Permit Application No #SWG 2009-00833
Rollover Pass Closure Project
Response to Request for Additional Information

As requested in your letter dated February 4, 2010, this submittal provides additional information in support of the Department of the Army permit application submitted on January 14, 2010. The requests in the above referenced letter are shown in italicized type face below, followed by our responses in regular type face.

Request:

- *As requested in our January 14, 2010, meeting, a complete description and precise location of all proposed activities proposed in waters or wetlands, including necessary drawings, sketches, or plans necessary for public notice on 8.5- x 11-inch sheets. These drawings should clearly depict the mean high water mark and, on beach areas, the high tide line.*

- *Plan view and cross-section elevation profile drawings showing the general and specific site location and character of all proposed activities.*

Response: Attachment A to this submittal contains 8.5- x 11-inch permit application drawings with the requested information.

Request:

- *For activities involving the discharge of dredged material into waters of the United States, a description of the type and quantity of the material; including appropriate dredged material testing data.*

Response: We estimate, based on bathymetry and topography data collected in August and October 2009, the proposed project will require placement of roughly 170,000 cubic yards of material (excluding construction losses) to fill Rollover Pass and provide a beach on the Gulf of Mexico shoreline. The Texas GLO is currently obtaining the requested data concerning quality of dredged material proposed for discharge into waters of the United States. We will provide the necessary information as soon as it is available.

Request:

- *A delineation of any Special Aquatic Sites (SAS), such as wetlands or mudflats, which may be impacted by the proposal. There appear to be some potential wetland areas on the southeast and southwest comers of the project (bay side) which appear to be part of the overall project. These areas, if present, would also need to be clearly shown on the permit application drawings.*

Response: Attachment A contains 8.5- x 11-inch permit application drawings with a delineation of potential jurisdictional waters within and adjacent to the project footprint, Attachment B contains a report detailing the delineation of those potential waters, and Attachment C contains a completed and signed Preliminary Jurisdictional Determination Form. The project footprint includes no mudflats, wetlands, or other significant habitats, and avoids, insofar as possible, potential jurisdictional areas.

Request:

- *A discussion of all attempts to avoid impacts to SAS where practicable to do so, minimize impacts to unavoidable impacts to SAS areas; especially wetlands and compensate for unavoidable wetland losses, considering the project's overall primary purpose. A discussion of alternatives considered during your review process and an explanation of your choosing this alternative is also required.*

Response: Attachment D contains a discussion of wetland avoidance, impact, and mitigation for the proposed project.

Request:

- *A conceptual mitigation plan to off-set unavoidable habitat impacts to jurisdictional areas.*

Response: Attachment D addresses project avoidance, minimization, and mitigation for proposed impacts. Note that we are proposing no impacts to Special Aquatic Sites (SAS) (none exist within the project footprint) and are proposing no mitigation for impacts to possible aquatic resources identified in the PJD.

Request:

- *We understand that you are proposing a fishing pier at some point in the future to mitigate impacts to the recreational fishing industry that may occur. Please also submit any plans for this structure. If you have not yet decided on its location, a list of possible locations and approximate dimensions and appurtenances, such as parking areas, should be provided to assist us in looking at overall project impacts.*

Response: The Texas GLO will provide more detailed information as the mitigation plan develops. At this time, the GLO and the stakeholders are working together to identify appropriate mitigation opportunities. The statement below describes the current status of that effort.

<u>Mitigation of Recreational Opportunities Impacted by Pass Closure</u>

The closure of Rollover Pass was authorized by SB 2043 which requires the Commissioner to develop and approve a mitigation plan for the loss of recreational opportunities if the Commissioner determines that the pass should be closed and such closure results in the loss of public recreational opportunities. The Commissioner is required to consult with the Texas Parks and Wildlife Department, Galveston County and the City of Gilchrist in developing the mitigation plan and is strongly encouraged by the legislature to study the feasibility of installing public fishing piers, boat ramps or other facilities to provide mitigation for the loss of public recreational opportunities.

In developing the mitigation plan, the GLO is currently working with the citizens of Gilchrist, specifically the Gulf Coast Rod, Reel and Gun Club (GRRGC) and the Gilchrist Community Association (GCA), to identify suitable mitigation for recreational opportunities that will be lost due to the closure of Rollover Pass. Shoreline fishing comprises the main recreational opportunity at Rollover Pass. Options under consideration to provide access to waters of the Gulf of Mexico and East Bay include piers extending into the Gulf of Mexico and/or Rollover Bay; additional boat ramps, and shoreline access in suitable locations. Recreational facility designs will consider and insofar as possible incorporate components to provide easy access to handicapped individuals and the senior population.

Although the locations of these recreational amenities are subject to change, the GLO currently envisions the potential recreational amenities being located in the following areas as shown in the figure below:

Gulf Pier — Within the current Rollover Pass opening to the Gulf of Mexico
Bay Pier — Within the current Rollover Pass opening into Rollover Bay
Bayside Boat Ramp — Directly east of the current Rollover Pass opening into Rollover Bay

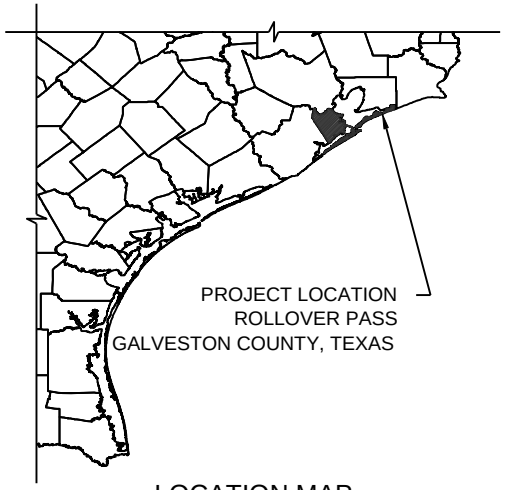
The size and design of the potential Gulf Pier and Bay Pier have not been decided. However, the GLO currently sees both Piers constructed of concrete with removable or blow away decks, similar to Bob Hall Pier in Nueces County. The GLO also envisions each Pier extending between 1,000 and 1,500 feet in length.

The GLO is also planning on constructing proper parking and public assistance facilities, such as restrooms, near the potential recreational amenities site(s). If construction of the recreational amenities takes place in and around the Rollover Pass area, these parking and public assistance facilities will be placed on the currently paved adjacent lands to the Pass.

