISSUED FOR PERMIT
12-DEC-2018

LEGEND

- PROPOSED LINE
- EXISTING LINE
- TOP OF BANK
- UNDERGROUND TELEPHONE
- WATERLINE
- HDD ENTRANCE
- WOODEN UTILITY POLE
- ELEC. TRANS. TOWER
- ADJACENT TEMPORARY WORKSPACE
- ETD WATERWAY

SCALE: 1"=100' ON 22"X34" SHEET

DATE: 01-NOV-2018

APPROVED BY: [Signature]

DATE: 12-DEC-2018

NorthStar
AS AN EXXON MOBIL SERVICE COMPANY

DATE: 01-NOV-2018

DATE: 12-DEC-2018

SPOT
Sea Port Oil Terminal

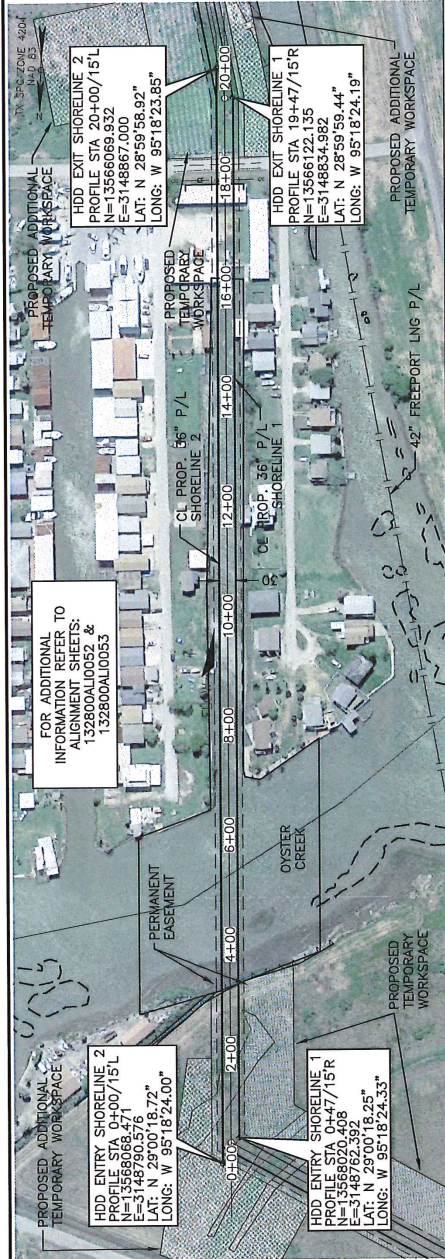
DATE: 01-NOV-2018

DATE: 12-DEC-2018

ECHO TO OYSTER CREEK P/L
HDD EXHIBIT
BASTROP BAYOU
BRAZORIA COUNTY, TEXAS

DATE: 01-NOV-2018

DATE: 12-DEC-2018



FOR ADDITIONAL INFORMATION REFER TO ALIGNMENT SHEETS: 132800A10053

HDD ENTRY SHORELINE 2
 PROFILE STA 0+00/15'L
 N=13566068.471
 E=3148670.406
 LAT: N 28°50'18.72"
 LONG: W 95°18'24.00"

HDD ENTRY SHORELINE 1
 PROFILE STA 19+47/15'R
 N=13566122.135
 E=3148634.982
 LAT: N 28°59'59.44"
 LONG: W 95°18'24.19"

HDD EXIT SHORELINE 2
 PROFILE STA 20+00/15'L
 N=13566089.932
 E=3148867.000
 LAT: N 28°59'56.92"
 LONG: W 95°18'23.35"

HDD EXIT SHORELINE 1
 PROFILE STA 19+47/15'R
 N=13566122.135
 E=3148634.982
 LAT: N 28°59'59.44"
 LONG: W 95°18'24.19"

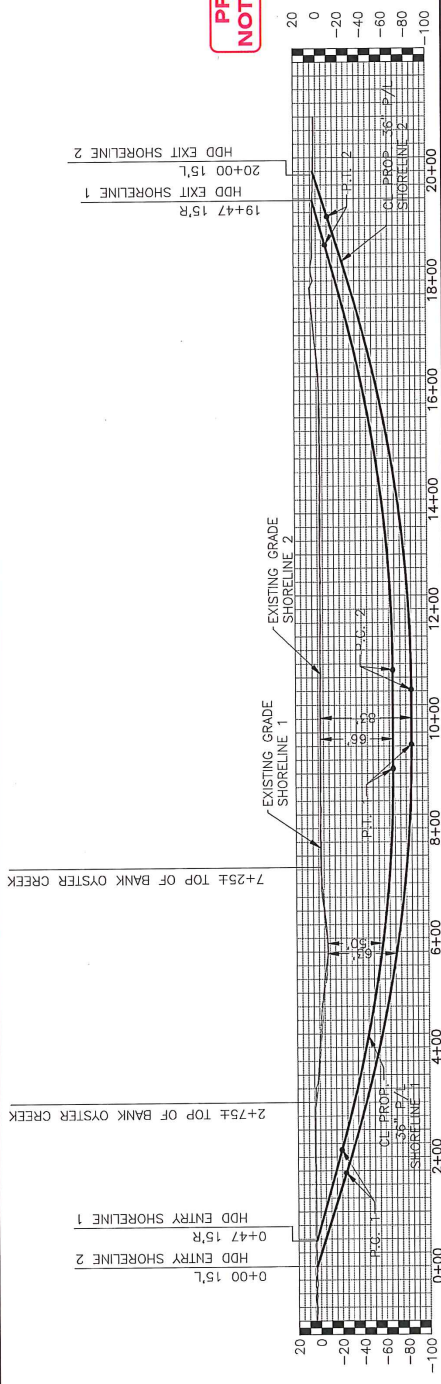
EXISTING FEATURES AND ELEVATIONS SHOWN ARE TO BE MAINTAINED OR FURNISHED BY MPH, INC. DEC-2018

8. MIN 3-JOINT AVG (COMBINED BENDING): 3.600'

4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
 5. DESIGN FACTOR: 0.60
 6. DESIGN PRESSURE: 1,480 PSIG
 7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG

SPECIFICATIONS:
 1. PRODUCT: Crude Oil
 2. CARRIER PIPE: 36.000" O.D., 0.635" W.T. (MIN.), API 5L X70, PSL2 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
 3. SEAM JOINT FACTOR: 1.0

PRELIMINARY DESIGN NOT FOR CONSTRUCTION



RE-ISSUED FOR PERMIT 12-DEC-2018



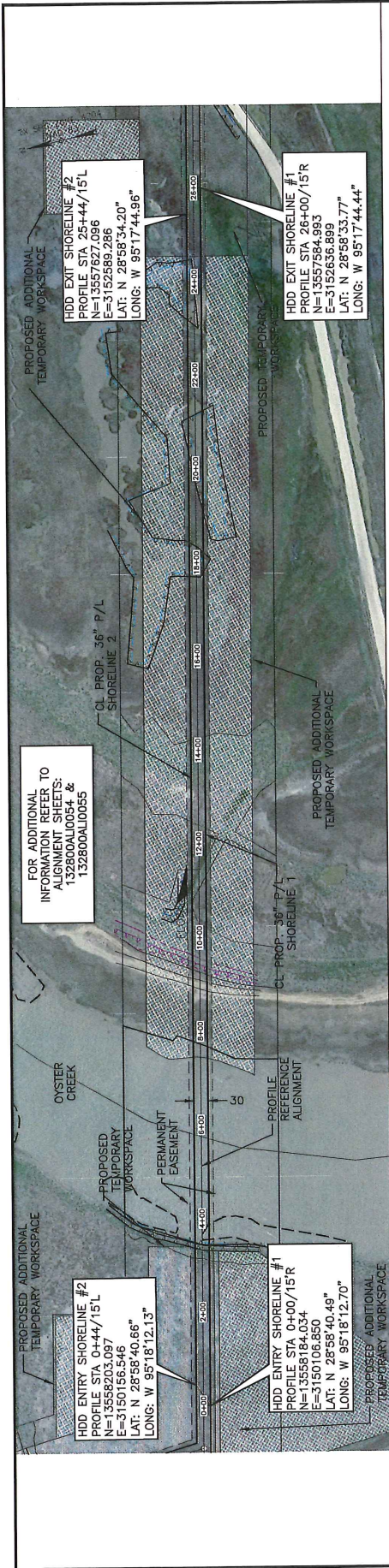
LEGEND

- PERMIT LINE
- EXISTING LINE
- TOP OF BANK
- ADJACENT ELECTRICAL
- UNDERGROUND TELEPHONE
- WATER
- WOOD PILES
- WOOD UTILITY POLES
- TOP OF BANK
- ADJACENT ELECTRICAL
- ADJACENT TELEPHONE
- WATER

NO.	ISSUED FOR REVIEW	DATE	BY	CHKD BY	DATE	APPROV.
A	ISSUED FOR REVIEW	01-NOV-2018	BNW	BNW	01-NOV-2018	BNW
B	REVISION FOR REVIEW	19-NOV-2018	BNW	BNW	19-NOV-2018	BNW
D	UPDATED SUPPLY BASE DRAWING	12-DEC-2018	BNW	BNW	12-DEC-2018	BNW

NO.	ISSUED FOR REVIEW	DATE	BY	CHKD BY	DATE	APPROV.
A	ISSUED FOR REVIEW	01-NOV-2018	BNW	BNW	01-NOV-2018	BNW
B	REVISION FOR REVIEW	19-NOV-2018	BNW	BNW	19-NOV-2018	BNW
D	UPDATED SUPPLY BASE DRAWING	12-DEC-2018	BNW	BNW	12-DEC-2018	BNW

