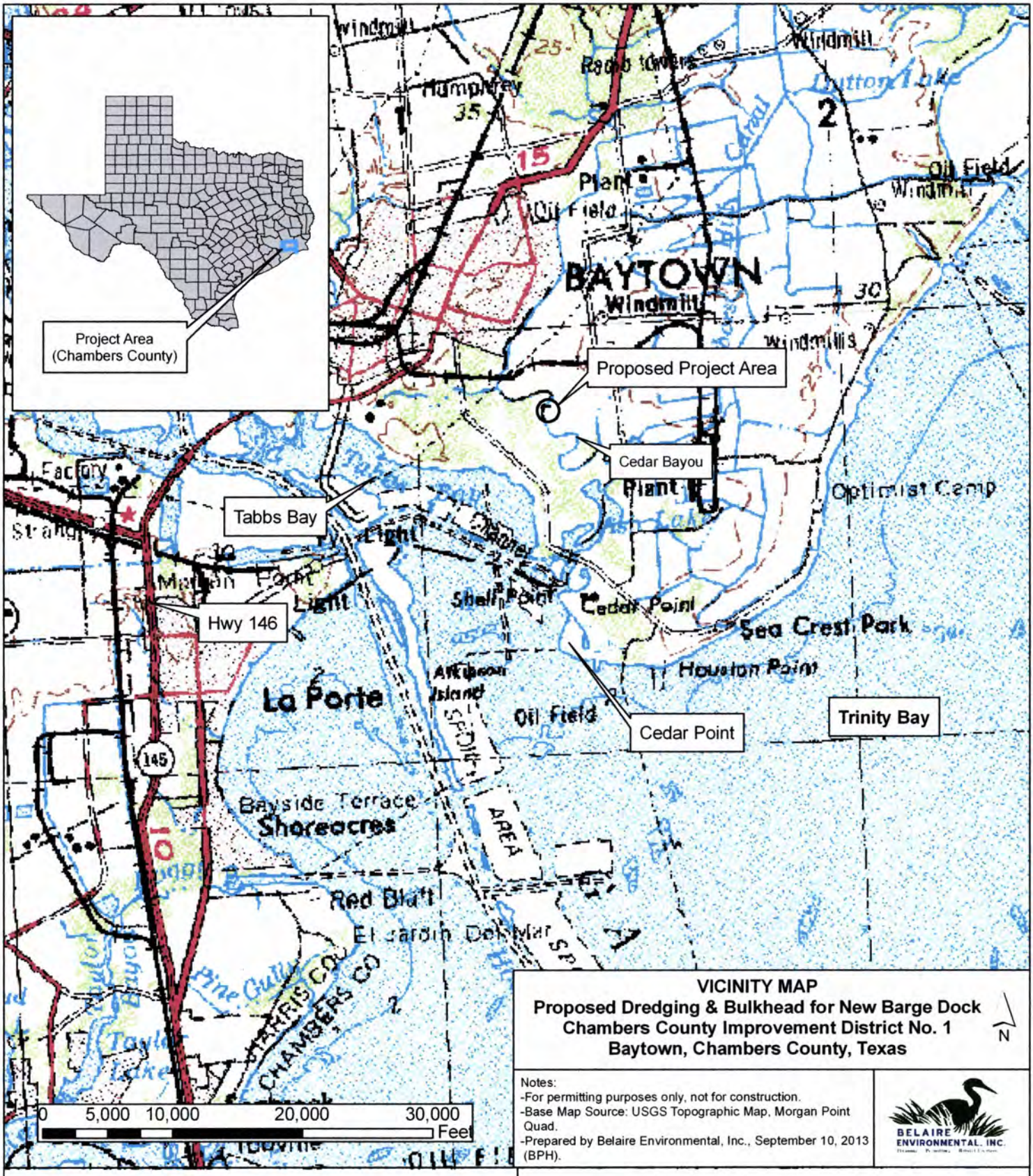

VICINITY MAP
Proposed Dredging & Bulkhead for New Barge Dock
Chambers County Improvement District No. 1
Baytown, Chambers County, Texas

N

Notes:
-For permitting purposes only, not for construction.
-Base Map Source: USGS Topographic Map, Morgan Point Quad.
-Prepared by Belaire Environmental, Inc., September 10, 2013 (BPH).

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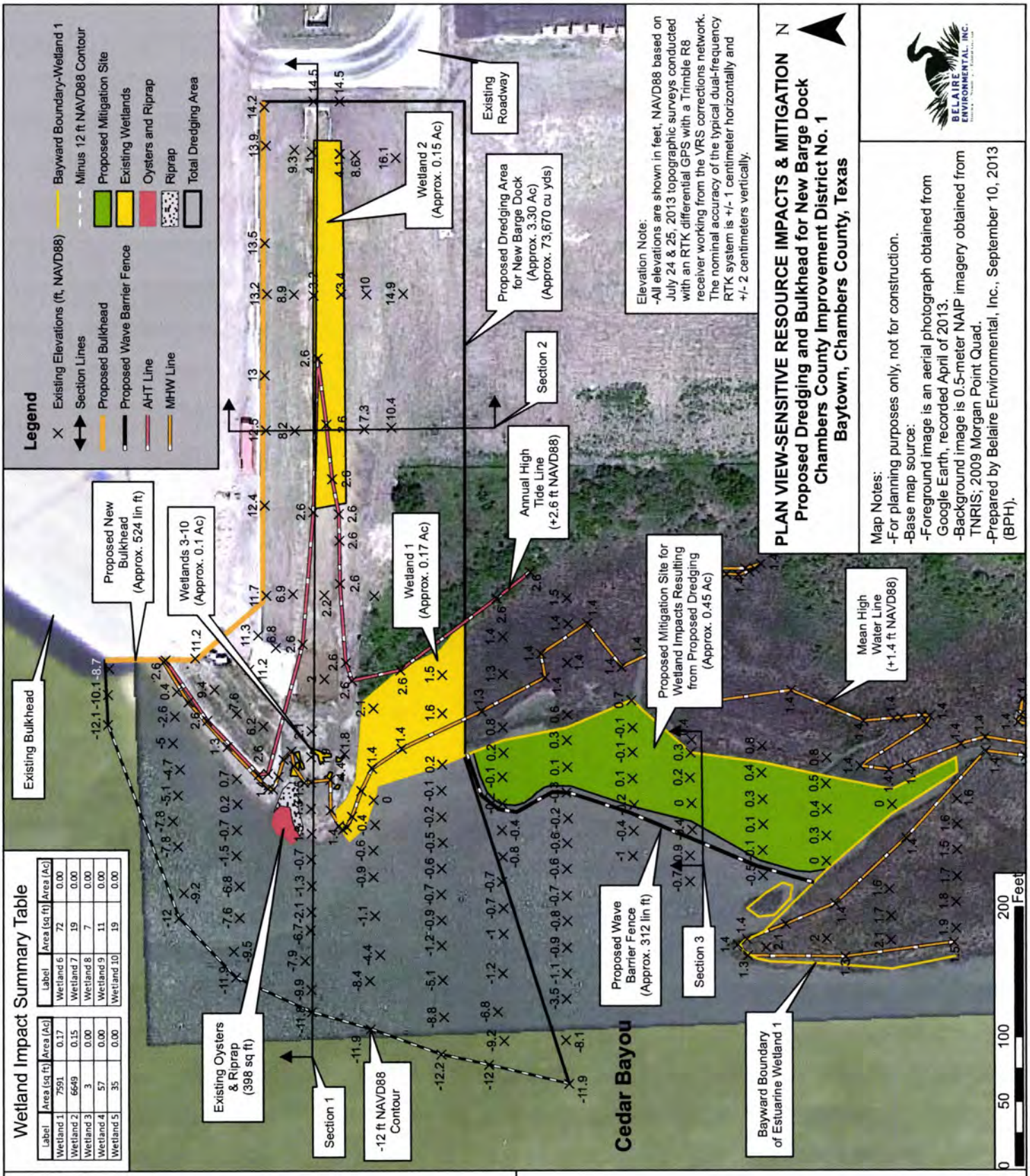
Proposed Dredging and Bulkhead for New Barge Dock
Chambers County Improvement District No. 1
Baytown, Chambers County, Texas

Chambers County Improvement District No. 1
1704 Seamist Drive, Suite 410
Houston, Texas 77008