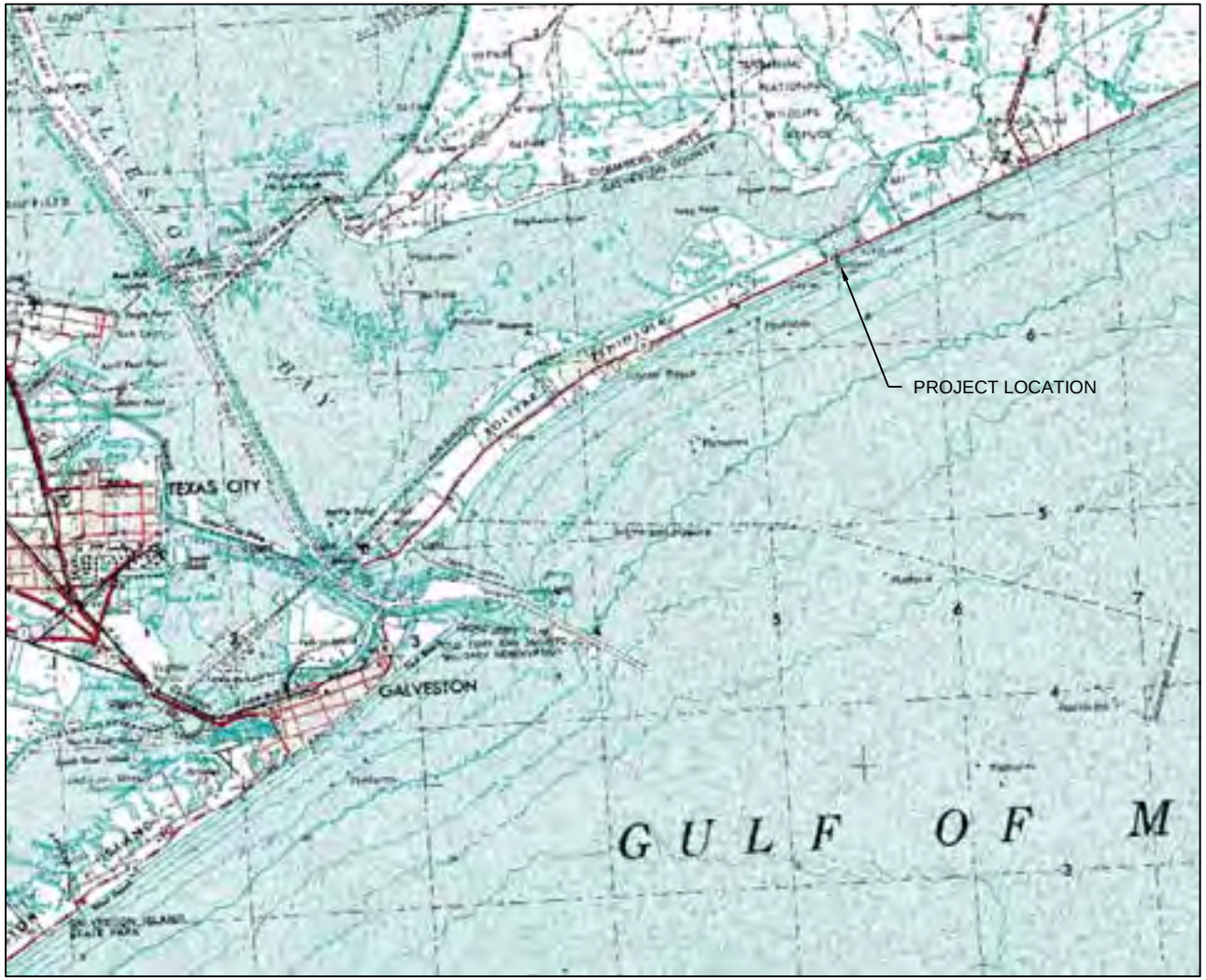
The GLO plans on coordinating with the Texas Parks and Wildlife Department in the near future to come up with more concrete recreational options and funding sources for these mitigation options. Once a more solidified set of recreational options in created, the GLO intends to distribute these options to the public and then hold a larger public meeting for all interested parties. From this meeting, the GLO hopes to find the most suitable recreational option(s) for all parties. This may mean constructing the recreational amenities not within the immediate Rollover Pass area. Notably, the GLO will submit a separate Department of the Army permit application for the selected recreational mitigation option(s).

ROLLOVER PASS CLOSURE PROJECT

GALVESTON COUNTY, TEXAS



LOCATION MAP
GULF COAST, TEXAS
NOT TO SCALE



VICINITY MAP
1"= 10,000'

DRAWING INDEX

1 COVER SHEET
2 OVERVIEW
3 KEY SHEET
4 ROLLOVER PASS CLOSURE PLAN AND PROFILE
5 ROLLOVER PASS CLOSURE PLAN AND PROFILE
6 ROLLOVER PASS CLOSURE PLAN AND PROFILE
7 PIPELINE ROUTE

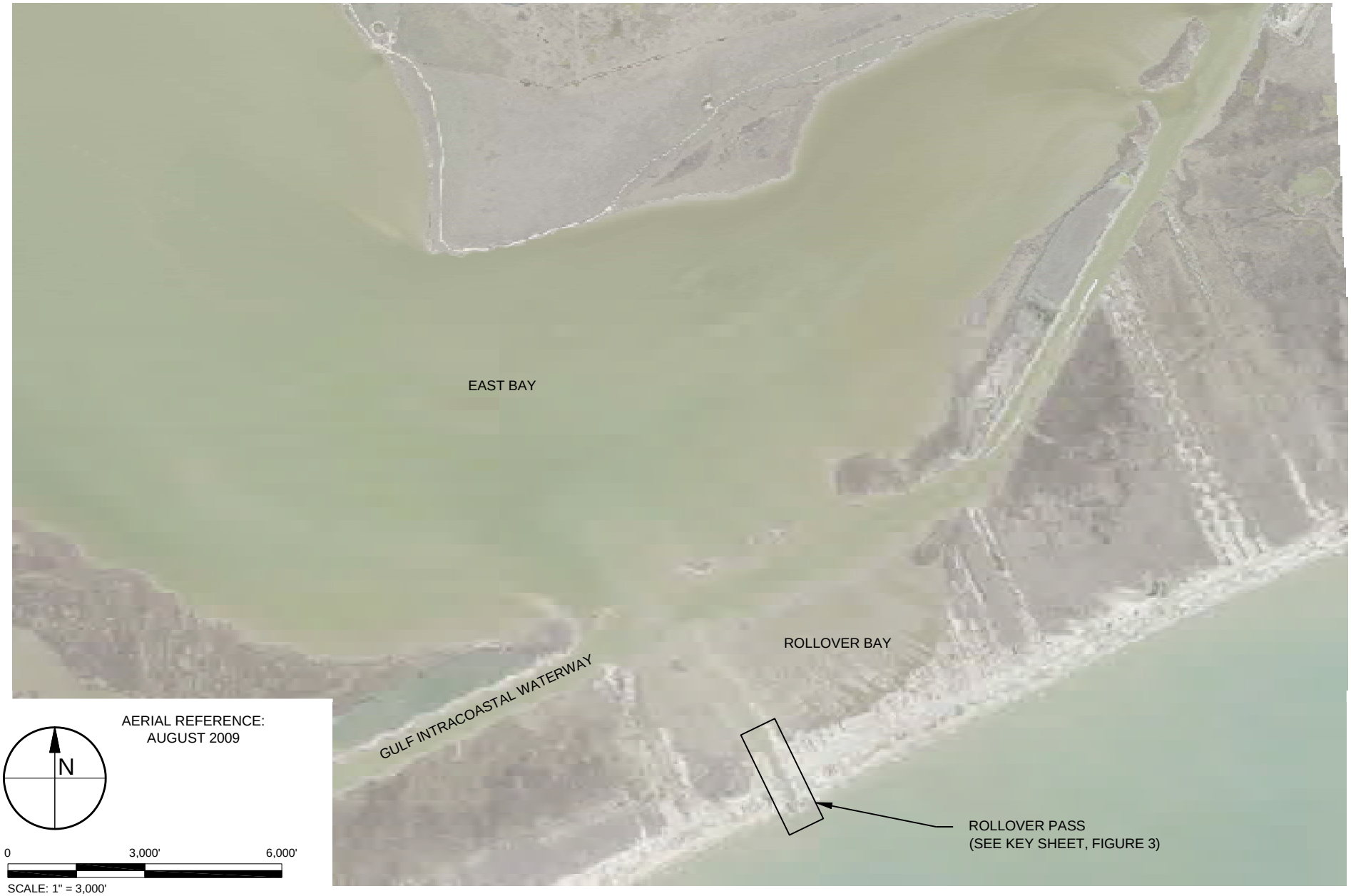
TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 1
COVER SHEET
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	1 of 7
DATE	FEB 2010