SPOT Sea Port Oil Terminal
 LYNX WALKER
 70403-RR-9503



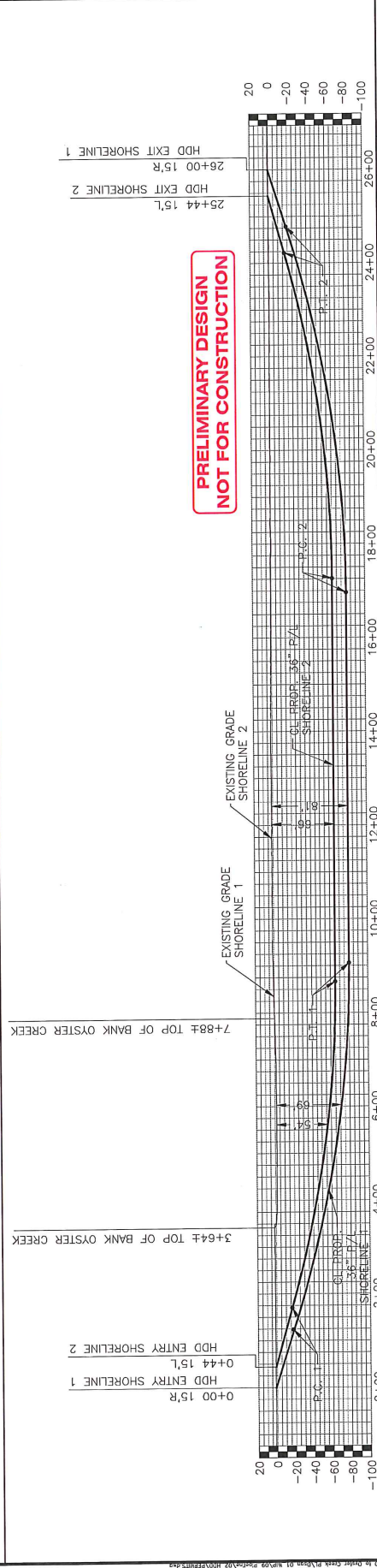
FOR ADDITIONAL INFORMATION REFER TO ALIGNMENT SHEETS: 132800A10054 & 132800A10055

8. MIN 3-JOINT AVG (COMBINED BENDING): 3.600'

4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
 5. DESIGN FACTOR: 0.60
 6. DESIGN PRESSURE: 1,480 PSIG
 7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG

1. PRODUCT: Crude Oil
 2. CARRIER PIPE: 36.000" O.D., 0.635" W.T. (MIN.), API 5L X70, PS12 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
 3. SEAM JOINT FACTOR: 1.0

- EXISTING FEATURES AND ELEVATIONS SHOWN ARE BASED ON SURVEY DATA FURNISHED BY B. W. PH. INC. DEC-2018



RE-ISSUED FOR PERMIT 12-DEC-2018

LEGEND

- PROPOSED LINE
- EXISTING LINE
- TOP OF BANK
- DESIGN PROFILE
- UNDERGROUND TELECON
- WATERLINE
- NO ENTRY/EXIT
- WOODS ENTRY/EXIT
- ELEC. TRANS. ENTRY/EXIT
- ADJAC. TEMPORARY WORKSPACE
- ADJ. WETLANDS
- ETD WETLANDS

HORIZONTAL SCALE ~ FEET
 0 100 200 400

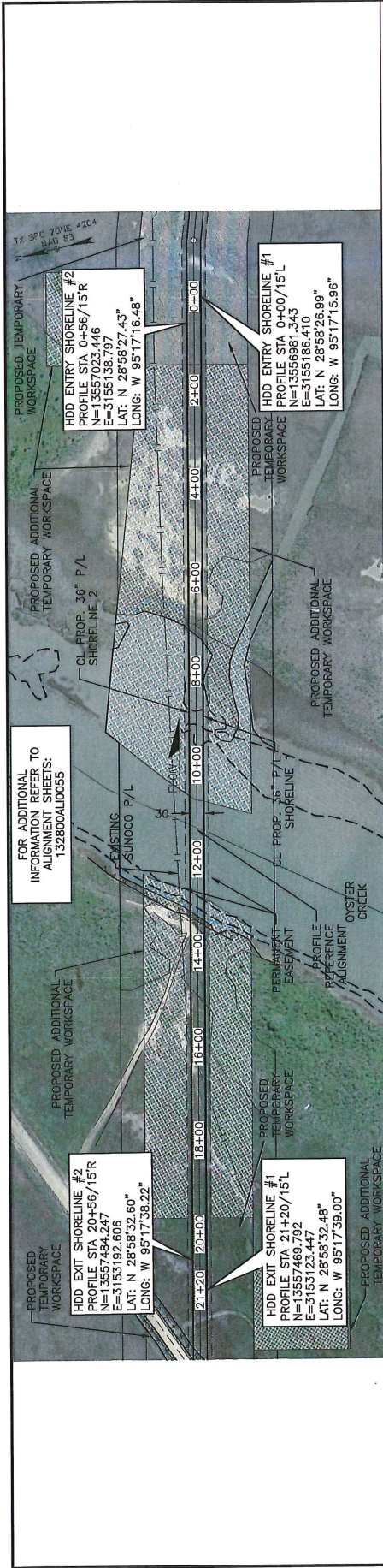
VERTICAL SCALE ~ FEET
 0 50 100 200

[ON 8.5"x11" SHEET HOR: 1"=40.00' VER: 1"=4.165']

NorthStar
 A QUALITY SERVICE COMPANY

SPOT
 Sea Port Oil Terminal

DATE	01-NOV-2018	DESIGNED BY	DAK
DATE	28-OCT-2018	CHECKED BY	DAK
DATE	30-OCT-2018	ENTERED BY	DAK
DATE	09-NOV-2018	ISSUED BY	DAK
DATE	12-DEC-2018	CONTROL #	70403-PRP-004



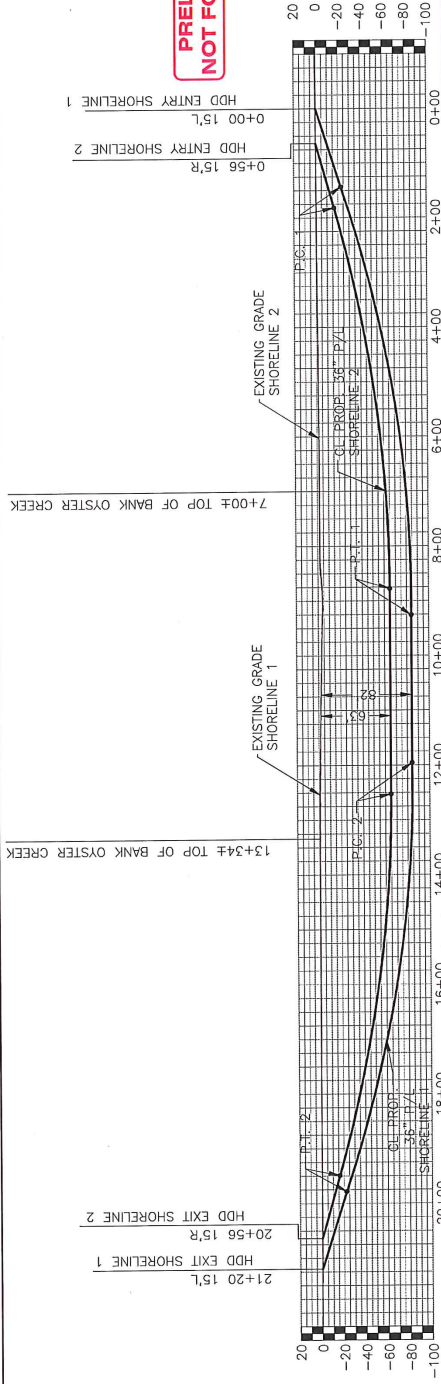
EXISTING FEATURES AND ELEVATIONS SHOWN ARE BASED ON SURVEY DATA FURNISHED BY: HPH, INC. DEC-2018

8. MIN 3-JOINT AVG (COMBINED BENDING): 3.600'

4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
 5. DESIGN FACTOR: 0.60
 6. DESIGN PRESSURE: 1,480 PSIG
 7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG

SPECIFICATIONS:
 1. PRODUCT: Crude Oil
 2. CARRIER PIPE: 36.000" O.D., 0.635" W.T. (MIN.), API 5L X70, PS12 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
 3. SEAM JOINT FACTOR: 1.0

**PRELIMINARY DESIGN
 NOT FOR CONSTRUCTION**



HORIZONTAL SCALE ~ FEET
 0 100 200 400
 VERTICAL SCALE ~ FEET
 0 50 100 200
 [ON 8.5" X 11" SHEET HOR: 1" = 40.00' VER: 1" = 16.5']

LEGEND

PROPERTY LINE	---
EXISTING SHORELINE	---
TOP OF BANK	---
EXISTING PROFILE	---
PROPOSED PROFILE	---
UNDERGROUND TELEPHONE	---
WATERLINE	---
HDD ENTRY/EXIT	---
WOODS (TYPICAL)	---
BLDG. TRANS. (TYPICAL)	---
ADJAC. TEMPORARY WORKSPACE	---
EXIST. TEMPORARY WORKSPACE	---
EXIST. WETLANDS	---