Agent:
BELAIRE ENVIRONMENTAL, INC.
P.O. Box 741 Rockport, Texas 78381

September 10, 2013 Page ___ of ___

Permit Application No. _____



Wetland Impact Summary Table

Label	Area (sq ft)	Area (Ac)
Wetland 1	7591	0.17
Wetland 2	6649	0.15
Wetland 3	3	0.00
Wetland 4	57	0.00
Wetland 5	35	0.00

Label	Area (sq ft)	Area (Ac)
Wetland 6	72	0.00
Wetland 7	19	0.00
Wetland 8	7	0.00
Wetland 9	11	0.00
Wetland 10	19	0.00

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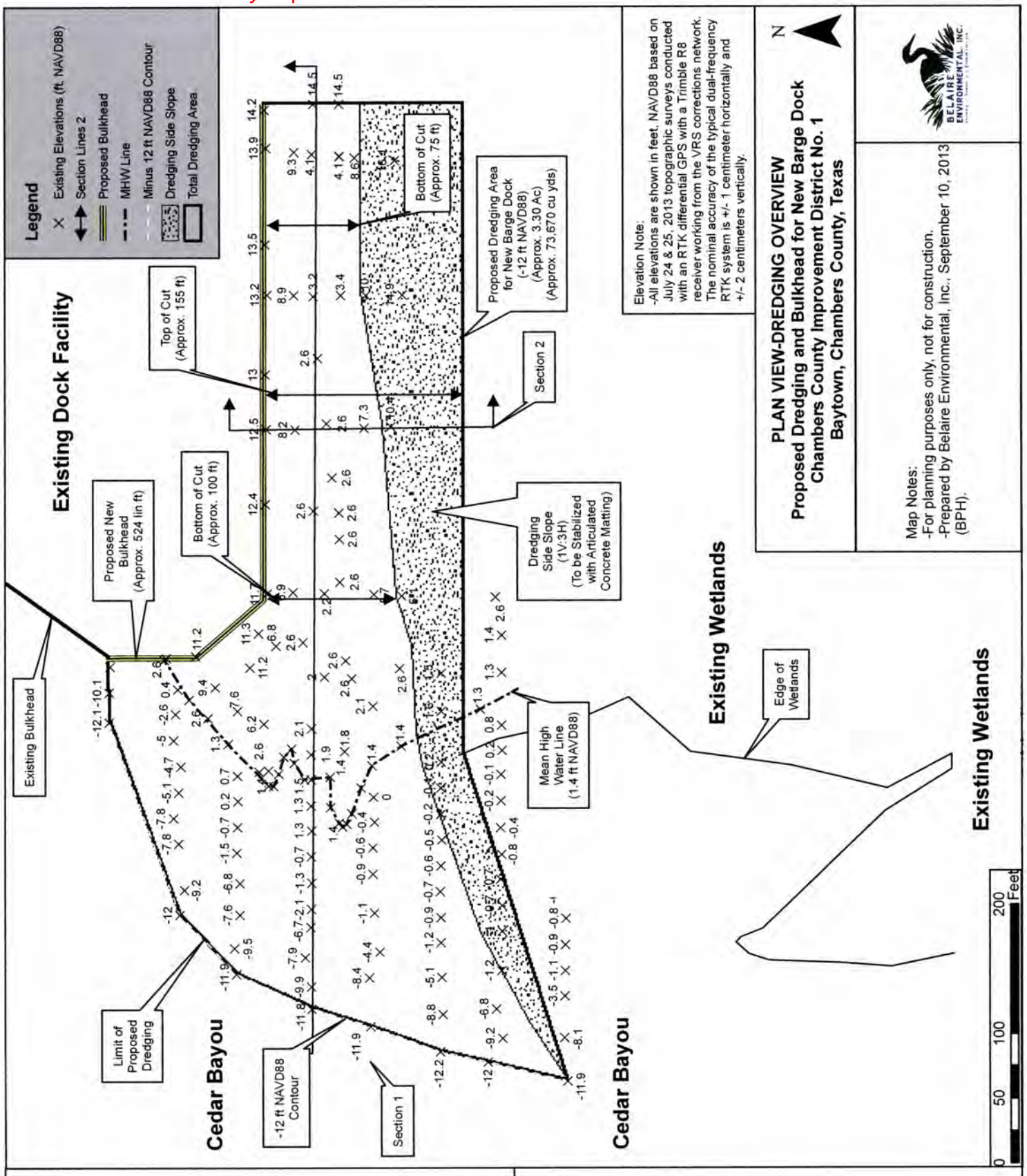

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Permit Application No. _____

Dredging Notes

-The total dredging footprint equals approx. 3.30 Ac.
-Approx. 73,670 cu yds of material will result from mechanical dredging to -12 ft NAVD88.
-All dredged material will be transported via trucks for placement at an adjacent, upland disposal site.
-Dredging will result in approximately 0.33 Ac of impacts to jurisdictional estuarine wetlands and approx. 398 sq ft of impacts to oysters.
-Upon completion of dredging, an approx. 524 lin ft bulkhead will be constructed to stabilize northern and western portions of the proposed dredging area.
-Upon completion of dredging, articulated concrete matting will be placed on side slopes within barge dock area for slope stabilization.

Survey Notes

-All elevations are shown in feet, NAVD88 based on July 24 & 25, 2013 topographic surveys conducted with an RTK differential GPS with a Trimble R8 receiver working from the VRS corrections network. The nominal accuracy of the typical dual-frequency RTK system is +/- 1 centimeter horizontally and +/- 2 centimeters vertically.
-To determine the AHTL, BEI examined the CBI-TAMUCC tide data at CBI Station no. 503 (Morgans Point) to determine the elevation of the highest annual spring tides (March-June) for the period of record, 1993 through 2013. Storm-driven tides were excluded from BEI's AHTL calculations. The sum of each year's highest annual tide (1993-2013) was divided by 21 (the number of years on record) to obtain the mean annual high tide for the 21-year period of record. The AHTL was determined to be +2.61 ft NAVD88 for the period of record. BEI used this elevation to stake the AHTL.
-BEI used the MHW elevation stated on the "Datums" page of CBI-TAMUCC Station no. 503 to determine the MHW elevation for the project area (Approx. +1.37 ft NAVD88).
-BEI used the MLLW elevation stated on the "Datums" page of CBI-TAMUCC Station no. 503 to determine the MLLW elevation for the project area (Approx. +0.12 ft NAVD88).

Mitigation Notes

-An iHGM Functional Assessment was completed to determine that a 1.36:1 mitigation ratio was appropriate to compensate for wetland impacts at the project site.
-The Applicant proposes to plant smooth cordgrass (Spartina alterniflora) and associated low marsh plant species on 3 ft centers and at suitable elevations within the proposed 0.45 Ac mitigation site.
-During preliminary model marsh surveys conducted on July 24 & 25, 2013, BEI found the smooth cordgrass growth range to be within -0.3 ft NAVD88 and +1.4 ft NAVD88. The proposed mitigation site is within the ideal growth range for smooth cordgrass growth without the addition of fill material.
-Approx. 312 lin ft of temporary wave barrier fencing will be installed a minimum of 5 ft bayward of the proposed mitigation site to aid in establishment of planted smooth cordgrass.

PLAN VIEW NOTES
Proposed Dredging & Bulkhead for New Barge Dock
Chambers County Improvement District No. 1
Baytown, Chambers County, Texas

Notes:
-For permitting purposes only, not for construction.
-Prepared by Belaire Environmental, Inc., September 10, 2013 (BPH).

BELAIRE ENVIRONMENTAL, INC.