SEAL

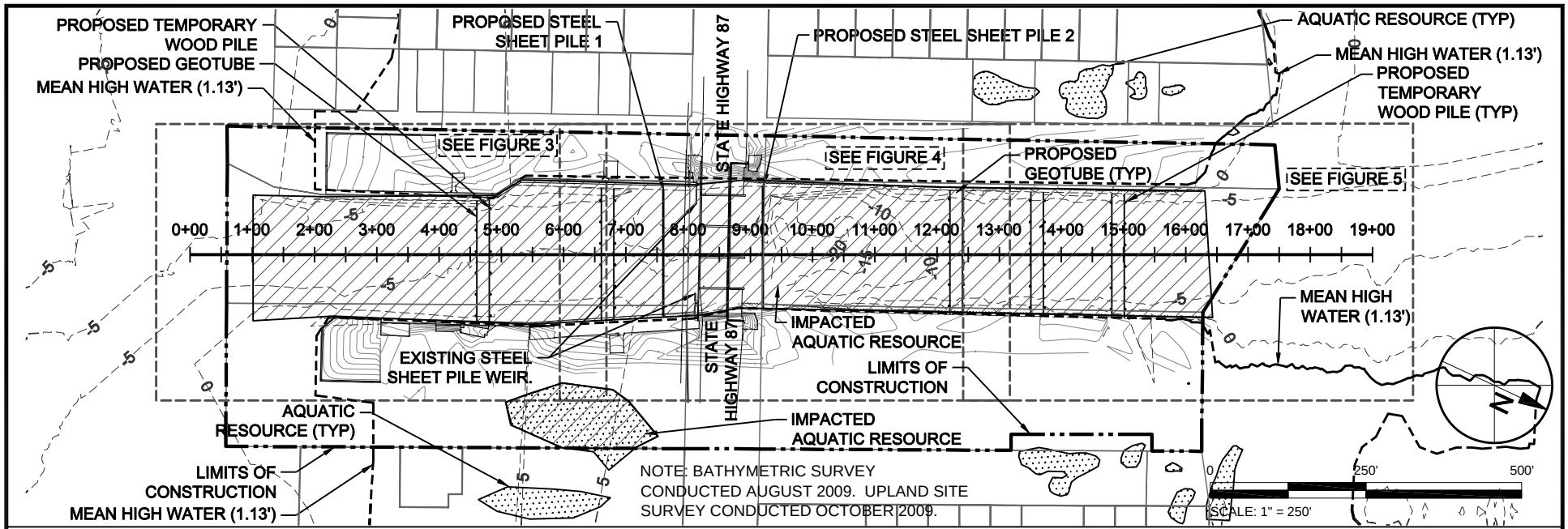
ENG DATE

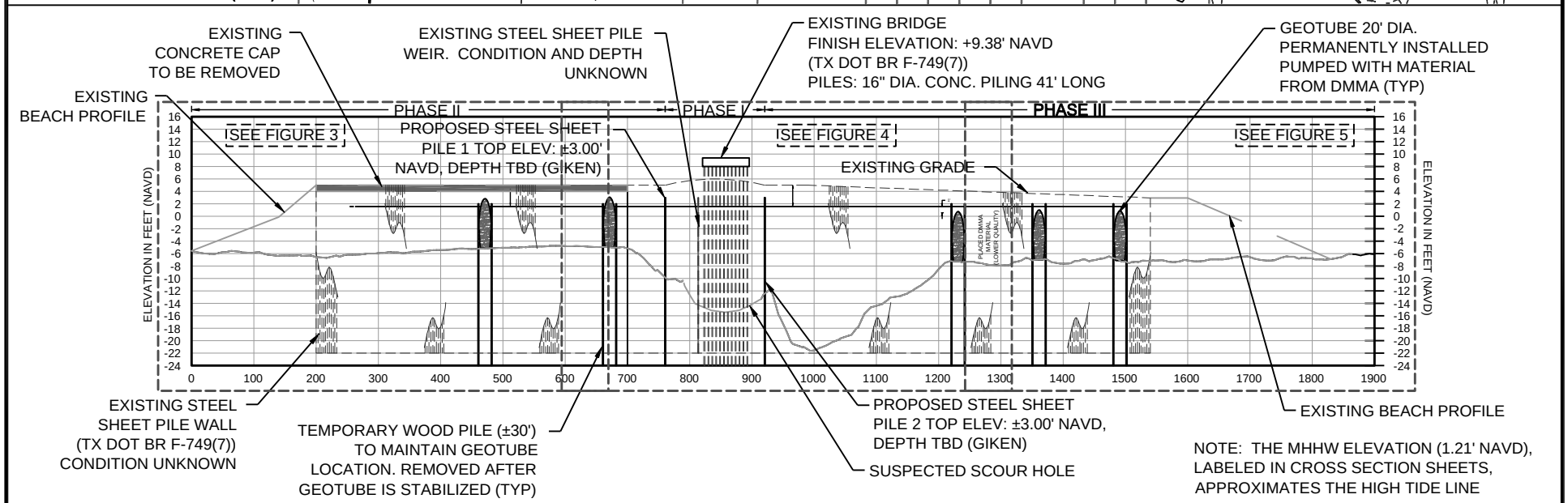


TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256

FIGURE 2
OVERVIEW
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	2 of 7
DATE	FEB 2010





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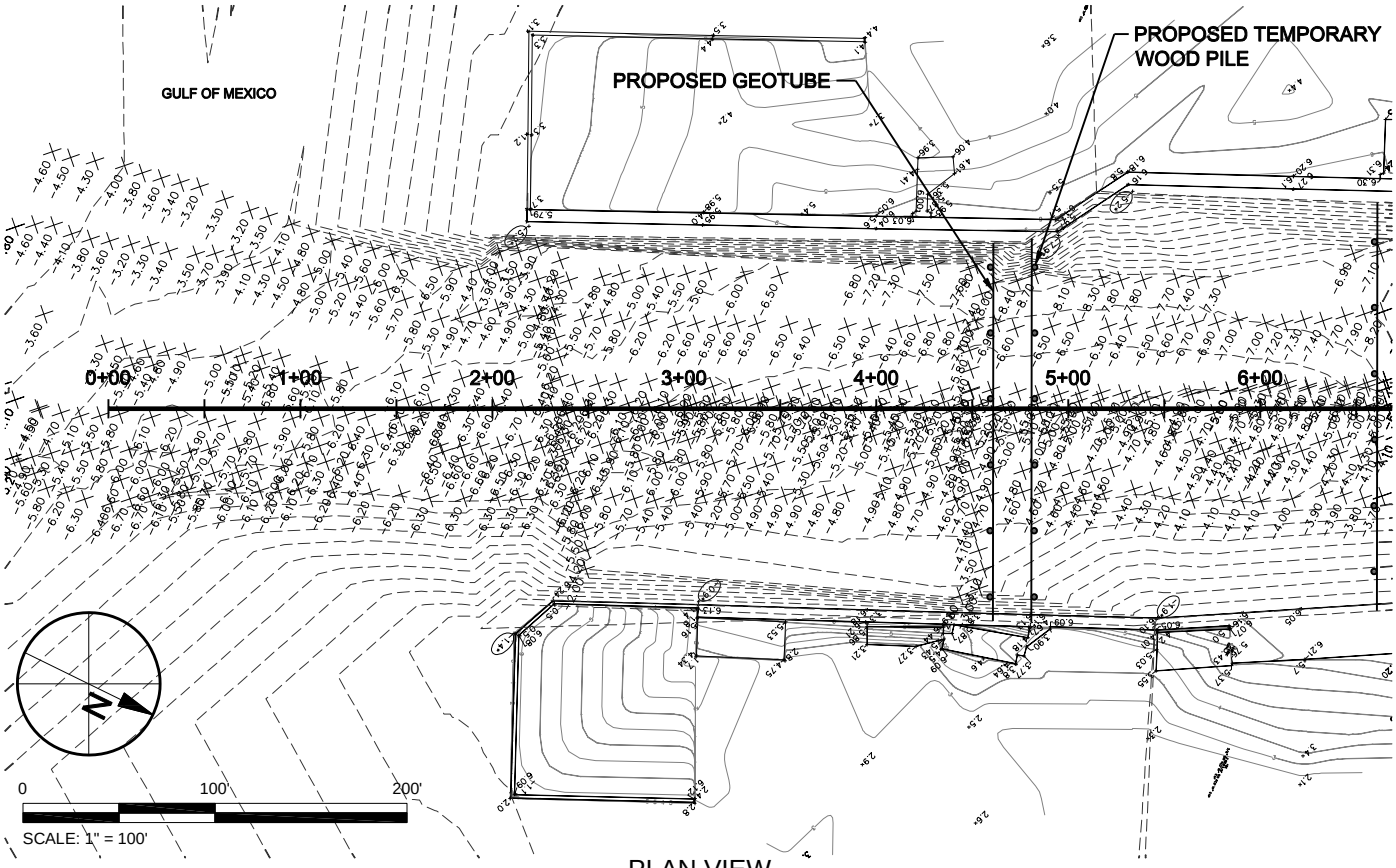
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