NO.	ISSUED FOR REVIEW	DATE	BY
A	ISSUED FOR PERMIT	12-DEC-2018	SPOT
B	REVISED FOR REVIEW		
C	REVISED FOR PERMIT		
D	UPDATED SURVEY BASE DRAWING		

RE-ISSUED FOR PERMIT
 12-DEC-2018

SPOT
 Sea Port Oil Terminal
 BRAZORIA COUNTY, TEXAS
 OYSTER CREEK #3
 HDD EXHIBIT

DATE	12-DEC-2018
BY	SPOT
CHECKED BY	SPOT
DATE	12-DEC-2018
PROJECT #	7040-PRF-100
NUMBER	7040-PRF-100

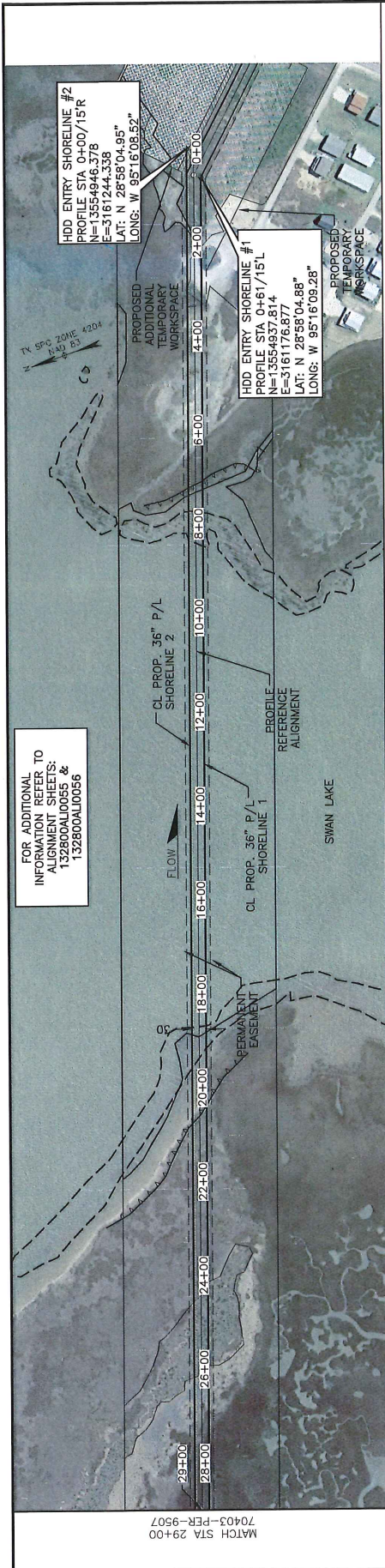
NorthStar
 AN OILFIELD SERVICES COMPANY
 13280 CALLE JARDINES, SUITE 100
 HOUSTON, TEXAS 77040
 TEL: 281.290.1000
 WWW.NORTHSTAR-USA.COM

FOR ADDITIONAL INFORMATION REFER TO ALIGNMENT SHEETS: 13280CAL0055

PROPOSED EXIT SHORELINE #2
 PROFILE STA 0+56/15R
 N=13557023.446
 E=3155138.797
 LAT: N 28°58'27.43"
 LONG: W 95°17'16.48"

PROPOSED ENTRY SHORELINE #1
 PROFILE STA 0+00/15L
 N=13556981.343
 E=3155186.410
 LAT: N 28°58'26.99"
 LONG: W 95°17'15.96"

PROPOSED EXIT SHORELINE #1
 PROFILE STA 21+20/15L
 N=13557091.742
 E=3155323.147
 LAT: N 28°58'32.48"
 LONG: W 95°17'39.00"



FOR ADDITIONAL INFORMATION TO THESE SHEETS: 132806A00055 & 132806A00056

HDD ENTRY SHORELINE #2
PROFILE STA 0+00/15R
N=15554946.378
E=51612558.088
LAT: N 28588 04.95"
LONG: W 9516 09.52"

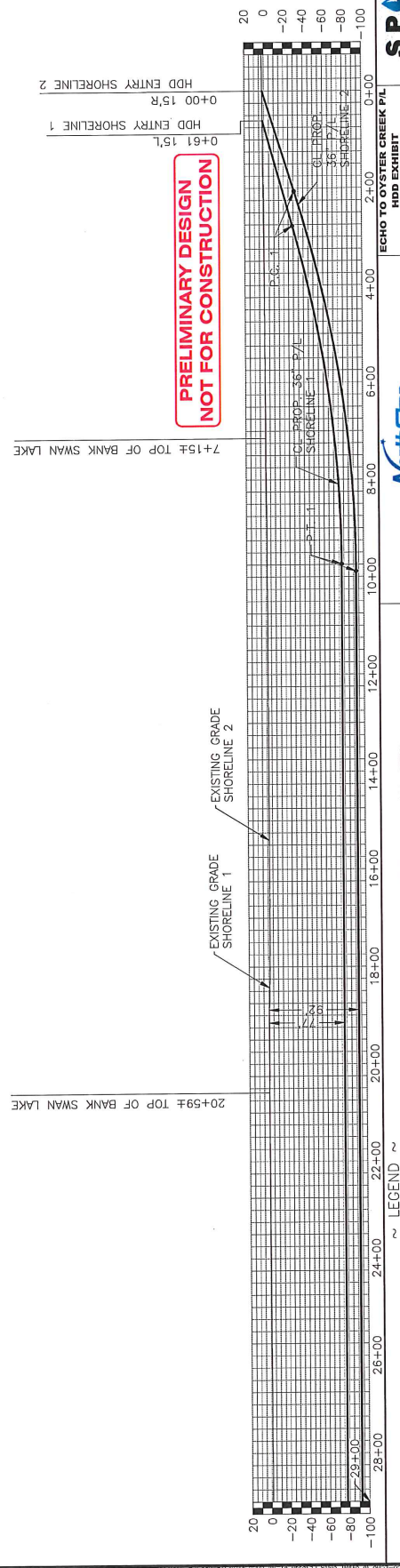
HDD ENTRY SHORELINE #1
PROFILE STA 0+61/15L
N=15554937.814
E=51611768.777
LAT: N 28588 04.88"
LONG: W 9516 09.28"

EXISTING FEATURES AND ELEVATIONS SHOWN ARE BASED ON DATA FURNISHED BY MPH, INC. DEC-2018

8. MIN 3-JOINT AVG (COMBINED BENDING): 3,600'

4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
5. DESIGN FACTOR: 0.60
6. DESIGN PRESSURE: 1,480 PSIG
7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG

SPECIFICATIONS:
1. PRODUCT: Crude Oil
2. CARRIER PIPE: 36.000" O.D., 0.635" W.T. (MIN.), API 5L X70, PSL2 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
3. SEAM JOINT FACTOR: 1.0



PRELIMINARY DESIGN NOT FOR CONSTRUCTION

RE-ISSUED FOR PERMIT 12-DEC-2018

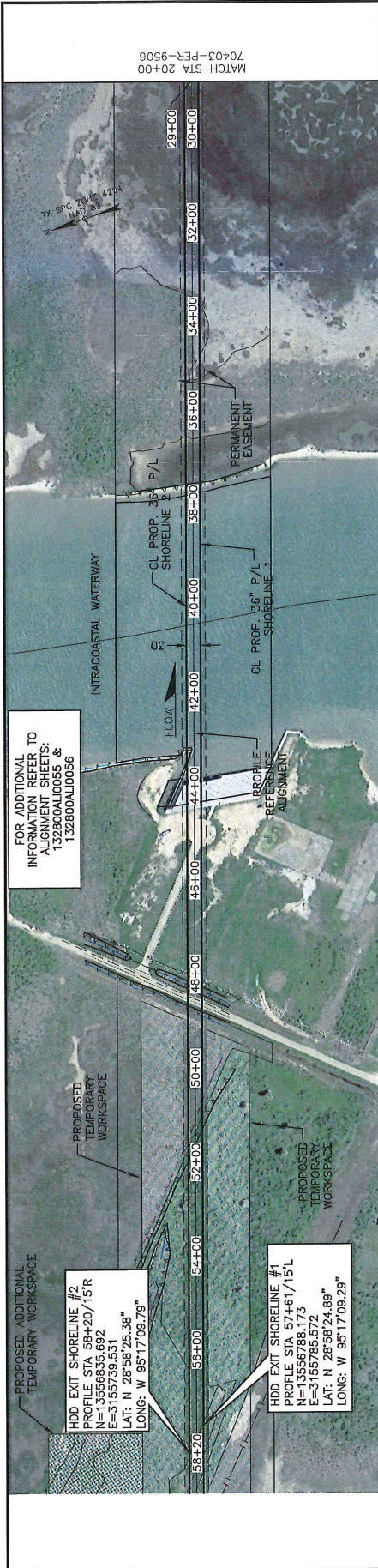
LEGEND
PROPERTY LINE
FENCE LINE
TOP OF BANK
UNDERGROUND UTILITY
UNDERGROUND TELECOM
WATERLINE

HORIZONTAL SCALE: ~ FEET
VERTICAL SCALE: ~ FEET
[ON 8.5"x11" SHEET HOR: 1"=48.30' VER: 1"=4.165']

NorthStar
ICWISWAN LAKE
BRAZORIA COUNTY, TEXAS
ECHO TO OYSTER CREEK P/L

NO.	DATE	BY	CHKD	APPD	DESCRIPTION
A	01-NOV-2018	MMW	MMW	MMW	DESIGNED BY
B	19-NOV-2018	MMW	MMW	MMW	CHECKED BY
C	12-DEC-2018	MMW	MMW	MMW	DESIGNED BY
D	12-DEC-2018	MMW	MMW	MMW	CHECKED BY