Proposed Dredging and Bulkhead for New Barge Dock
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Baytown, Chambers County, Texas

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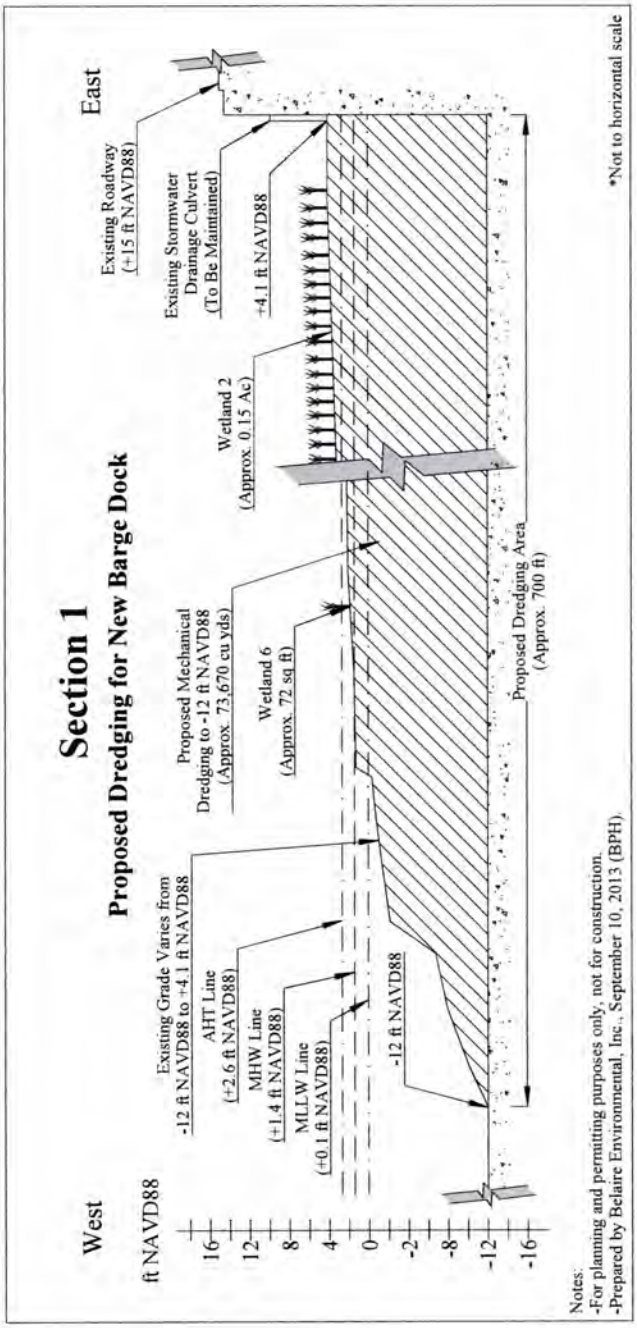
September 10, 2013 Page ___ of ___

Permit Application No. _____



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Baytown, Chambers County, Texas

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P.O. Box 741 Rockport, Texas 78381

September 10, 2013 Page ___ of ___

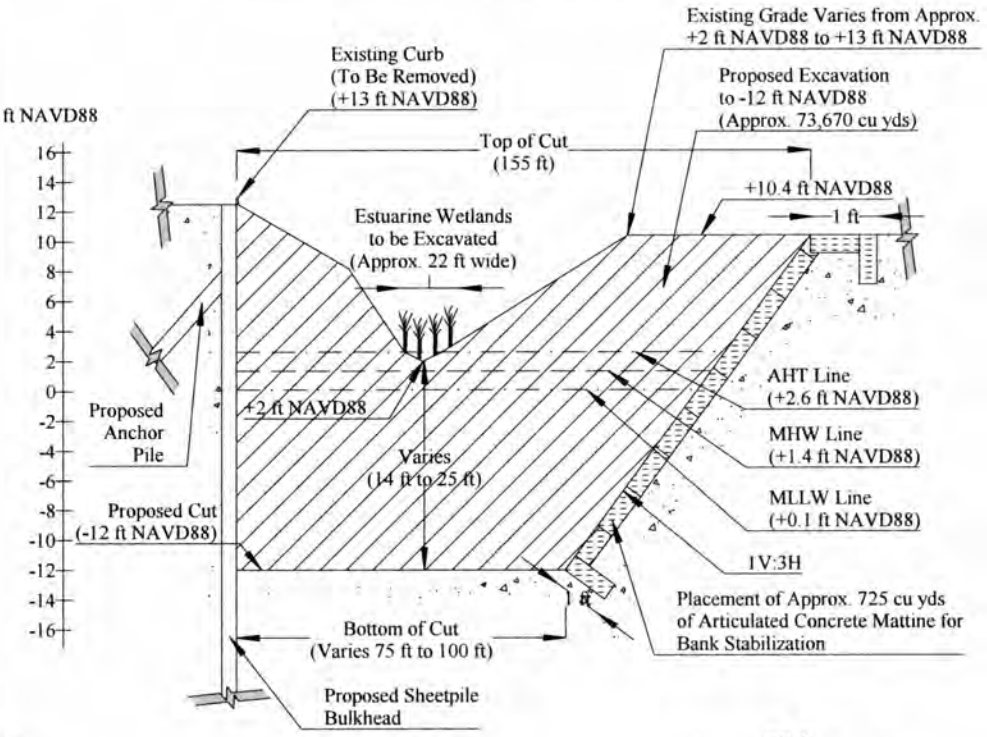
Permit Application No. _____

Section 2

North

Proposed Dredging, Bulkhead, and Articulated Concrete Mat for New Barge Dock

South



Notes:
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-Prepared by Belaire Environmental, Inc., September 10, 2013 (BPH).

Proposed Dredging and Bulkhead for New Barge Dock
Chambers County Improvement District No. 1
Baytown, Chambers County, Texas

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1704 Seamist Drive, Suite 410
Houston, Texas 77008

Agent:
BELAIRE ENVIRONMENTAL, INC.
P.O. Box 741 Rockport, Texas 78381

September 10, 2013 Page ___ of ___

Permit Application No. _____

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Mitigation Notes

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PLAN VIEW NOTES
Proposed Dredging & Bulkhead for New Barge Dock
Chambers County Improvement District No. 1
Baytown, Chambers County, Texas

Notes:
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BELAIRE ENVIRONMENTAL, INC.

Proposed Dredging and Bulkhead for New Barge Dock
Chambers County Improvement District No. 1
Baytown, Chambers County, Texas

Chambers County Improvement District No. 1
1704 Seamist Drive, Suite 410
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P.O. Box 741 Rockport, Texas 78381

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Permit Application No. _____

Mitigation Plan
Proposed Relocated Mitigation
Chambers County Improvement District No.1
Baytown, Chambers County, Texas
SWG-2013-00821
August 3, 2018

The April 10, 2008 USACE/EPA Final Mitigation Rule (2008 Mitigation Rule) outlines 12 Fundamental Components to be uniformly addressed in all compensatory mitigation plans (33 CFR 332.4(c)(2) through (c)(14)) for the purposes of developing successful compensatory mitigation projects and facilitating effective compliance measures. According to the 2008 Mitigation Rule, "the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts." The information below outlines the 12 Fundamental Components of Chambers County Improvement District No. 1's (CCID) proposed compensatory mitigation plan.

I. Objective of the Compensatory Mitigation Plan

A. Method of Compensation

The objective of the compensatory mitigation plan is to provide sufficient created habitat to assure there is no net loss in the function and values of aquatic resources. The applicant proposes to create tidal wetlands as mitigation for permanent impacts due to barge dock expansion activities along Cedar Bayou near Baytown, Chambers County, Texas. The project will impact approximately 0.33 acres of estuarine wetlands. The originally permitted 398 square feet of hard substrate riprap with oysters to be impacted were found to have only dead shell during a May 29, 2018 field survey. A photographic exhibit has been included as Exhibit D.

As mitigation for permanent impacts, the applicant proposes to move the permitted mitigation site upstream approximately 2.1 miles on the eastern side of Cedar Bayou. The proposed relocated site will utilize existing uplands. The relocated mitigation area will total approximately 1.18 acres including planting benches, a circulation channel and an upland buffer. The existing upland chosen for the proposed site will be scraped down to suitable growing elevation for smooth cordgrass (*Spartina alterniflora*). Excavated material will be removed from the mitigation area and placed in an upland area designated by CCID. The proposed middle planting area will be graded and sloped from a southwestern elevation of +0.5 Ft. NAVD88 to a northeastern elevation of +1.8 Ft. NAVD88. The proposed outer planting benches will be graded to an elevation of +1.00 Ft. NAVD88. A perennial stream runs along the southern boundary of the proposed mitigation site. This stream along with tidal exchange from Cedar Bayou will be circulated through the mitigation site via a circulation channel. Proposed circulation channel will be excavated to -0.7 Ft. NAVD88 and will promote tidal circulation and flushing within the interior of the site. An upland buffer of approximately 10-20 Ft. will border the planting benches to create adequate room for side sloping and prevent impacts to the nearby existing wetland. During the mitigation site feasibility survey, the applicant's environmental consultant, Belaire Environmental, Inc. (BEI) noted the shoreline area where upland directly abut Cedar Bayou are eroding. The existing shoreline is eroding. Approximately 168 LF (504 sq ft) of articulated concrete matting will be placed along the existing shoreline to protect the mitigation site and to provide hard substrate to offset the loss of 398 sq ft of hard substrate.