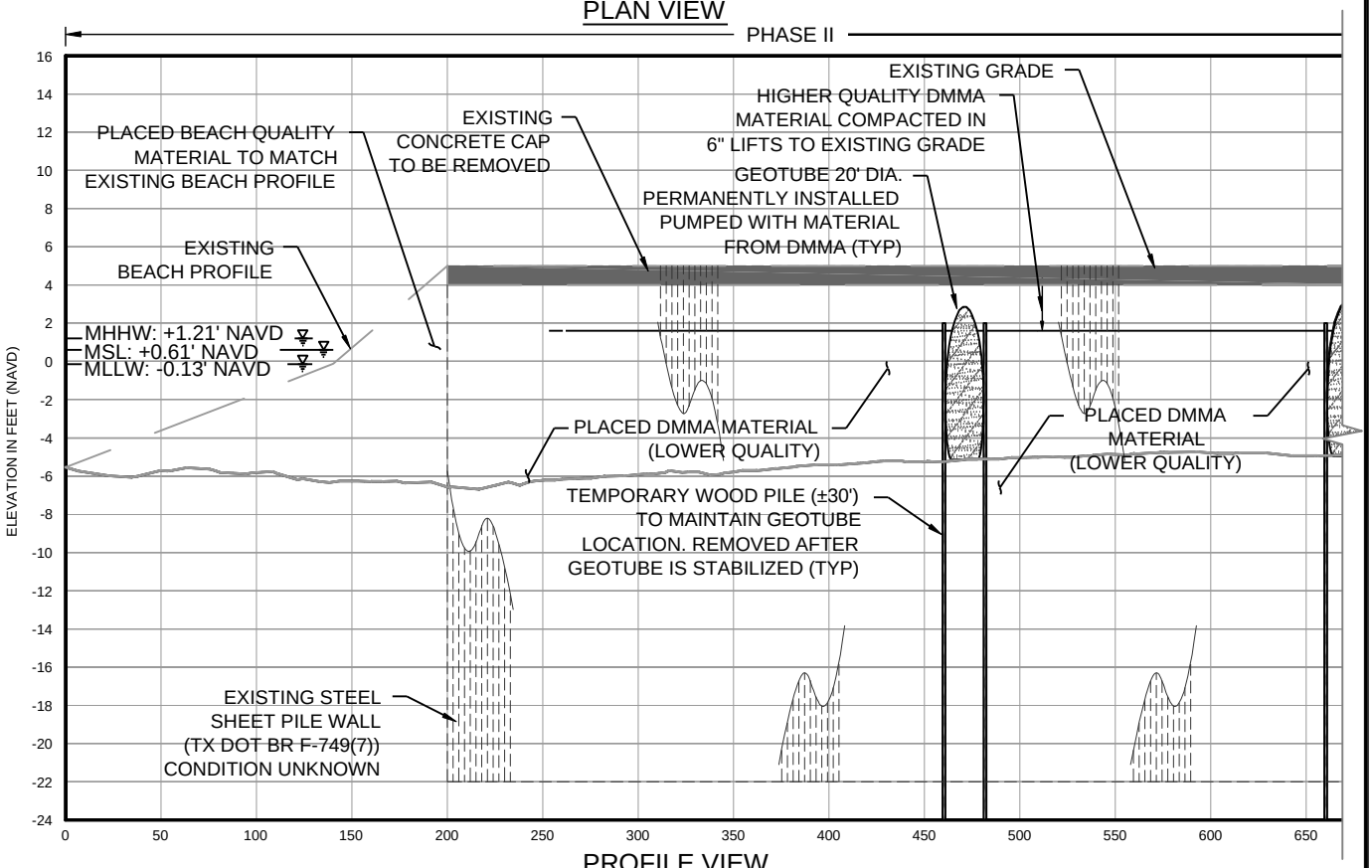
FIGURE 3
KEY SHEET
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	3 of 7
DATE	FEB 2010