SPOT
Sea Port Oil Terminal
LINA WALKER
12-DEC-2018
70403-597-8558



FOR ADDITIONAL INFORMATION REFER TO ALIGNMENT SHEETS: 132800AL0055 & 132800AL0056

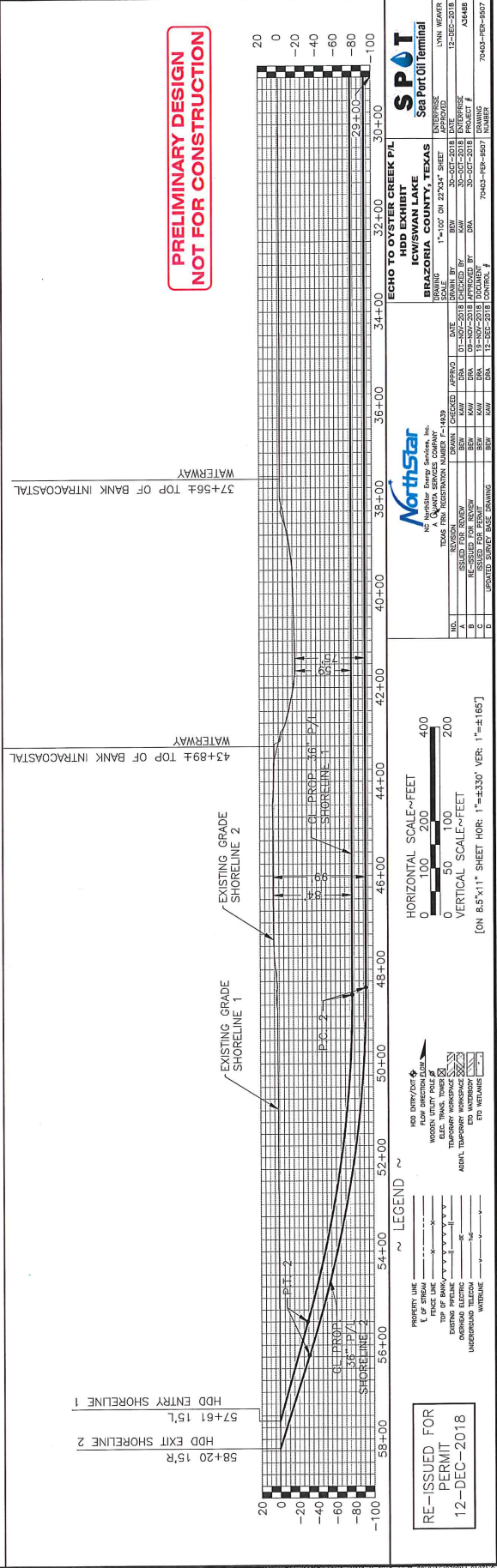
HDD EXIT SHORELINE #2
 PROFILE STA 58+20/15'R
 N=13556835.692
 E=3155739.531
 LAT: N 28°58'25.38"
 LONG: W 95°17'09.79"

HDD EXIT SHORELINE #1
 PROFILE STA 57+61/15'L
 N=13556788.173
 E=3155785.572
 LAT: N 28°58'24.89"
 LONG: W 95°17'09.29"

MATCH STA 20+00
 70403-PER-9506

4. MINIMUM/MAXIMUM TEST PRESSURE: 1,900 PSIG/2,000 PSIG
 5. DESIGN FACTOR: 0.60
 6. DESIGN PRESSURE: 1,480 PSIG
 7. MAXIMUM OPERATING PRESSURE: 1,480 PSIG
8. MIN 3-JOINT AVG (COMBINED BENDING): 3.600'

- SPECIFICATIONS:
 1. PRODUCT: Crude Oil
 2. CARRIER PIPE: 36.000" O.D., 0.635" W.T. (MIN.), API 5L X70, PSL2 PIPE W/15-22 MILS FBE & 30-40 MILS OF ARO COATING
 3. SEAM JOINT FACTOR: 1.0



PRELIMINARY DESIGN
 NOT FOR CONSTRUCTION

RE-ISSUED FOR PERMIT
 12-DEC-2018

- LEGEND
- PROPOSED USE
 - EXISTING USE
 - EXISTING UTILITY
 - TOP OF BANK
 - OVERHEAD ELECTRIC
 - UNDERGROUND TELECOM
 - UNDERGROUND ELECTRIC
 - PROPOSED TEMPORARY WORKSPACE
 - EXISTING TEMPORARY WORKSPACE
 - EXISTING EASEMENT
 - EXISTING SHORELINE

HORIZONTAL SCALE ~ FEET
 0 100 200 400

VERTICAL SCALE ~ FEET
 0 50 100 200

[ON 8.5"x11" SHEET HOR. 1"=±1165' VER. 1"=±1165']