The applicant proposes to plant approximately 0.66 acres of smooth cordgrass within the mitigation site. This will provide a 2:1 mitigation ratio for permanent estuarine wetland impacts, as recommended by the Texas Parks and Wildlife Department (TPWD) during a February 3, 2014 agency site visit to the project area. Due to the project design, an additional 0.18 acres of side slopes will be planted with marsh hay cordgrass (*Spartina* patens) for stabilization.

Mitigation Plan
Proposed Relocated Mitigation
Chambers County Improvement District No.1
Baytown, Chambers County, Texas
SWG-2013-00821
August 3, 2018

B. Manner in which the resource functions of the mitigation will address the needs of the watershed or region

The proposed mitigation site will improve the riparian area of Cedar Bayou. The 1.18 acre mitigation site will aid in filtering stormwater runoff from the adjacent perennial stream prior to flow entering Cedar Bayou. The proposed armored articulated mat shoreline will help stabilize the shoreline and protect the mitigation site from erosive forces from passing vessel traffic in Cedar Bayou. The functions and values of the created wetland include erosion protection, floodwater attenuation, fishery and fish nursery habitat, wading and shorebird foraging, etc. The Cedar Bayou shoreline has been historically impacted by development. Mitigation occurring along the same shoreline of the impact aims to replace and increase the function and value of the impacted wetland.

II. Site Selection

The site selection priority for compensatory mitigation was to identify areas where estuarine wetlands along Cedar Bayou occur and have the potential to thrive. The proposed mitigation site is adjacent to Cedar Bayou and approximately 2.1 miles north of the impacted wetland. The proposed relocated site is zoned by the City of Baytown as open space/recreational. The addition of the mitigation site to this area follows the zoning guidelines and enhances the land use from an upland to a wetland with higher function and value.

The mitigation site was identified by the applicant and their environmental consultant. Baseline data included elevations and salinity levels collected from an adjacent 5.36 acre estuarine wetland located on the shoreline of Cedar Bayou. The selected area was determined to be a suitable area to relocate the permitted mitigation site.

A 2:1 compensatory mitigation ratio was proposed, as recommended by resource agencies in the original permitting process. The planting of 0.66 acres of smooth cordgrass within the mitigation site, the side slope planting of 0.19 acres of marsh hay cordgrass and the armoring of the mitigation site will benefit the riparian corridor of Cedar Bayou and perform the applicant's priority to conduct estuarine marsh establishment as its mitigation project.

III. Site Protection Instrument

Within 60-days of the start of permanent construction in jurisdictional areas, the permittee will consummate and record with the County Clerk of Chambers County, restrictive covenants for the entire 1.18 Ac mitigation site including the upland buffer, planting benches and circulation channel. The permittee owns the property.

IV. Baseline Information (Impact and Compensation Site)

A. Ecological Characteristics of the Impacted Site

Mitigation Plan
Proposed Relocated Mitigation
Chambers County Improvement District No.1
Baytown, Chambers County, Texas
SWG-2013-00821
August 3, 2018

From July 24-26, 2013, at the request of CCID, BEI performed a wetland/jurisdictional determination and delineation for the proposed 3.30-acre barge dock expansion area located approximately 1 mile southeast of the town of Baytown, Texas and adjacent to Cedar Bayou, Chambers County, Texas. The approximately 3.30-acre proposed dredging area stretches approximately 350 linear feet along Cedar Bayou and extends inland approximately 700 feet to the eastern project boundary. Land features within the proposed project area consisted of an approximately 100-ft wide, partially tidally influenced, man-made ditch containing both uplands and volunteer estuarine wetlands, a native smooth cordgrass-dominated estuarine wetland on the shoreline of Cedar Bayou, brushland and routinely mowed/maintained grassland.

Two wetland vegetation communities were present within the project area (Wetland Vegetation Community A and Wetland Vegetation Community B). Wetland Vegetation Community A consisted of an approximately 0.17-acre estuarine wetland (Wetland 1) that was typically dominated by smooth cordgrass with coastal salt grass (*Distichlis spicata*), salt-meadow cord grass (*Spartina patens*) and Roemer's rush (*Juncus roemerianus*) also present but not dominant within the vegetation community. Wetland Vegetation Community A was located on the shoreline of Cedar Bayou and was tidally influenced and relatively flat (Approx. 1-2% slope).

Wetland Vegetation Community B (Approx. 0.16 Ac) consisted of volunteer estuarine wetlands (Wetlands 2-10) located in the bottom of the recently excavated, man-made ditch. Wetland 2 (Approx. 0.15 Ac) is the largest wetland within Wetland Vegetation Community B and is located in the interior of the ditch while Wetlands 3-10 are all less than 0.1-acre and are located at the mouth of the ditch.

During the July, 2013 project field work, BEI also identified and mapped approximately 398 square feet of scattered live oysters at the mouth of the existing drainage ditch within the project site. The oysters were observed growing on concrete riprap which was placed at the mouth of the existing drainage ditch during its original construction to combat erosion of the ditch from high tides and vessel traffic within Cedar Bayou. During a May 28, 2018, field survey, BEI visited the same location and observed whole dead oyster shells. Therefore, BEI is requesting the oyster relocation be removed from the mitigation plan. The proposed articulated concrete matting for shoreline stabilization at the relocated mitigation site will provide hard substrate for oysters natural establishment.

The remainder of the impact site consists of unvegetated shallows at the mouth of the existing drainage ditch.

B. Ecological Characteristics of the Compensation Site

On May 30, 2018, at the request of CCID, BEI performed a mitigation feasibility survey and a wetland delineation of the proposed 1.18 acre relocated mitigation site located 2.5 miles east of the town of Baytown, Texas and adjacent to Cedar Bayou, Chambers County, Texas.

The proposed mitigation site is adjacent to Cedar Bayou and connects to a perennial stream to the south. The proposed site parallels and runs behind an existing 5.36 acre existing estuarine wetland. The upland site consists primarily of herbaceous vegetation (*Iva annua* and *Cynodon*

dactylon) with a strip of trees (*Triadica sebifera* and *Quercus* species) bordering the eastern boundary.

V. Determination of Credits

During the permitting process for the existing permit, it was determined that a 2:1 mitigation to impact ratio was sufficient for impacts to this project. The *SWG Tidal Fringe HGM (Interim)* guidance determined that using a 2:1 ratio for the proposed relocated mitigation site will result in a net gain in function and values from estuarine wetlands lost during project excavation.

Of the 0.33 acre of estuarine wetlands that will be impacted by the proposed barge dock expansion project, only 0.17 acre of the impacted wetlands are high quality, native wetlands dominated by smooth cordgrass. The remaining 0.16 acre of impacted wetlands consisted of low-quality, volunteer estuarine wetlands located in the bottom of the recently excavated, man-made ditch. The majority (eight out of nine) of the volunteer wetlands are very small in size and provide little value in terms of water quality or habitat values. The proposed mitigation site will not only replace twice the amount of estuarine wetlands impacted by the proposed project, but adequately compensates for the functions and values that will be lost at the project site.

VI. Mitigation Work Plan

A. Geographic Boundaries

The proposed 3.30-acre barge dock expansion area is located approximately 1 mile southeast of the town of Baytown, Texas and adjacent to Cedar Bayou, Chambers County, Texas. The approximately 3.30-acre proposed dredging area stretches approximately 350 linear feet along Cedar Bayou and extends inland approximately 700 feet to the eastern project boundary. The proposed mitigation site is located approximately 2.1 miles north of the project site on the eastern bank of Cedar Bayou and is bound to the north by an existing, native smooth cordgrass-dominated estuarine wetland.

B. Construction Methods

Barges or an upland land route will be used to bring construction equipment to the site depending upon contractor preference, final design and cost evaluations. Timber mats will be used to minimize impacts during equipment access. Mitigation site construction will begin with marking the project boundaries and placing silt fence and/or hay bale BMPs around the project boundary to discourage sediment runoff during construction activities. Site excavation will begin, and material will be removed from the mitigation site and placed in an upland area designated by CCID. After excavating and shaping the proposed mitigation planting benches and side slopes the circulation channels will be excavated. After excavation work is complete, equipment will be removed from the site and the articulated concrete matting will be installed to stabilize the shoreline from erosion.

Due to the length of time between the beginning of impacts and mitigation site planting, it is not economically feasible to harvest, pot and maintain transplant stock from the impact site. The applicant proposes to obtain plant material from the NRG ponds in Baytown or other approved

sources. Plants will be transported via boat, and carried in tubs into the mitigation site for planting. A transplanting permit from TPWD will be obtained prior to harvesting, transplanting and replanting smooth cordgrass within the mitigation site.