SEAL
ENG DATE



PLAN VIEW

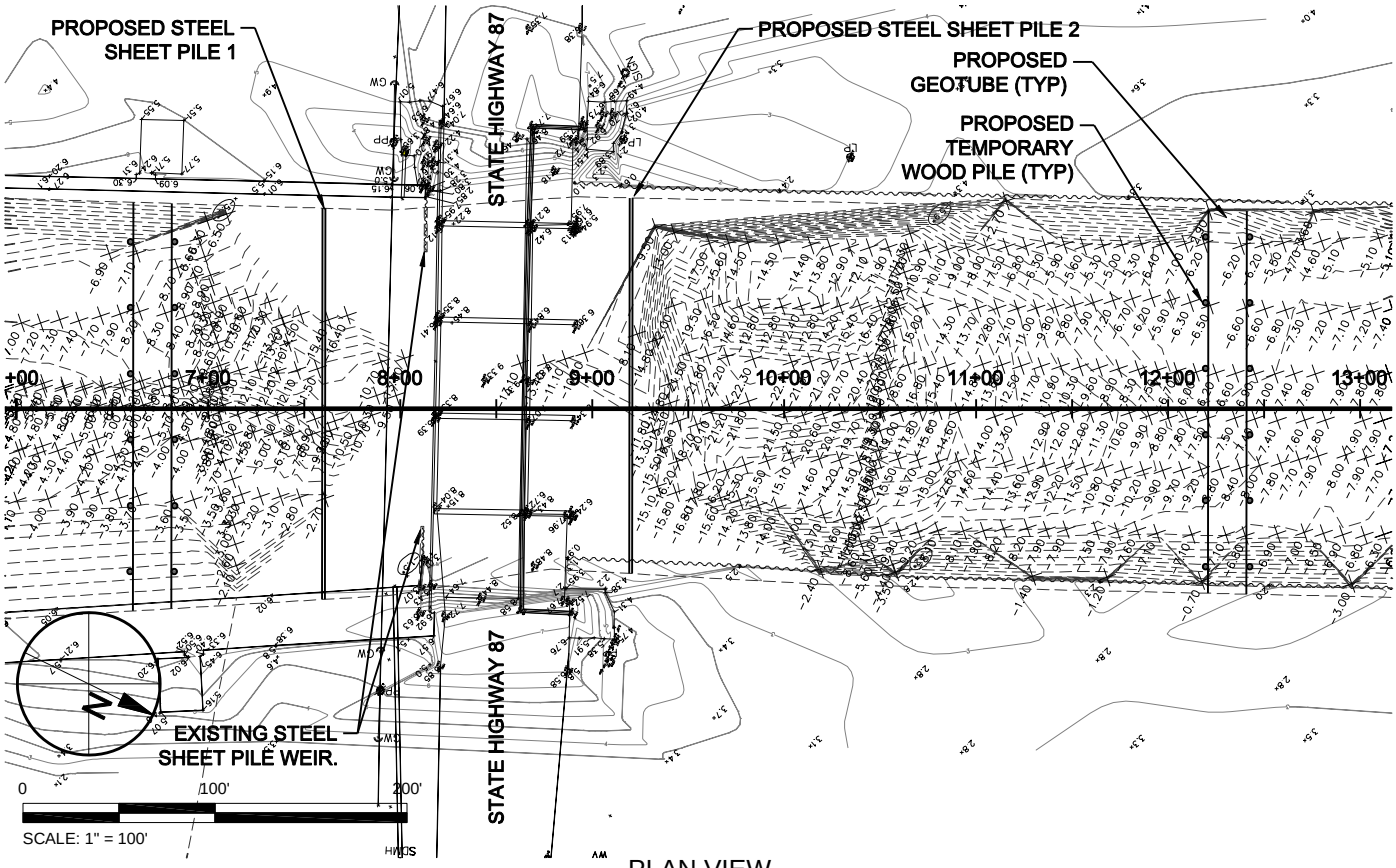


PROFILE VIEW

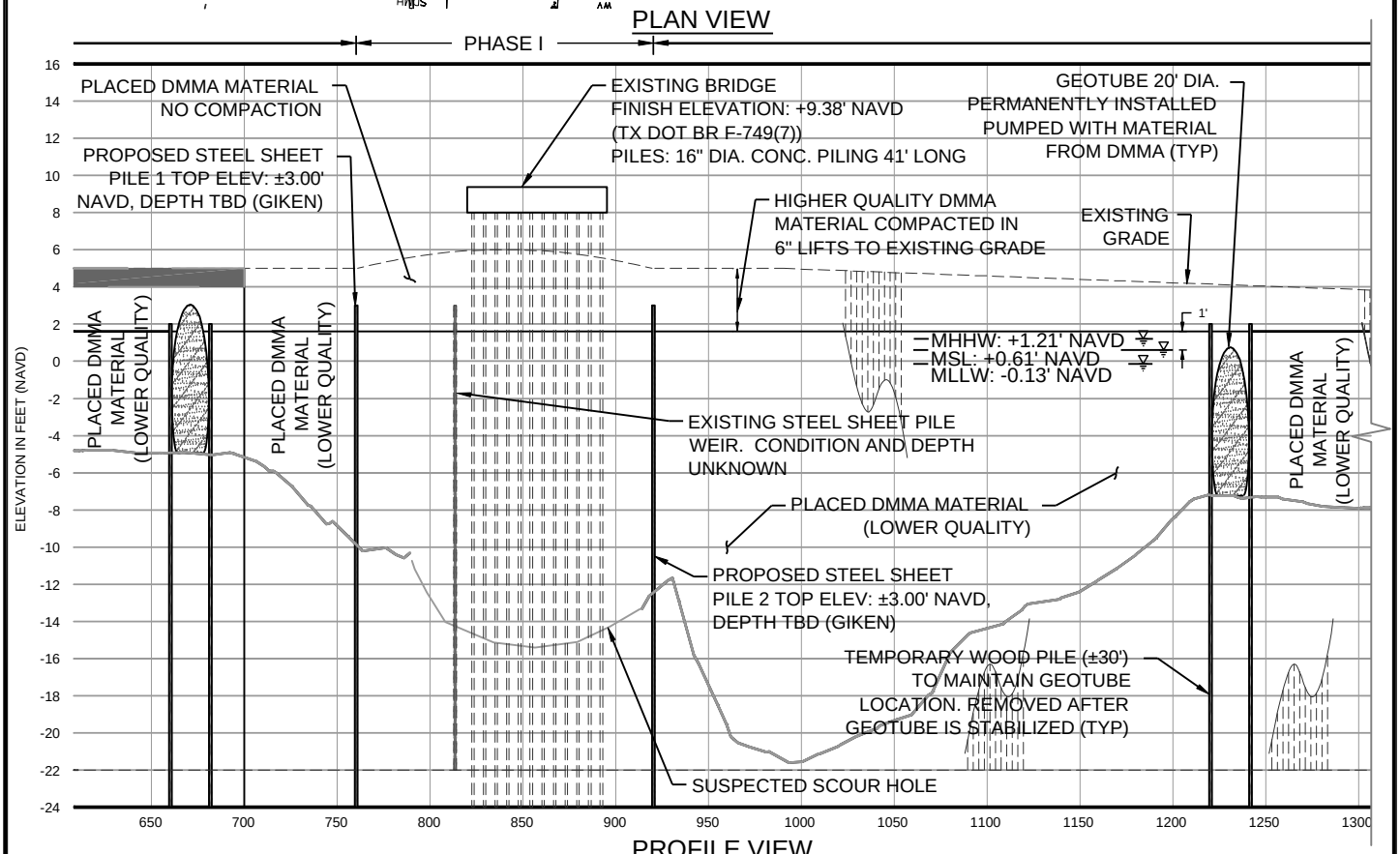
TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 4
ROLLOVER PASS CLOSURE PLAN AND PROFILE
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	4 of 7
DATE	FEB 2010