NorthStar
 THE ENERGY SERVICES COMPANY
 A QUANTA SERVICES COMPANY

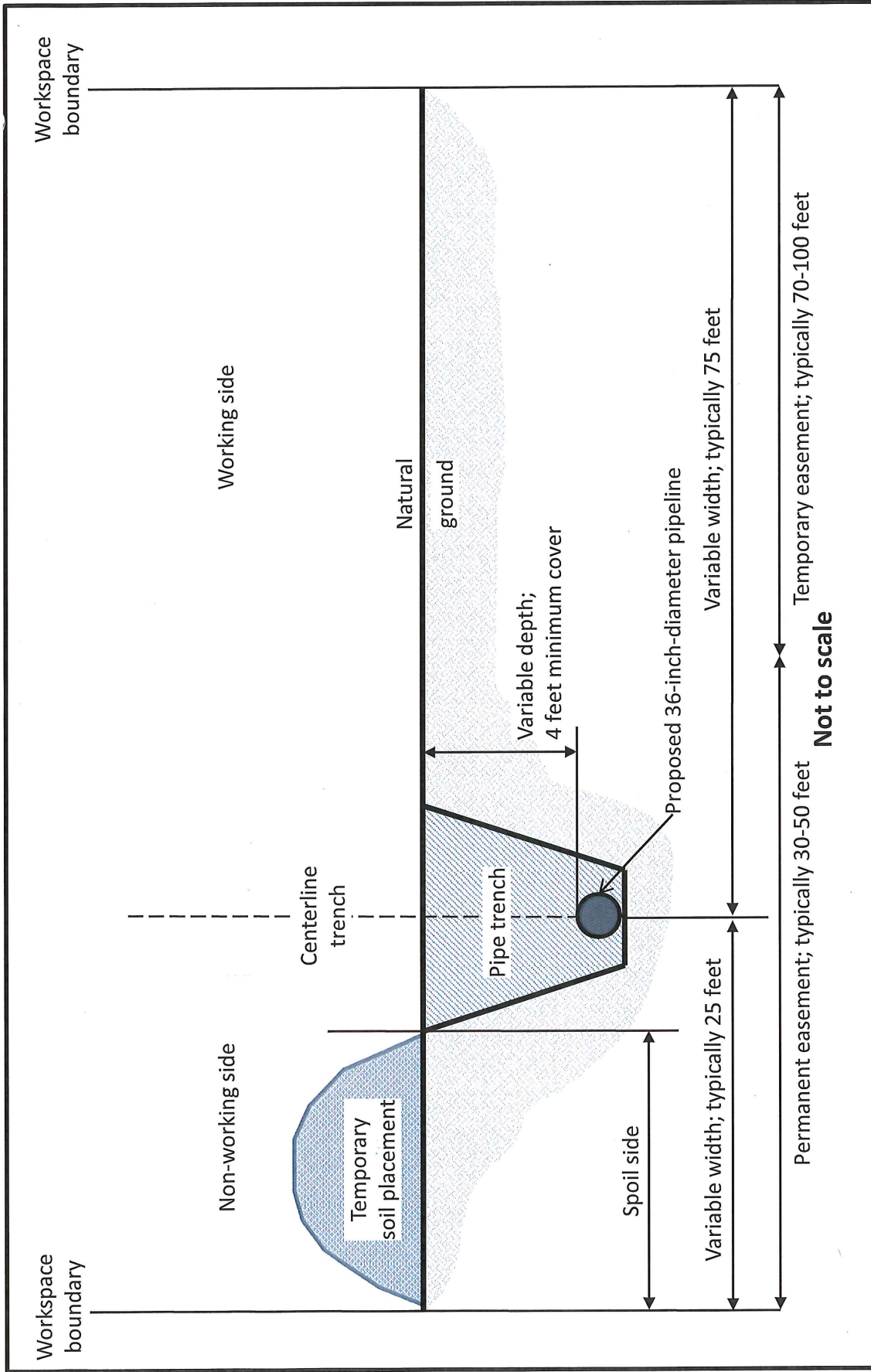
ICWISWAN LAKE
 BRAZOSIA COUNTY, TEXAS

ECHO TO OYSTER CREEK P/L
 HDD EXHIBIT

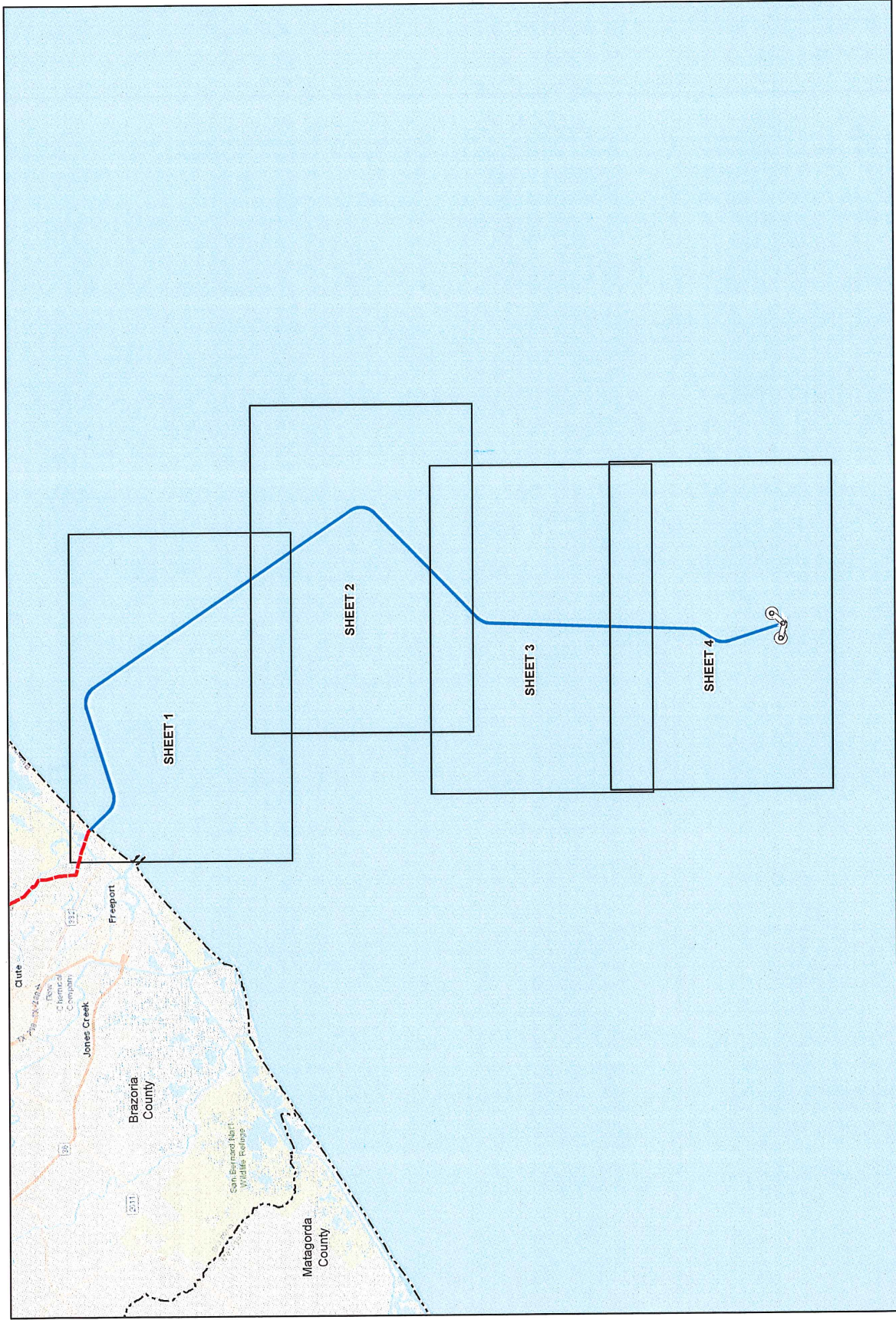
DATE: 01-NOV-2018
 SCALE: 1"=100' ON 22" X 34" SHEET
 DRAWN BY: KMM
 CHECKED BY: KMM
 DESIGNED BY: KMM
 REVISIONS FOR REVIEW: 01-NOV-2018
 REVISIONS FOR PERMIT: 12-DEC-2018

DATE: 12-DEC-2018
 SCALE: 1"=100' ON 22" X 34" SHEET
 DRAWN BY: KMM
 CHECKED BY: KMM
 DESIGNED BY: KMM
 REVISIONS FOR REVIEW: 01-NOV-2018
 REVISIONS FOR PERMIT: 12-DEC-2018

UNL NUMBER: 12-DEC-2018
 NUMBER: 70403-PER-9507



**Figure 18-10. Sea Port Oil Terminal Project
Typical Onshore Open-cut Trench Profile**



	<p>SEA PORT OIL TERMINAL PROJECT USACE NO. SWG-2018-00751 OFFSHORE COMPONENTS INDEX MAP</p>	<p>1:400,000 Created By: K. Shields Date: 12/20/18 IAD 1000 SpatialData Frame Source: Coastal IPSE 42M Feet</p>	
	<p>FIGURE 2</p>	<p> Proposed Onshore Centerline Proposed Offshore Centerline County Boundary Mapbook Index </p>	

APR 08 2019



SEA PORT OIL TERMINAL PROJECT
 USAGE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 OFFSHORE COMPONENTS DETAIL MAP
 TEXAS

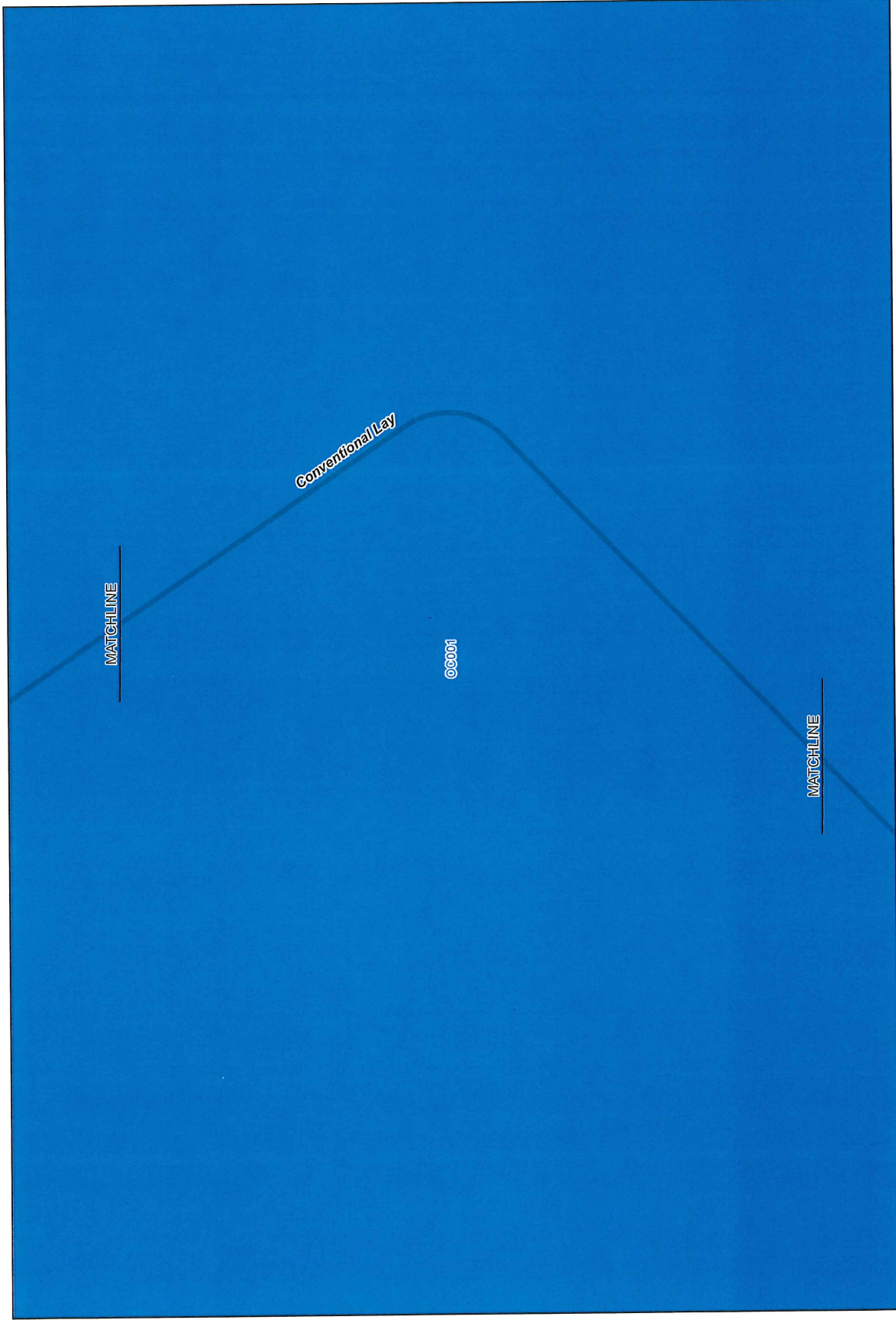
FIGURE 3
 SHEET 1 OF 4

SWCA
 ENVIRONMENTAL CONSULTANTS

1:100,000
 Created By: K. Shields
 Project Number: 18187
 IAD 1883 Shoreline Terms Book Control PPS 4204 Print
 0 2000 4000 6000 8000 10000 Feet
 0 660 1320 1980 2640 3300 3960 4620 5280 5940

Proposed Onshore Centerline HDD Entry/Exit
 Proposed Offshore Centerline Perennial Waterbody
 Proposed Deepwater Port Estuarine Emergent Wetland
 Project Workspace County Boundary