C. Timing and Sequence

All construction of mitigation, including planting, will be completed within 18 months after start of construction within jurisdictional areas.

D. Connections to Existing Waters and Uplands

The proposed mitigation site will be directly connected to tidal waters of Cedar Bayou via the circulation channels excavated to an elevation below Mean High Water.

E. Methods for Establishing Plant Community

The proposed smooth cordgrass (*Spartina alterniflora*) planting area within the proposed mitigation site will range in elevation from +0.5 ft NAVD88 to +1.8 ft NAVD88 based on the target hydrologic regime, marsh elevations and plant communities identified within reference marshes adjacent to the proposed mitigation site. The reference marsh sites were used as a basis for achieving appropriate hydrological features, marsh elevation and plant community success at the mitigation site. Planting at the mitigation site will be conducted after installation of the shoreline stabilization and 60-days after the completion of earthwork at the site to allow for settling. Planting will be performed generally according to the following guidelines:

1. Smooth cordgrass and marsh hay cordgrass will be planted on 3-ft centers. A planting unit will consist of a single stem of smooth cordgrass with viable roots. Each planting unit will be securely embedded in the planting surface.
2. Plant material will be borrowed from approved sources. The applicant will obtain the necessary TPWD permit prior to conducting transplanting activities.
3. If required by the TPWD permit, no more than one 6" plug of source material per one square yard shall be obtained from the designated borrow areas. Incidental damage to borrow areas shall be strictly avoided.
4. Complete photographic coverage of planting area taken immediately prior to and following transplant activities shall be submitted to the USACE and proper resource agencies.
5. USACE and proper resource agencies shall be notified in writing upon completion of the planting effort.

F. Erosion Control Measures

Best Management Practices (BMPs) for soil erosion and sediment control will be utilized during project construction and mitigation site construction to the maximum extent practical. During construction, a silt curtain with floating boom will be placed around and seaward of the construction area to control turbidity and suspended sediments.

Mitigation Plan
Proposed Relocated Mitigation
Chambers County Improvement District No.1
Baytown, Chambers County, Texas
SWG-2013-00821
August 3, 2018

VII. Maintenance Plan

The site will be maintained during monitoring periods, as described in Section IX, below. Any potential invasive species, as listed in Section IX.a.4., below, will be removed. The monitoring schedule and maintenance plans are outlined in Sections VIII and IX, respectively.

VIII. Performance Standards

Success criteria for annual monitoring events are as follows:

Year 1 – 25 percent cover
Year 2 – 50 percent cover
Year 3 – 70 percent cover
Year 4 – 70 percent cover
Year 5 – 70 percent cover

IX. Monitoring Requirements

The applicant will implement a monitoring program at the proposed mitigation site for a period of five years or may be released from monitoring if the site has at least two consecutive monitoring events that document performance standards (70% percent coverage). Mitigation monitoring and reporting will be conducted as follows.

A. Mitigation Site Monitoring and Reporting

1. USACE shall be notified in writing upon completion of the initial planting effort.
2. A monitoring effort will be conducted within 60 days following the initial planting. If 50% survival of the transplant material is not achieved, a 2nd planting effort will be made within the next 30 days following the 60-day monitoring effort. A written report detailing the results of the effort shall be submitted within 30 days following the 60-day monitoring event or within 30 days following the replanting.
3. A monitoring study will be conducted following planting. The percent coverage will be monitored within the mitigation site. Monitoring studies will note any unusual sedimentation variations and will include depth of soft-sediment accumulations throughout the site. Rates of erosion and other observations will also be made. Subsequent progress reports containing the referenced information shall be submitted to the USACE 6-months after the initial planting, then yearly for a period of five years. The mitigation site will be considered to have met performance standards if there are at least two consecutive monitoring events that document 70% vegetative coverage within the respective sites or if 70% coverage has been met by the Year 5 monitoring event.
4. Undesirable species control for Chinese tallow (*Triadica sebifera*), Brazilian pepper (*Schinus terebinthifolius*), salt cedar (*Tamarix ramosissima*), common reed (*Phragmites australis*) and Australian pine (*Casuarina equisetifolia*) will be conducted prior to each monitoring event and the status of invasive species will be discussed in each monitoring report. Any invasive species encountered during mitigation site monitoring events will be sprayed with herbicide.

5. If the mitigation site has not achieved 70% vegetation coverage at the three-year, four-year and/or five-year monitoring period, the areas not achieving 70% coverage will be replanted to the original specifications. Replanting will occur annually if 70% coverage is not achieved during any of the additional monitoring efforts. The mitigation site will be considered to have met performance standards if there are at least two consecutive monitoring events that document 70% vegetative coverage within the site or if the site reaches 70% coverage at the Year 5 monitoring.
6. Monitoring reports will list the monitoring requirements and performance standards and evaluate the compensatory mitigation site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points, and/or other pertinent features. A general statement will be included describing the conditions of the sites. If performance standards are not being met, an explanation of the difficulties and potential remedial actions proposed by the permittee, including a timetable will be provided.

X. Long-term Management Plan

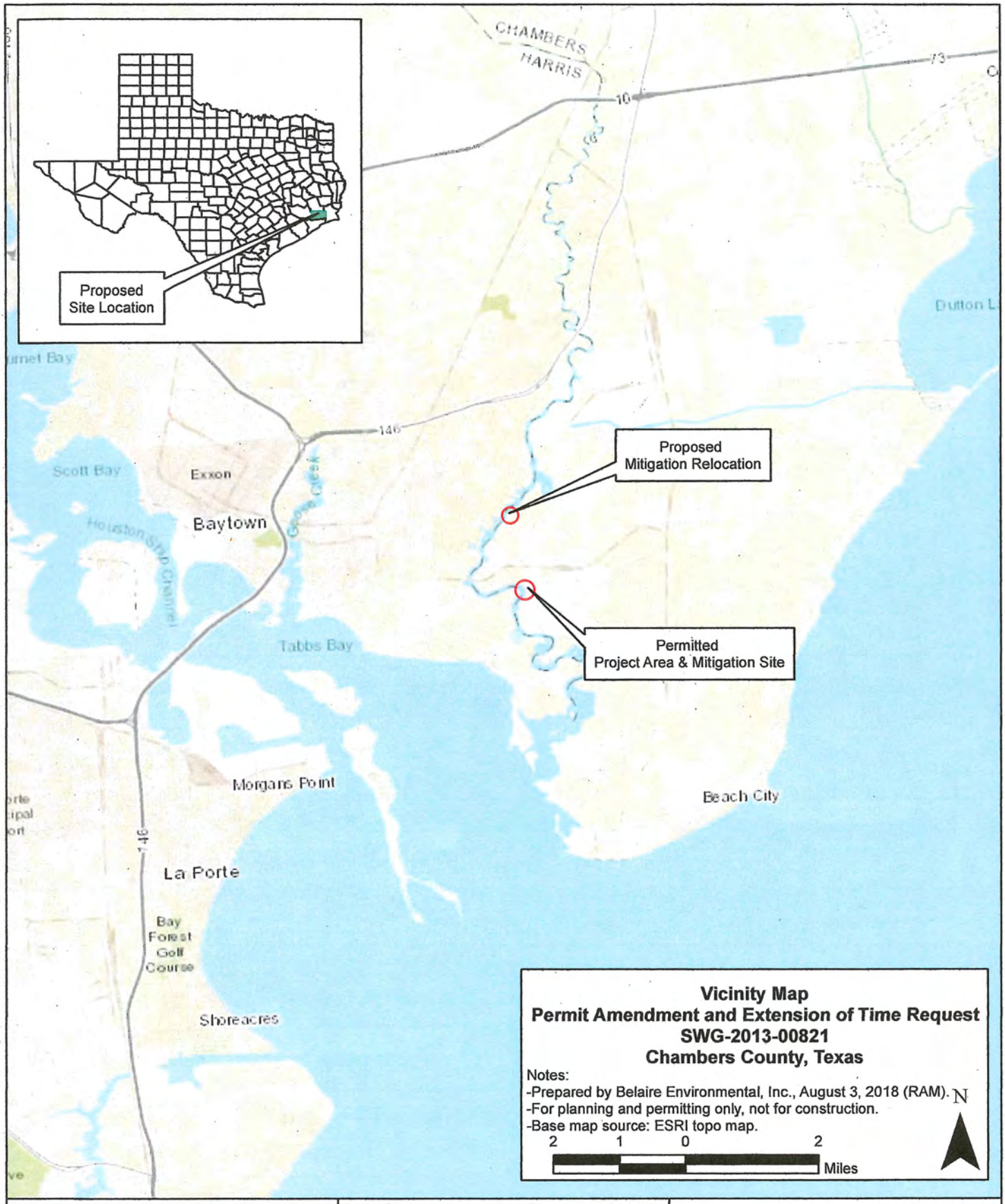
Long-term management may include measures agreed upon by the applicant and the USACE if the site does not meet ecological performance standards defined in Section VIII. The proposed site is expected to be self-sustaining.