PLAN VIEW

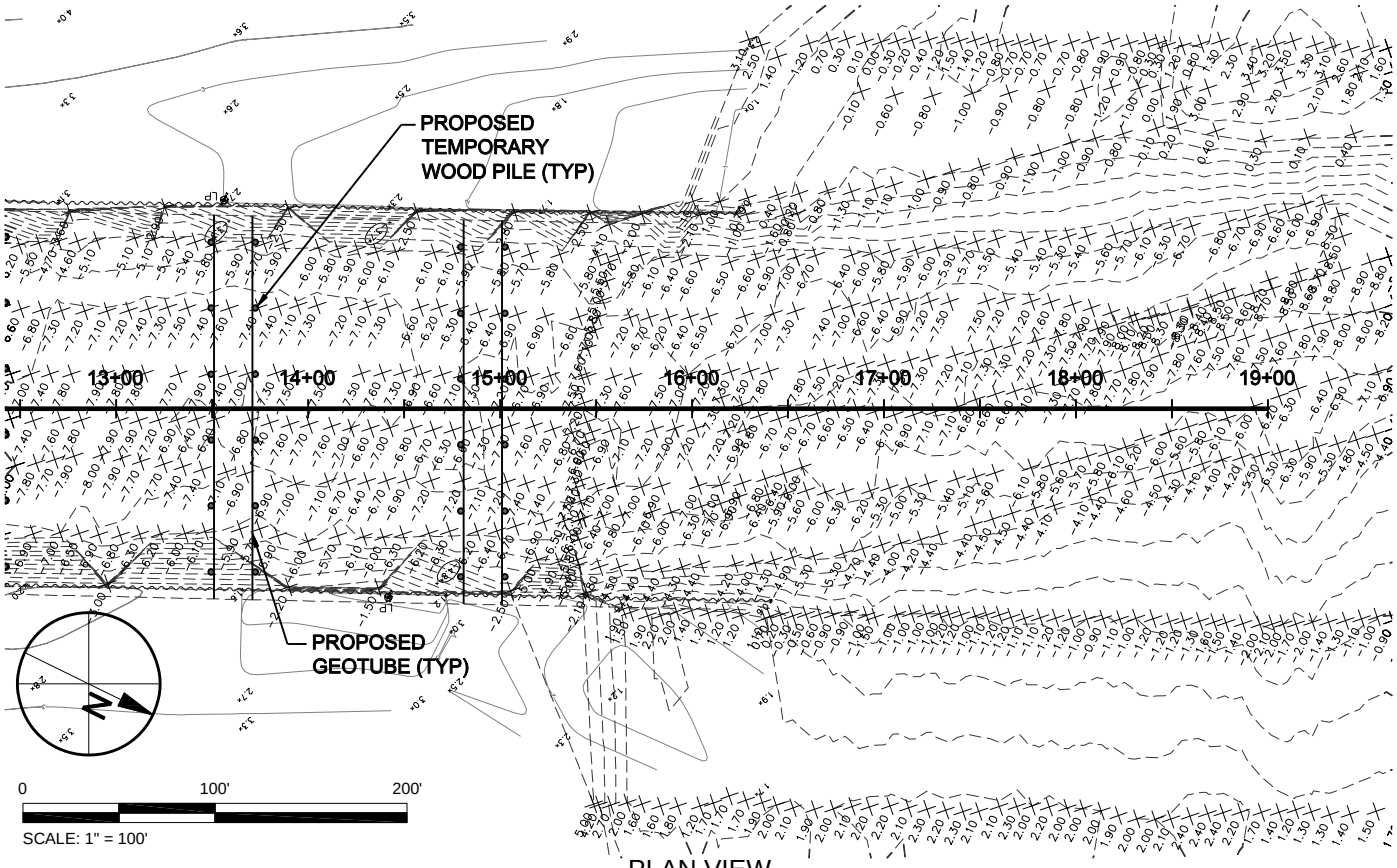


PROFILE VIEW

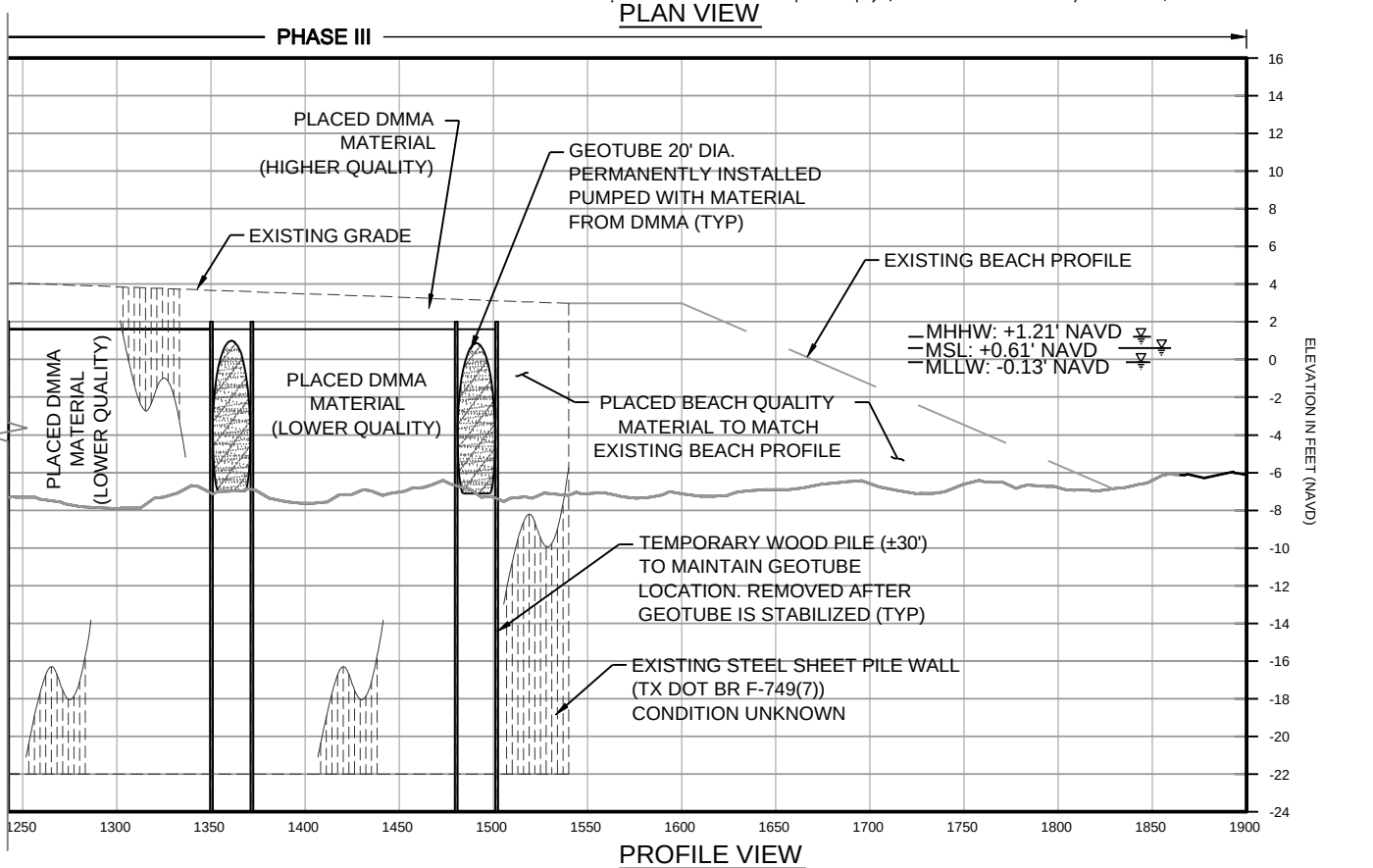
TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 5
ROLLOVER PASS CLOSURE PLAN AND PROFILE
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	5 of 7
DATE	FEB 2010



PLAN VIEW

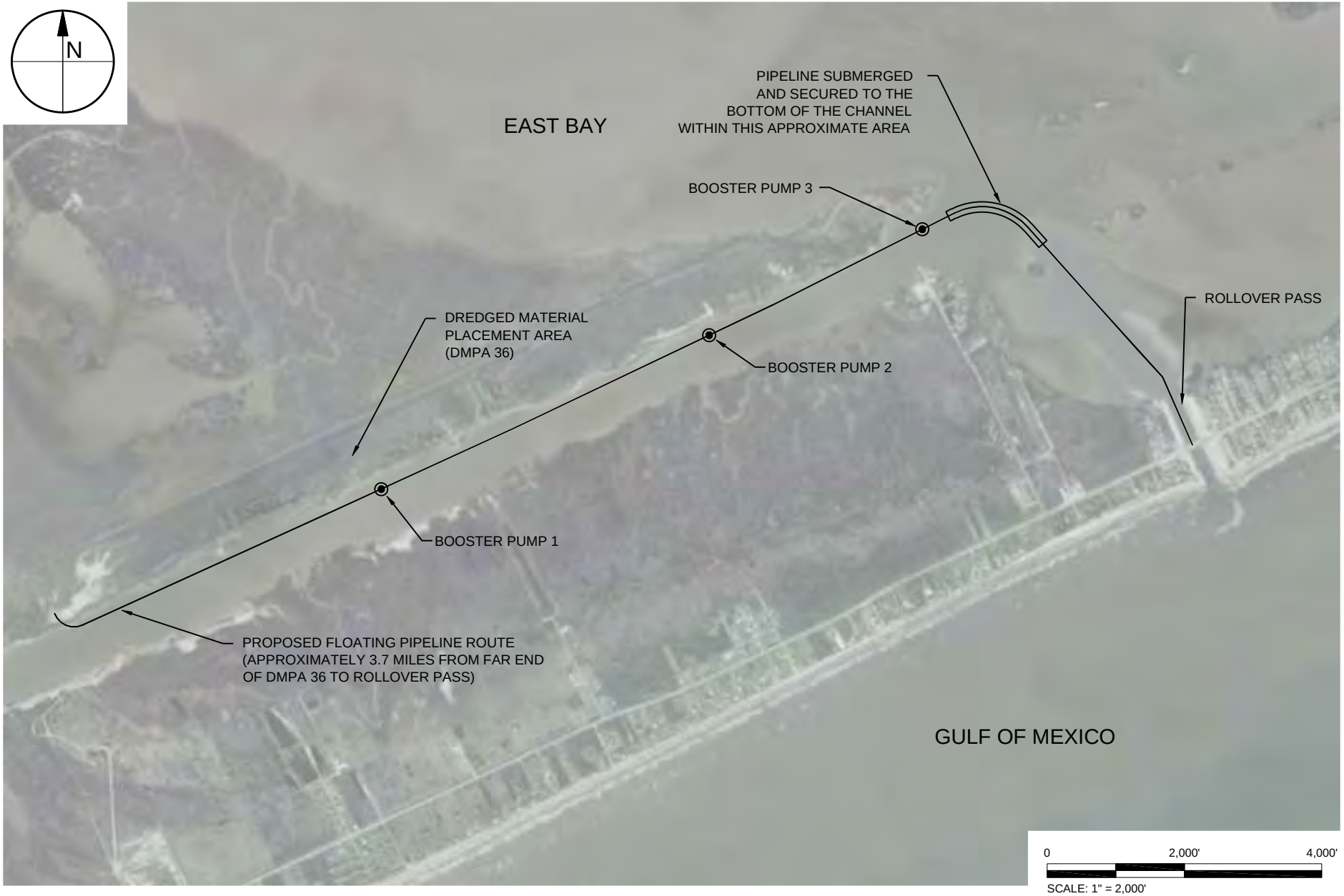


PROFILE VIEW

TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 6
ROLLOVER PASS CLOSURE PLAN AND PROFILE
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	6 of 7
DATE	FEB 2010



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TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 7
PIPELINE ROUTE
ROLLOVER PASS CLOSURE PROJECT
GALVESTON COUNTY, TEXAS

PROJECT	C2009-063
DRAWN BY	AF
SHEET	7 of 7
DATE	FEB 2010

Attachment B
Wetland Delineation Report

CORRIGAN CONSULTING, INC.

12000 Aerospace Ave., Suite 450
Houston, Texas 77034
(281) 922-4766 • Fax (281) 922-4767

February 12, 2010

David L. Stites, Ph.D.
Director, Environmental Services
Taylor Engineering, Inc.
10151 Deerwood Park Blvd., Bldg. 300, Suite 300,
Jacksonville, FL 32256

Re: Wetland Delineation Report, Rollover Pass, 09-141, Task 6

Dear Mr. Stites,

On February 6, 2010 Corrigan Consulting, Inc. (CCI) met with David Stites of Taylor Engineering (Client) and Steve Walls of the US Army Corps of Engineers Galveston District (USACE) to assess the Rollover Pass project area for the presence of wetlands and other potential USACE jurisdictional areas. The limits of the investigation included an area approximately 200 feet wide along the western shore of Rollover Pass and an area approximately 300 feet wide along the eastern shore (Attachment A, Figure 1). The bounds of the survey area were based on field estimations of the maximum limits of the proposed project area to ensure that an adequate survey area was established. After reviewing the survey area with Mr. Walls, it was determined that several areas would likely fall under USACE jurisdiction. These areas were identified and their boundaries located using a sub-meter accurate Trimble Geo XT Geographic Positioning System (GPS) device. Within the survey area, three distinct communities were identified as likely or potentially jurisdictional under Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act (RHA). These included three areas of intertidal marsh identified as Wetlands A, B, and C; eight depressions currently impounding water identified as Other Surface Waters (OSW) A-H, and two tidally flushed pools identified as Tidal Pools A and B (Attachment A, Figures 2, 3, 4). The constituent habitats of these features are discussed in detail within the following paragraphs. A map displaying NWI-mapped wetlands within and near the project area can be found in Attachment A, Figure 5. Attachment B includes field photographs.