APR 08 2019



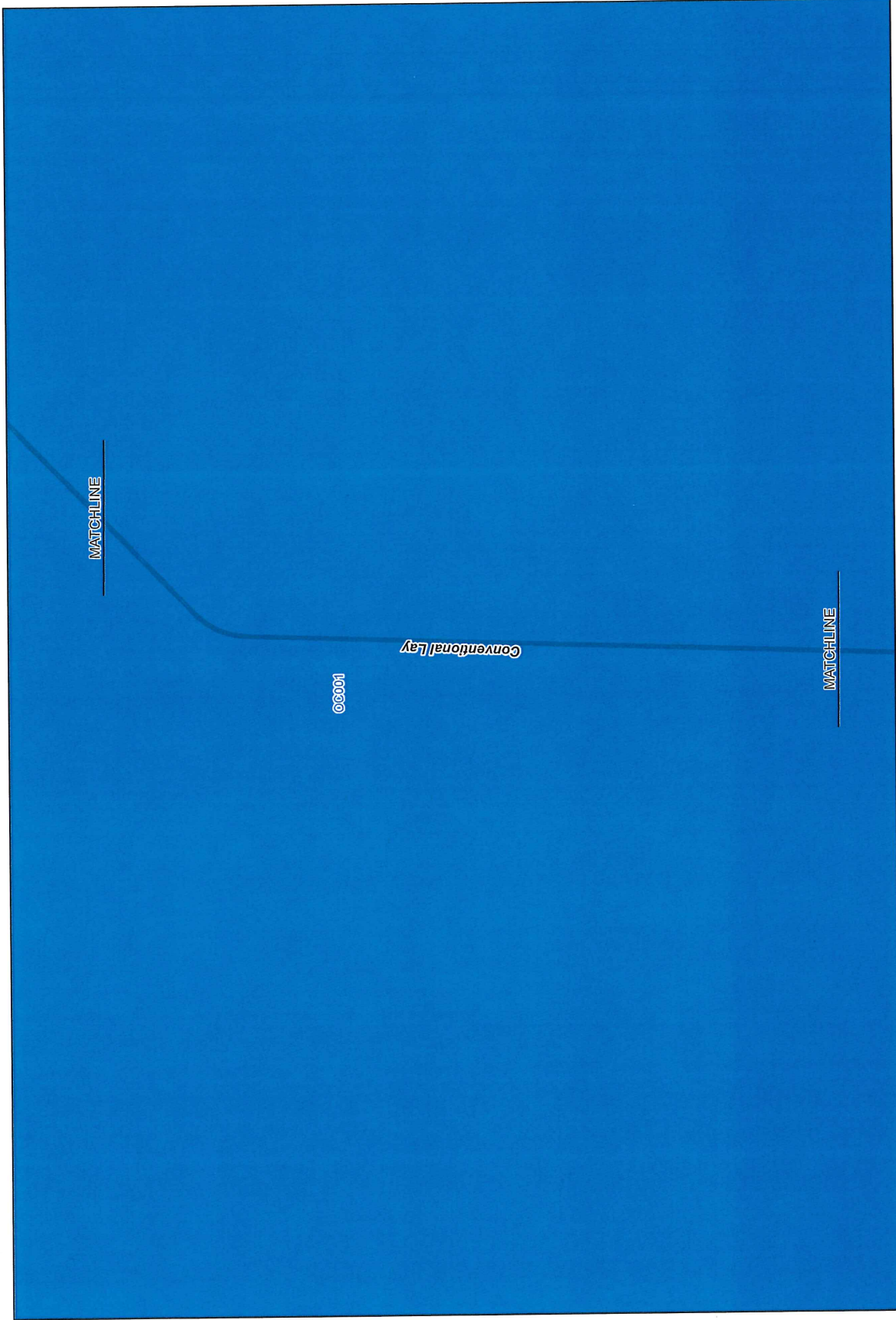
SEA PORT OIL TERMINAL PROJECT
 USACE NO. SWG-2018-00751
 AQUATIC RESOURCES IMPACTS -
 OFFSHORE COMPONENTS DETAIL MAP
 TEXAS

FIGURE 3
 SHEET 2 OF 4

SWCA
 ENVIRONMENTAL CONSULTANTS

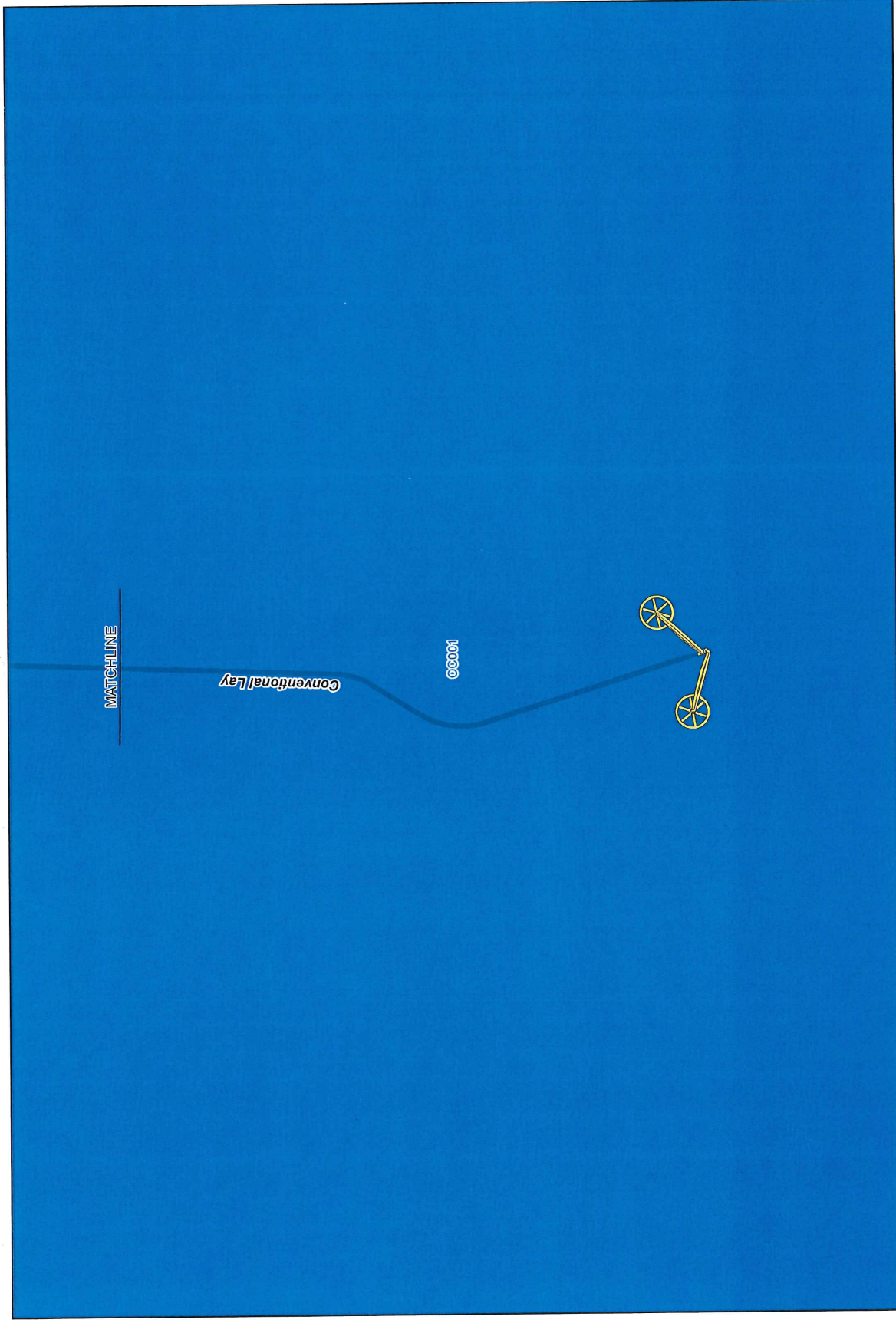
1:100,000
 Created By: K. Shields
 Date: 12/20/18
 MDC 1023 Standard Plans From Search Center Project: 004-104-1000
 Scale: 1:100,000
 Units: Feet
 0 600 1200 1800 2400 Feet

Proposed Onshore Centerline
 Proposed Offshore Centerline
 Proposed Deepwater Port
 Project Workspace
 HDD Entry/Exit
 Perennial Waterbody
 Estuarine Emergent Wetland
 County Boundary



	<p>SEA PORT OIL TERMINAL PROJECT USAGE NO. SWG-2018-00751 AQUATIC RESOURCES IMPACTS - OFFSHORE COMPONENTS DETAIL MAP TEXAS</p>	<p>FIGURE 3 SHEET 3 OF 4</p>
	<p>Proposed Onshore Centerline Proposed Offshore Centerline Proposed Deepwater Port Project Workspace</p>	<p>HDD Entry/Exit Perennial Waterbody Estuarine Emergent Wetland County Boundary</p>

APR 08 2019



	<p>SEA PORT OIL TERMINAL PROJECT USACE NO. SWG-2018-00751 AQUATIC RESOURCES IMPACTS - OFFSHORE COMPONENTS DETAIL MAP TEXAS</p>	<p>FIGURE 3 SHEET 4 OF 4</p>
	<p>Proposed Onshore Centerline Proposed Offshore Centerline Proposed Deepwater Port Project Workspace</p>	<p>HDD Entry/Exit Perennial Waterbody Estuarine Emergent Wetland County Boundary</p>