XI. Adaptive Management

If results of the monitoring indicate that the mitigation is not successful, the applicant will coordinate with the USACE in an attempt to agree upon the appropriate course of action. In the event of a discreet storm event or other "Act of God", CCID will discuss with the USACE how to best bring the site up to performance standards.

XII. Financial Assurances

Financial Assurances for the mitigation site will be provided via either an escrow account or bond and will be financially-based off the costs associated with Sections IX and X, above. The applicant will work with USACE personnel and their environmental consultant to determine an appropriate escrow account amount or bond amount to insure the completion of Sections IX and X, above.



Vicinity Map
Permit Amendment and Extension of Time Request
SWG-2013-00821
Chambers County, Texas

Notes:
-Prepared by Belaire Environmental, Inc., August 3, 2018 (RAM).
-For planning and permitting only, not for construction.
-Base map source: ESRI topo map.

Permit Amendment and EOT Request
SWG-2013-00821

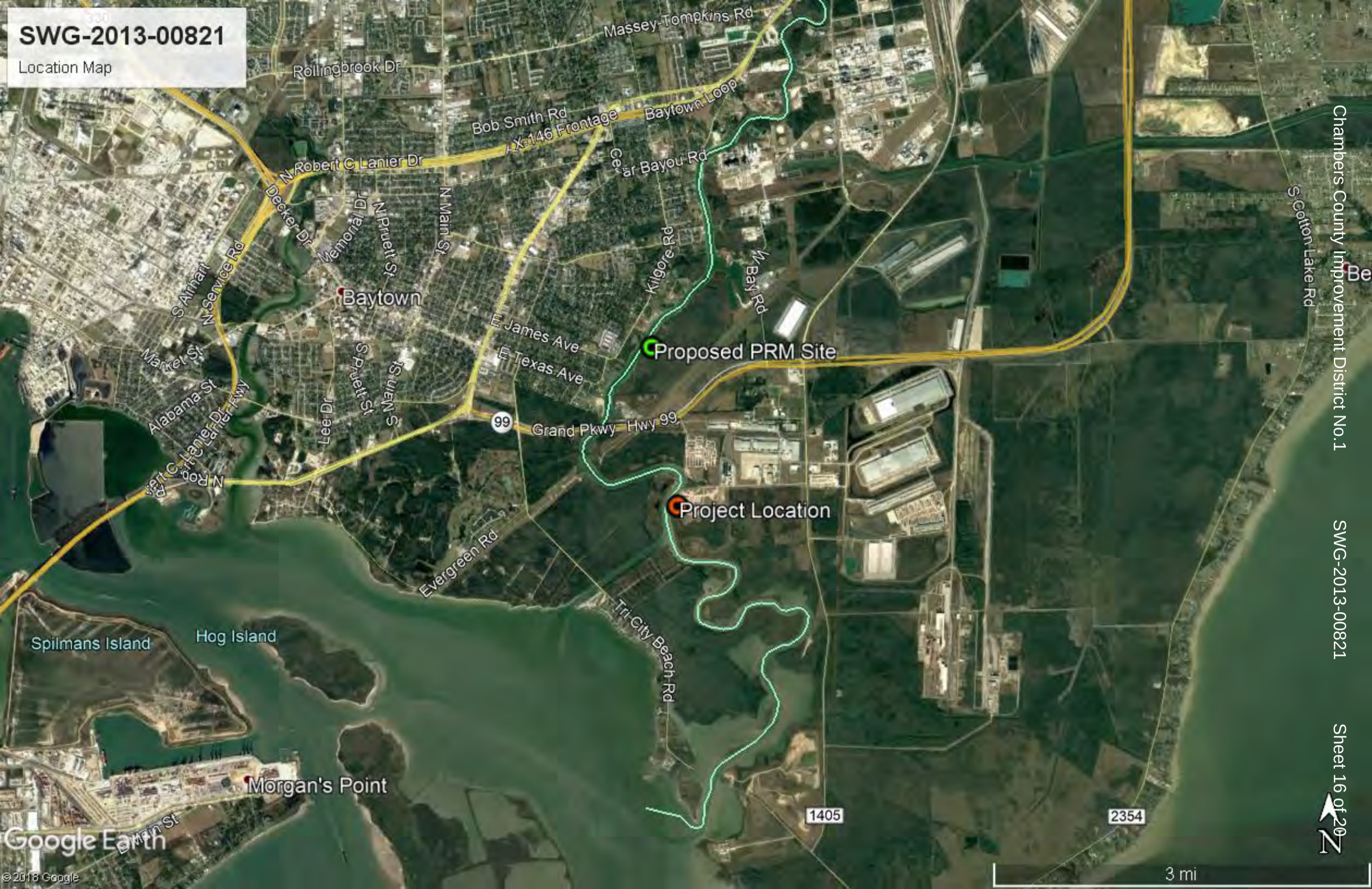
Chambers County Improvement District No.1
7500 FM 1405
Baytown, TX 77532

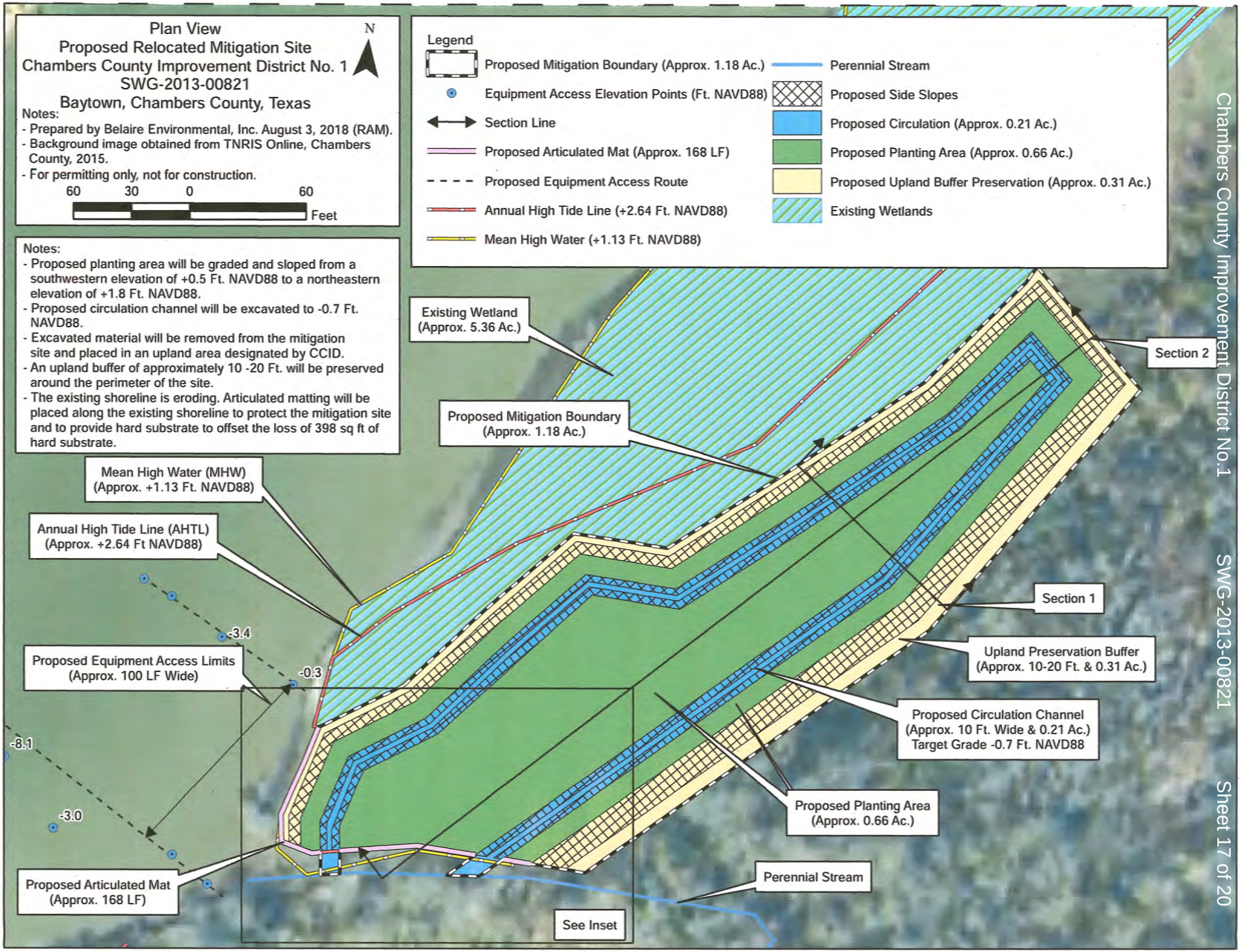
BELAIRE ENVIRONMENTAL, INC.