The intertidal Wetlands A, B, and C were all located below the Annual High Tide Line (AHTL) and were composed of sparse, perennial, communities of smooth cord grass (*Spartina alterniflora*). Wetlands A and B were mapped as discrete communities while only the portion of Wetland C within the survey area was mapped. The substrate was observed and characterized as unconsolidated estuarine sediment underneath two to three inches of sand. As these areas occur below the observed AHTL they are assumed to be jurisdictional under the CWA or RHA.

Eight areas were identified above the AHTL and labeled as OSW. The eight mapped OSW features ranged in size from 247 square feet to 5,109 square feet. The depth of these features ranged from approximately six inches to two feet or more. While no features were observed to support established vegetative communities, each exhibited limited signs of prolonged

inundation manifested by the presence of significant accumulation of filamentous algae. Much of the vegetation observed was either dead or dormant and with the exception of a few notable species, namely marshhay grass (*Spartina patens*), coastal Bermuda grass (*Cynodon dactylon*), seashore dropseed (*Sporobolus virginicus*), and flat sedge (*Cyperus sp.*); therefore, a comprehensive list of dominant species could not be accurately compiled. An examination of the soils reveled recent disturbance and recent deposits of alleviated sand. The NRCS Soil Survey for Galveston County has the survey area mapped as Mustang Fine Sand Urban Complex (Attachment A, Figure 6). This soil is listed as a hydric soil on the National List of Hydric Soils. Hydrology was somewhat problematic to establish, however the accumulations of filamentous algae suggest prolonged inundation. It was unclear at the time of the investigation whether conditions during the growing season would sustain the levels of inundation or saturation at the limits observed. However, should these conditions persist into the growing season; it is likely these areas would maintain the requisite wetland characteristics as defined within the USACE Wetland Delineation Manual.

Tidal Pools A and B, located south of US Highway 87 and immediately east of Rollover Pass also appear to be resultant of the storm surge generated by Hurricane Ike. As with the aforementioned OSW, these storm-generated features lack established wetland vegetative assemblages. However, observed evidence of regular tidal flushing from the Gulf of Mexico as well as their position at or below the AHTL would indicate that the features are waters of the US and potentially subject to CWA and RHA.

Based upon interpretation of 2006 aerial imagery, it appears that both the OSW features and Tidal Pools were not present prior to the landfall of Hurricane Ike in September 2008. Furthermore, it was not readily apparent, at least with regards to the OSW, as to whether these features developed as a result of scouring associated with the storm landfall, or as a result of post Hurricane Ike salvage and clean-up operations. In an abundance of caution these features have been identified as areas to avoid for future project planning purposes. As for the wetland and waters of the US identified, it is recommended that all efforts be made to avoid impacts to these resources. Any impacts proposed would require authorization from the USACE as well as approved compensatory mitigation for all impacts.

Should you have any question regarding the information discussed within this report, please feel free to contact me or Rachel Schultz at (281) 922-4766.

Regards,

Rachel Schultz

for Scott Davis, PWS
Manager, Natural Resources

ATTACHMENT A

Figures


Wetland Map
Figure 1
Taylor Engineering
Rollover Pass
Bolivar Peninsula, Texas
CORRIGAN CONSULTING, INC.
Image Source: Houston-Galveston Area Council 2006
Wetland C
OSW E
OSW F
OSW G
OSW H
Wetland A
Wetland B
OSW A
OSW B
OSW C
OSW D
Tidal Pool A
Tidal Pool B
NORTH
Feet
0
100
200
400
600
Legend
Wetlands

Wetland Map: West	Taylor Engineering Rollover Pass Bolivar Peninsula, Texas
Figure 2	

CORRIGAN CONSULTING, INC.

Image Source: Houston-Galveston Area Council 2006

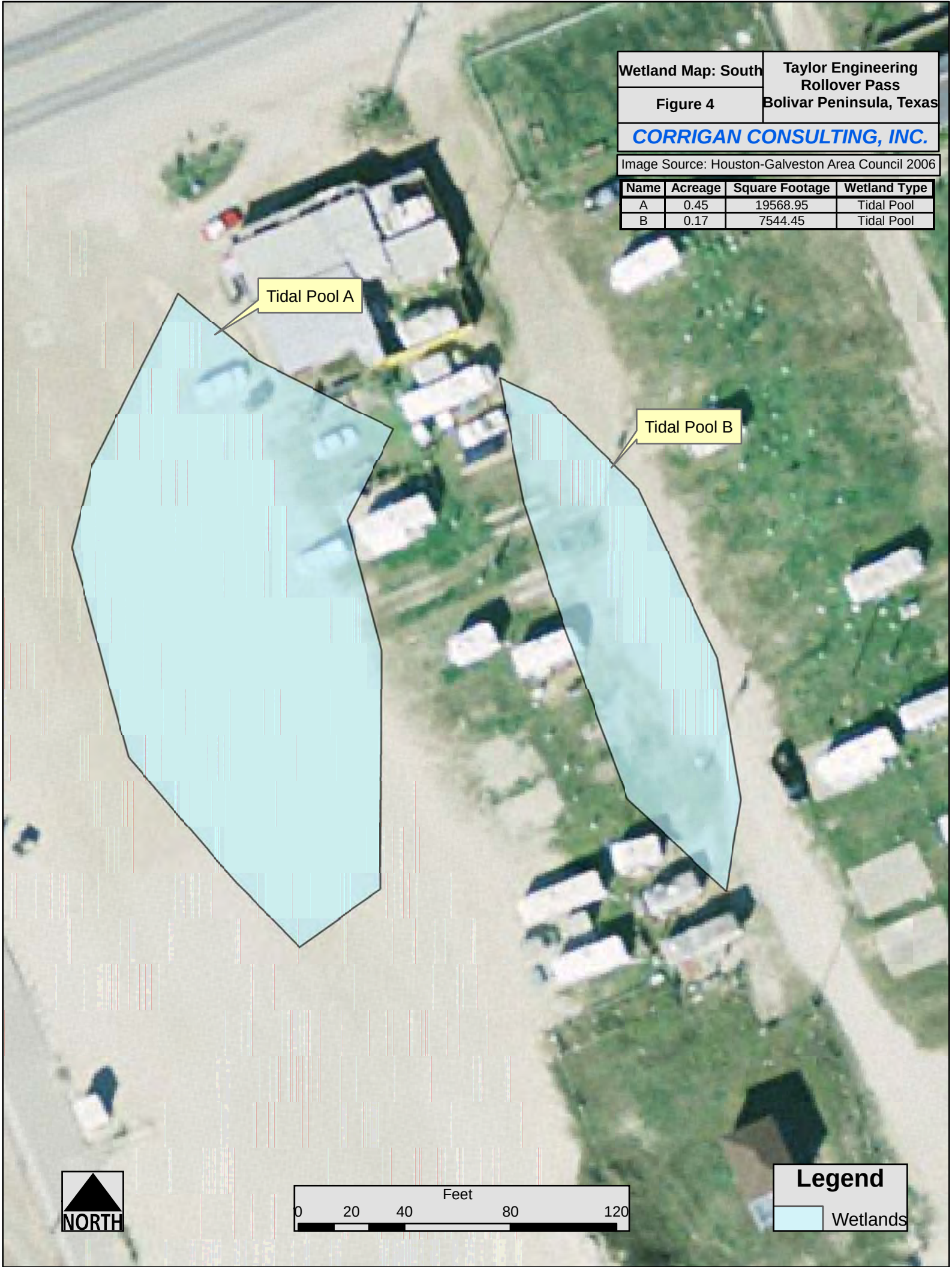
Name	Acreage	Square Footage	Wetland Type
A	<0.01	38.55	Wetland
B	<0.01	116.86	Wetland
A	0.01	401.98	OSW
B	0.02	887.11	OSW
C	0.11	4893.71	OSW
D	0.08	3434.60	OSW

Wetland Map: East	Taylor Engineering Rollover Pass Bolivar Peninsula, Texas
Figure 3	

CORRIGAN CONSULTING, INC.