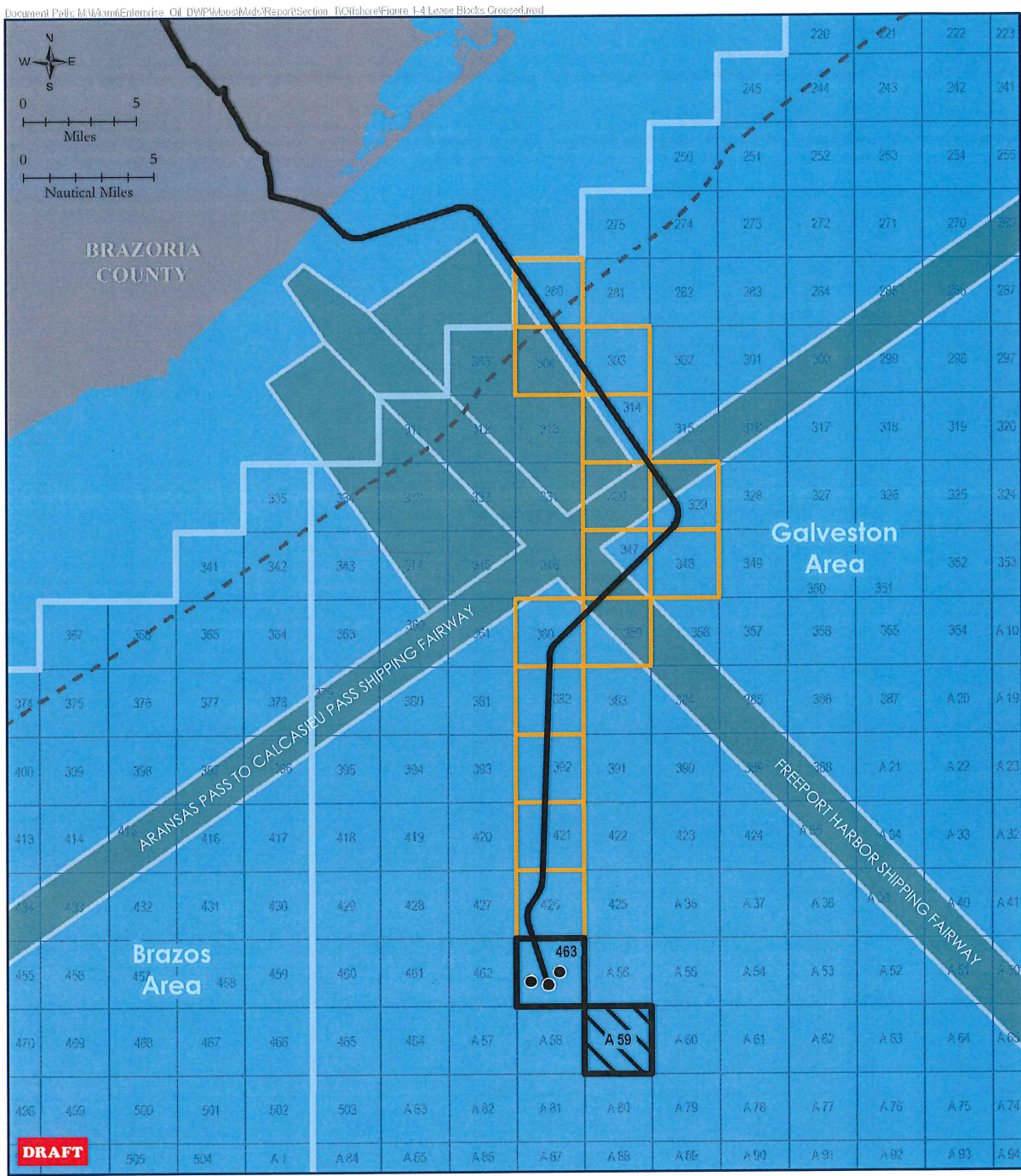
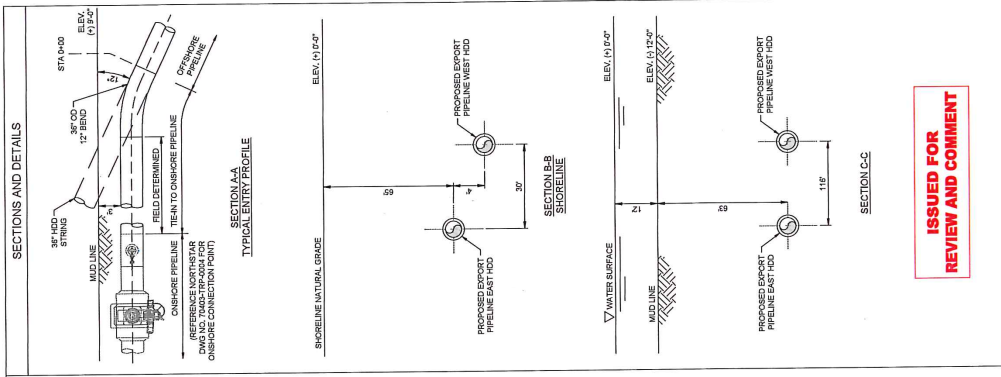
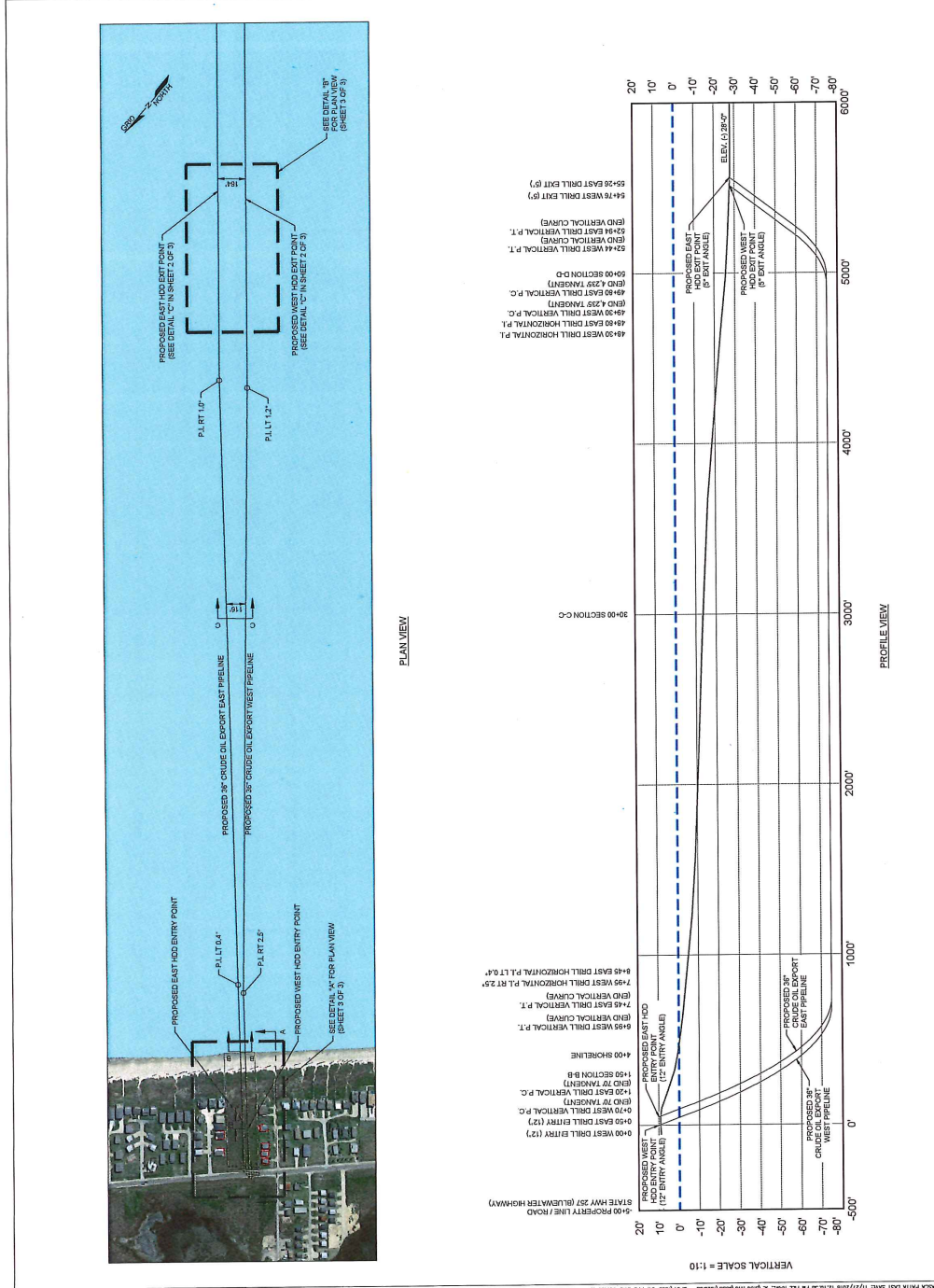


Figure 18-6
Lease Blocks Crossed by the
SPOT DWP Offshore Pipelines

SPOT Terminal Services LLC
 Source - ESRI, BOEM, NOAA



ISSUED FOR REVIEW AND COMMENT



TITLE		SHORE CROSSING TO GALVESTON AREA PROPOSED OFFSHORE PIPELINE PROPOSED HDD DETAIL (SHEET 1 OF 3)	
SHEET	SCALE	SIZE	CIT/DRAWING NO.
1 OF 3	1"=300'	D	1825-CT-PPL-DWG-001421
REV	DATE	BY	APP'D
A			

REFERENCE NO.	REFERENCE TITLE	REV	DESCRIPTION	ISSUED FOR REVIEW AND COMMENT
7500-RR-0004	SHORELINE TERMINAL GENERAL ARRANGEMENT 36\"/>			
7500-RR-0003	OSTER CREEK TERMINAL GENERAL ARRANGEMENT 36\"/>			
7500-MV-0007	MANLINE VALVE # 7 GENERAL ARRANGEMENT 36\"/>			
STD-0709	HORIZONTAL DIRECTIONAL DRILLING			



SPOT
Sea Port Oil Terminal
CLIENT DRAWING NO.