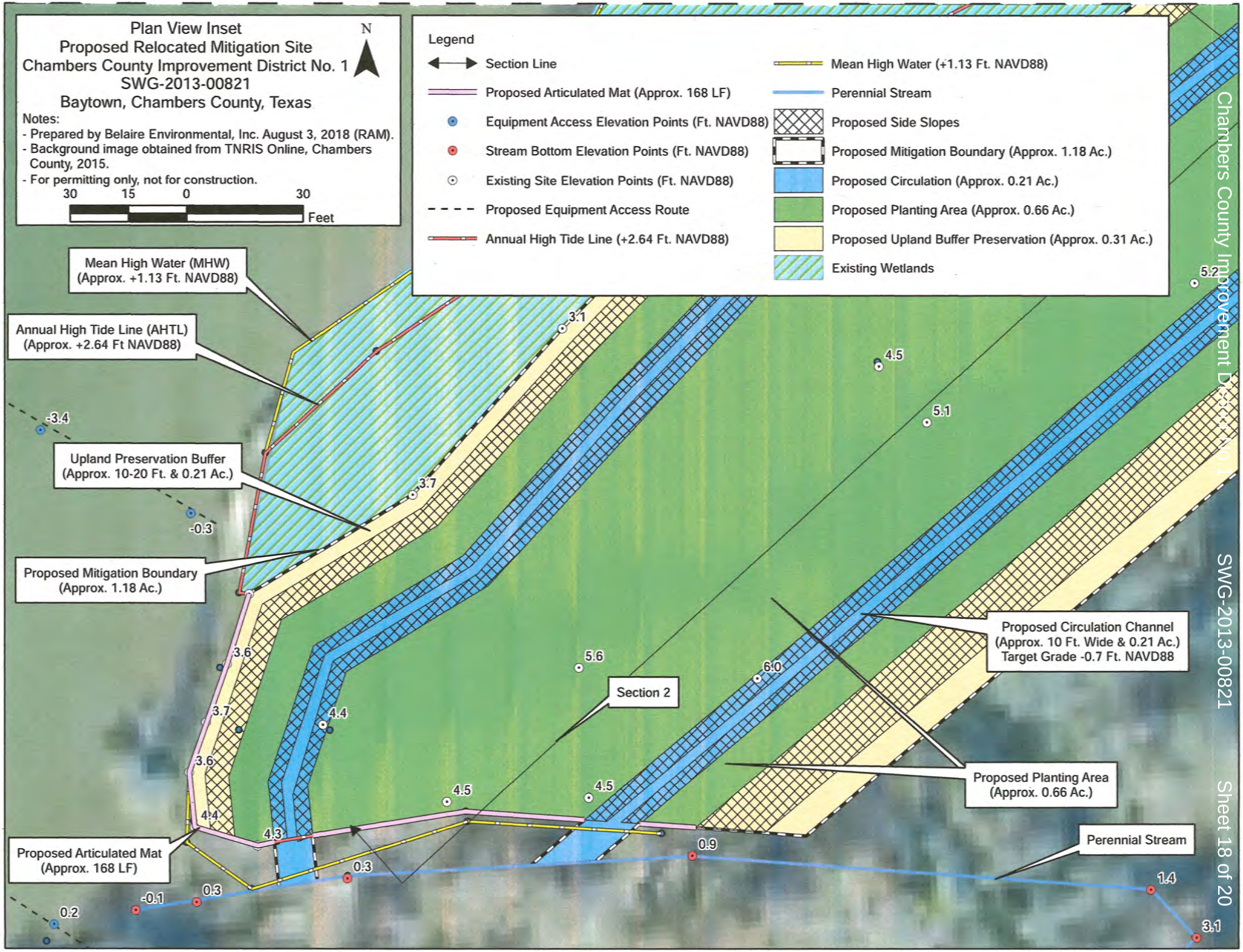
PREPARED BY:

BELAIRE ENVIRONMENTAL, INC.
P.O. BOX 741 ROCKPORT, TX 78381

August 3, 2018 Page __ of __


SWG-2013-00821
Location Map
Massey-Tompkins Rd
Rollingbrook Dr
Bob Smith Rd
FM-146 Frontage
Baytown Loop
N Robert C Lanier Dr
Cedar Bayou Rd
Decker Dr
Memorial Dr
N Pruett St
N Main St
Kilgore Rd
W Bay Rd
S Colton Lake Rd
S Airhart
N Service Rd
Baytown
E James Ave
E Texas Ave
Proposed PRM Site
Market St
Alabama St
S Pruett St
S Main St
Lee Dr
99
Grand Pkwy - Hwy 99
Project Location
Evergreen Rd
Tri City Beach Rd
Spilmans Island
Hog Island
Morgan's Point
1405
2354
Google Earth
© 2018 Google
3 mi
N
Chambers County Improvement District No.1
SWG-2013-00821
Sheet 16 of 20


Plan View
Proposed Relocated Mitigation Site
Chambers County Improvement District No. 1
SWG-2013-00821
Baytown, Chambers County, Texas
N
Notes:
- Prepared by Belaire Environmental, Inc. August 3, 2018 (RAM).
- Background image obtained from TNRIS Online, Chambers County, 2015.
- For permitting only, not for construction.
60 30 0 60
Feet
Notes:
- Proposed planting area will be graded and sloped from a southwestern elevation of +0.5 Ft. NAVD88 to a northeastern elevation of +1.8 Ft. NAVD88.
- Proposed circulation channel will be excavated to -0.7 Ft. NAVD88.
- Excavated material will be removed from the mitigation site and placed in an upland area designated by CCID.
- An upland buffer of approximately 10 -20 Ft. will be preserved around the perimeter of the site.
- The existing shoreline is eroding. Articulated matting will be placed along the existing shoreline to protect the mitigation site and to provide hard substrate to offset the loss of 398 sq ft of hard substrate.
Legend
Proposed Mitigation Boundary (Approx. 1.18 Ac.)
Equipment Access Elevation Points (Ft. NAVD88)
Section Line
Proposed Articulated Mat (Approx. 168 LF)
Proposed Equipment Access Route
Annual High Tide Line (+2.64 Ft. NAVD88)
Mean High Water (+1.13 Ft. NAVD88)
Perennial Stream
Proposed Side Slopes
Proposed Circulation (Approx. 0.21 Ac.)
Proposed Planting Area (Approx. 0.66 Ac.)
Proposed Upland Buffer Preservation (Approx. 0.31 Ac.)
Existing Wetlands
Existing Wetland (Approx. 5.36 Ac.)
Section 2
Proposed Mitigation Boundary (Approx. 1.18 Ac.)
Mean High Water (MHW) (Approx. +1.13 Ft. NAVD88)
Annual High Tide Line (AHTL) (Approx. +2.64 Ft NAVD88)
-3.4
-0.3
-8.1
-3.0
Proposed Equipment Access Limits (Approx. 100 LF Wide)
Section 1
Upland Preservation Buffer (Approx. 10-20 Ft. & 0.31 Ac.)
Proposed Circulation Channel (Approx. 10 Ft. Wide & 0.21 Ac.) Target Grade -0.7 Ft. NAVD88
Proposed Planting Area (Approx. 0.66 Ac.)
Proposed Articulated Mat (Approx. 168 LF)
Perennial Stream
See Inset
Chambers County Improvement District No.1
SWG-2013-00821
Sheet 17 of 20