APPLICANT	SPOT TERMINAL SERVICES LLC
PROJECT	

REVISION NO.	DATE	BY	APP'D

ISSUED FOR REVIEW AND COMMENT	A
-------------------------------	---

DATE	1/22/18
------	---------

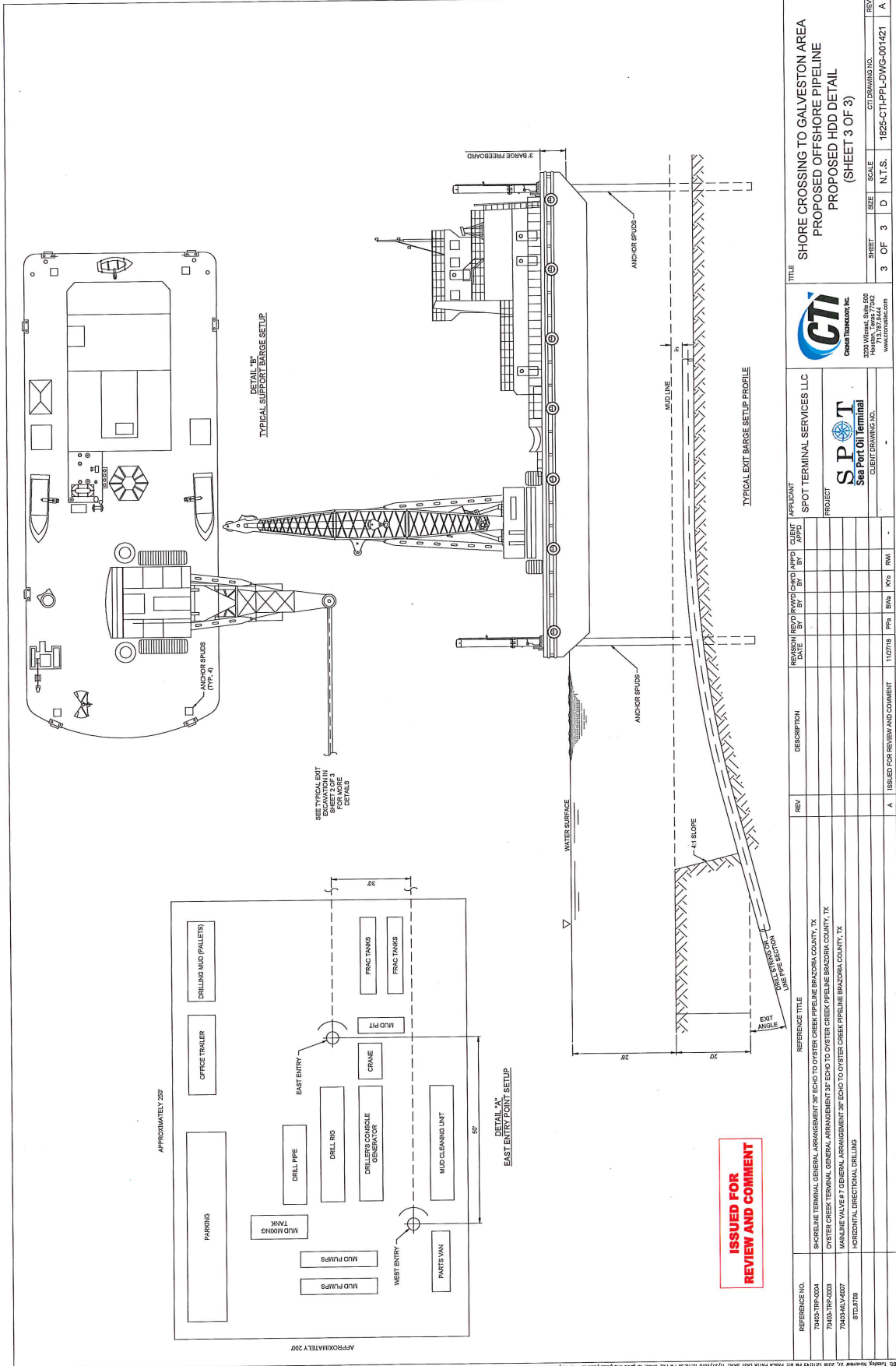
DATE	1/22/18
------	---------

NOTES

1. SET UP DRILLING EQUIPMENT A MINIMUM OF 100 FEET FROM THE EDGE OF THE WATER SURFACE AND USE SHORING WITHIN THE 100 FOOT ZONE.
2. DO NOT ALLOW THE USE OF ANY ACCESS TO THE DRILLING PAD WITHOUT THE APPROVAL OF COMPANY'S INSPECTOR.
3. INITIAL STABLE DRILLING MUD THICK OR SHIMS TO PREVENT CONTAMINATION OF CONTAIN ANY RELEASE OF DRILLING MUD.
4. INSTALL BEAMS DOWNLOPES FROM THE DRILL ENTRY AND ANTICIPATED EXIT POINTS TO PREVENT CONTAMINATION OF DRILLING MUD.
5. ACCORDANCE WITH THE APPROPRIATE REGULATORY AUTHORITY REQUIREMENTS.
6. WATER DEPTH TO BE FIELD VERIFIED.
7. THE GEOMETRY OF ENTRY & EXIT EXCAVATIONS MAY VARY FOR ACTUAL FIELD CONDITIONS.
8. TYPICAL EXIT ANGLES MAY VARY FROM BETWEEN 4" TO 8" MAXIMUM.
9. THE POSITION OF DRILLING EQUIPMENT IDENTIFIED BY LETTERS J & D IS SHOWN FOR DRILLING AT ENTRY DRILLING OPERATIONS. IDENTICAL LETTERS MUST BE USED TO INDICATE EQUIPMENT FOR WEST ENTRY DRILLING OPERATIONS. IDENTICAL LETTERS MUST BE USED TO INDICATE EQUIPMENT FOR EAST ENTRY DRILLING OPERATIONS.
10. REFER TO HORIZONTAL DIRECTIONAL DRILLING STANDARD (DOCUMENT NO. STD.0179) FOR MORE INFORMATION.

ISSUED FOR REVIEW AND COMMENT

REFERENCE NO.	REFERENCE TITLE	REV	DESCRIPTION	REVISION (REV'D OR CHG'D)	DATE	BY	APPD	CLIENT	APPLICANT
7060-TIP-0004	SHORELINE TERMINAL GENERAL ARRANGEMENT 30' ECHO TO OYSTER CREEK PIPELINE BRAZORIA COUNTY, TX	A							
7060-TIP-0003	OYSTER CREEK TERMINAL GENERAL ARRANGEMENT 30' ECHO TO OYSTER CREEK PIPELINE BRAZORIA COUNTY, TX								
7060-MALV-0007	MANLINE VALVE #7 GENERAL ARRANGEMENT 30' ECHO TO OYSTER CREEK PIPELINE BRAZORIA COUNTY, TX								
STL0179	HORIZONTAL DIRECTIONAL DRILLING								
<p style="text-align: center;">S.P.O.T. Sea Port Oil Terminal CLIENT SERVICES U.S.</p>									
<p style="text-align: center;">CTI Case Technology, Inc. 3200 Wilshire, Suite 200 Houston, TX 77019-2442 www.casecti.com</p>									
<p style="text-align: center;">SHORE CROSSING TO GALVESTON AREA PROPOSED OFFSHORE PIPELINE PROPOSED HDD DETAIL (SHEET 2 OF 3)</p>									
TITLE		SHEET		SCALE	CTI DRAWING NO.				
		2 OF 3	D	N.T.S.	1825-CT-PPI-L-DWG-001421		REV A		



ISSUED FOR REVIEW AND COMMENT

REFERENCE NO.	REFERENCE TITLE	REV	DESCRIPTION	REVISION DATE	REVISED BY	APPROVED BY	CLIENT APPROVED	DATE
TM03-TRF-0004	SHORELINE TERMINAL GENERAL ARRANGEMENT 30' ECHO TO OYSTER CREEK PIPELINE BRAZORIA COUNTY, TX							
TM03-TRF-0003	OYSTER CREEK TERMINAL GENERAL ARRANGEMENT 30' ECHO TO OYSTER CREEK PIPELINE BRAZORIA COUNTY, TX							
TM03-MLV-0007	MAINLINE VALVE #7 GENERAL ARRANGEMENT 30' ECHO TO OYSTER CREEK PIPELINE BRAZORIA COUNTY, TX							
STD-01709	HORIZONTAL DIRECTIONAL DRILLING							

ISSUED FOR REVIEW AND COMMENT	DATE	BY	CHKD	APPD	ST	CLIENT APPROVED
	11/27/18	PPS	BNS	KV6	RNI	

APPLICANT	PROJECT
SPOT TERMINAL SERVICES LLC	Sea Port Oil Terminal

CLIENT DRAWING NO.	SCALE	SHEET	SIZE	D	N.T.S.	CTI DRAWING NO.
1825-CTL-PPL-DWG-001421		3 OF 3	D	3		

TITLE	REV
SHORE CROSSING TO GALVESTON AREA PROPOSED OFFSHORE PIPELINE PROPOSED HDD DETAIL (SHEET 3 OF 3)	A

CTI	SPOT
CTI CONSULTING, INC. 3000 WILSON BLVD TULSA, OK 74103 WWW.CTI-CORP.COM	SPOT Sea Port Oil Terminal CLIENT DRAWING NO.