Plan View Inset
Proposed Relocated Mitigation Site
Chambers County Improvement District No. 1
SWG-2013-00821
Baytown, Chambers County, Texas
N
Notes:
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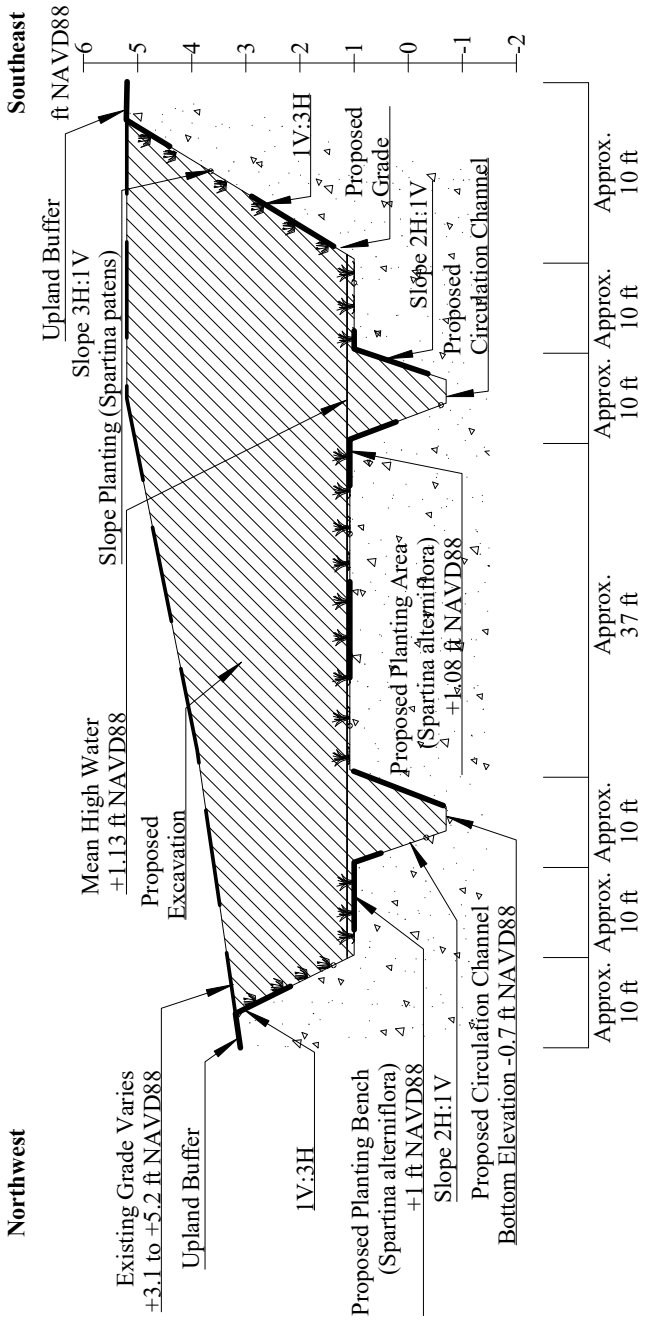
30 15 0 30
Feet
Legend
Section Line
Proposed Articulated Mat (Approx. 168 LF)
Equipment Access Elevation Points (Ft. NAVD88)
Stream Bottom Elevation Points (Ft. NAVD88)
Existing Site Elevation Points (Ft. NAVD88)
Proposed Equipment Access Route
Annual High Tide Line (+2.64 Ft. NAVD88)
Mean High Water (+1.13 Ft. NAVD88)
Perennial Stream
Proposed Side Slopes
Proposed Mitigation Boundary (Approx. 1.18 Ac.)
Proposed Circulation (Approx. 0.21 Ac.)
Proposed Planting Area (Approx. 0.66 Ac.)
Proposed Upland Buffer Preservation (Approx. 0.31 Ac.)
Existing Wetlands
Mean High Water (MHW) (Approx. +1.13 Ft. NAVD88)
Annual High Tide Line (AHTL) (Approx. +2.64 Ft NAVD88)
Upland Preservation Buffer (Approx. 10-20 Ft. & 0.21 Ac.)
Proposed Mitigation Boundary (Approx. 1.18 Ac.)
Proposed Articulated Mat (Approx. 168 LF)
Proposed Circulation Channel (Approx. 10 Ft. Wide & 0.21 Ac.) Target Grade -0.7 Ft. NAVD88
Section 2
Proposed Planting Area (Approx. 0.66 Ac.)
Perennial Stream
-3.4
-0.3
3.1
3.7
3.6
3.7
3.6
4.4
4.3
4.4
4.5
4.5
5.6
6.0
4.5
5.1
5.2
0.9
0.3
-0.1
0.3
0.2
1.4
3.1
Chambers County Improvement District No. 1
SWG-2013-00821
Sheet 18 of 20

Section View 1
Proposed Relocated Mitigation
Chambers County Improvement District No. 1
SWG-2013-00821



NOTES:
- All proposed finish grades are shown in feet, NAVD88, based on a May 29, 2018 topographic model marsh survey, as well as BEI's past experience regarding marsh growth-range elevations in the area.
- The proposed bench planting areas will be planted with Spartina alterniflora on three foot centers.
- The proposed 1V:3H side slopes will be planted with Spartina patens on three foot centers.
- The upland buffer will be remain in "as is" conditions, presence of any invasive species will be treated.
- The horizontal and vertical configuration of the constructed features may be adjusted to accomodate on-site conditions.
- Prepared by Belaire Environmental, Inc. August 3, 2018 (RAM).
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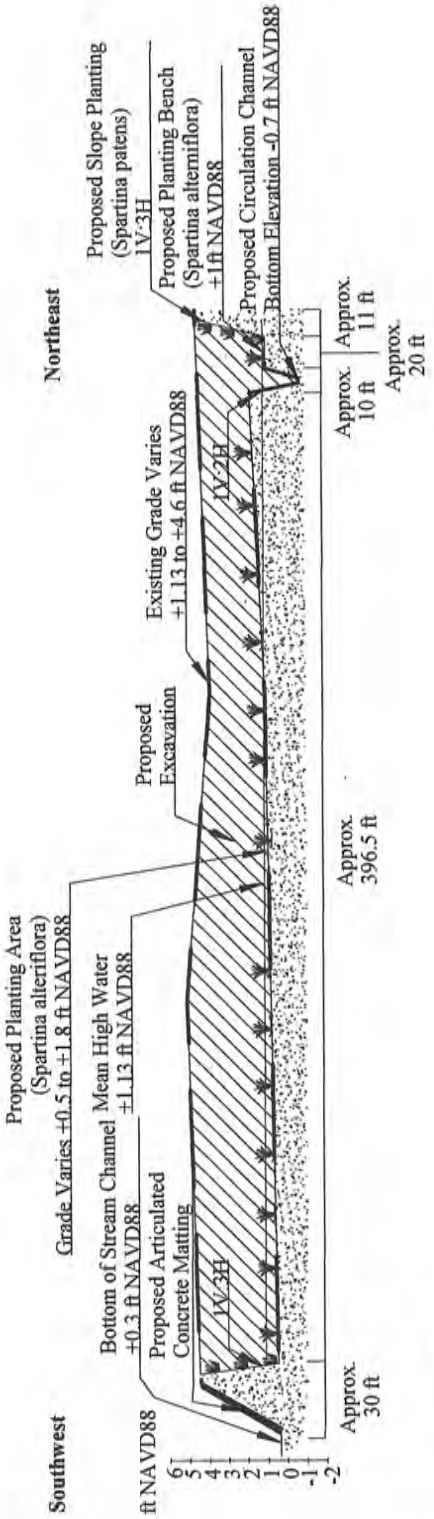
Section View 2
Proposed Relocated Mitigation
Chambers County Improvement District No. 1
SWG-2013-00821



NOTES:
- All proposed finish grades are shown in feet, NAVD88, based on a May 29, 2018 topographic model marsh survey, as well as BEI's past experience regarding marsh growth-range elevations in the area.
- The proposed bench planting areas will be planted with Spartina alterniflora on three foot centers.
- The proposed 1V:3H side slopes will be planted with Spartina pateus on three foot centers.
- The upland buffer will be remain in "as is" conditions, presence of any invasive species will be treated.
- The horizontal and vertical configuration of the constructed features may be adjusted to accomodate on-site conditions.
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Proposed Relocated Mitigation SWG-2013-00821 Chambers County Improvement District No. 1 7500 FM 1405 Baytown, TX 77523	BELAIRE ENVIRONMENTAL, INC.	PREPARED BY: BELAIRE ENVIRONMENTAL P.O. Box 741 Rockport, TX 78381 August 3, 2018 page __ of __