Image Source: Houston-Galveston Area Council 2006

Name	Acreage	Square Footage	Wetland Type
C	0.08	3691.36	Wetland
E	0.03	1344.90	OSW
F	0.01	247.87	OSW
G	0.02	995.98	OSW
H	0.12	5109.37	OSW

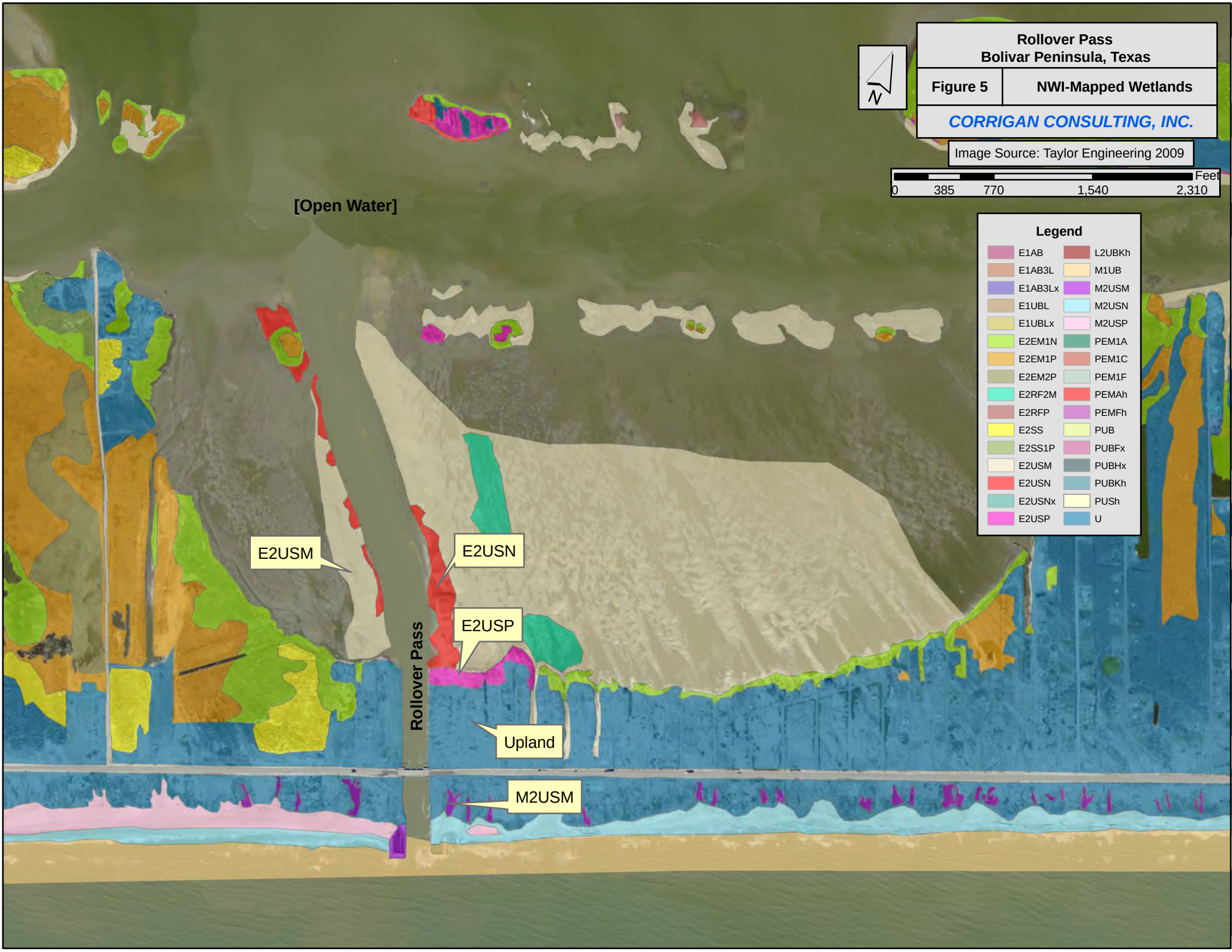


Wetland Map: South	Taylor Engineering Rollover Pass Bolivar Peninsula, Texas
Figure 4	

CORRIGAN CONSULTING, INC.

Image Source: Houston-Galveston Area Council 2006

Name	Acreage	Square Footage	Wetland Type
A	0.45	19568.95	Tidal Pool
B	0.17	7544.45	Tidal Pool


Rollover Pass
Bolivar Peninsula, Texas
Figure 5
NWI-Mapped Wetlands
CORRIGAN CONSULTING, INC.
Image Source: Taylor Engineering 2009
N
0
385
770
1,540
2,310
Feet
Legend
E1AB
E1AB3L
E1AB3Lx
E1UBL
E1UBLx
E2EM1N
E2EM1P
E2EM2P
E2RF2M
E2RFP
E2SS
E2SS1P
E2USM
E2USN
E2USNx
E2USP
L2UBKh
M1UB
M2USM
M2USN
M2USP
PEM1A
PEM1C
PEM1F
PEMAh
PEMFh
PUB
PUBFx
PUBHx
PUBKh
PUSh
U
[Open Water]
E2USM
E2USN
E2USP
Rollover Pass
Upland
M2USM

Soil Map	Taylor Engineering Rollover Pass Bolivar Peninsula, Texas
Figure 6	

CORRIGAN CONSULTING, INC.

Image Source: Houston-Galveston Area Council 2006

Soil Symbol	Soil Name
Bb	Beaches
Mn	Mustang fine sand
Mp	Mustang fine sand, saline
Mu	Mustang-Urban land complex
Vx	Veston loam, slightly saline-strongly saline complex
W	Water

ATTACHMENT B

Photographs

Photograph No. 1 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Wetland A (CSD 2/6/10)

Photograph No. 2 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Wetland B. (CSD 2/6/10)

Photograph No. 3 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water A. (CSD 2/6/10)

Photograph No. 4 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water B. (CSD 2/6/10)

Photograph No. 5 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water C. (CSD 2/6/10)

Photograph No. 6 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water D. (CSD 2/6/10)

Photograph No. 7 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Wetland C. (CSD 2/6/10)

Photograph No. 8 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water E. (CSD 2/6/10)

Photograph No. 9 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water F. (CSD 2/6/10)

Photograph No. 10 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water G. (CSD 2/6/10)

Photograph No. 11 – Taylor Engineering, Wetland Delineation, Rollover Pass.
Other Surface Water H. (CSD 2/6/10)

Attachment C
Preliminary Jurisdictional Determination Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 18 February 2010

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: Michael Trudnak, PE, Taylor Engineering, Inc. is requesting this PJD for Texas General Land Office as their Agent for this project.

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston Office, file name Rollover Pass Closure File # SWG 2009 00833

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: Gilchrist, Texas. Property immediately adjacent to Rollover Pass. Project will fill and close Rollover Pass, and grade the fill to match adjacent upland elevations.

(SEE ATTACHED TABLE DOCUMENTING MULTIPLE WATERBODIES

State: Texas County/parish/borough: Galveston City: Gilchrist
Center coordinates of site (lat/long in degree decimal format): Lat. 29.508750 **Pick List**, Long. -94.500587° **Pick List**.

Name of nearest waterbody: Site lies between the Gulf of Mexico and Rollover Bay, on the Bolivar Peninsula, Texas

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Cowardin Class E1UB (Rollover Pass) – 6.06 acres
Cowardin Class M2US2 (Tidal Pools A, B) – 0.622 acres
`

Wetlands: 0.486 acres

Cowardin Class: E2US3 (small patches of *Spartina alterniflora)* 0.088
Cowardin Class L1UB3 (Other Waters of the State) – 0.397 acres

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: Rollover Pass

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

X Office (Desk) Determination. Date:

X Field Determination. Date(s): 6 February 2010

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

X Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: See attached report by Corrigan Consulting, Inc. Feb 12, 2010 and attached impact and mitigation discussion by Taylor Engineering for description, maps, and figures of the various waters.

☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☐ U.S. Geological Survey map(s). Cite scale & quad name: .

☐ USDA Natural Resources Conservation Service Soil Survey. Citation:

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☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

X Photographs: X Aerial: See aerial and ground-level photographs in attached report by Corrigan Consulting, Inc. 12 February 2010. See attached aerial photographs and interpretation by Taylor Engineering, Inc.

X Other: See photographs in attached report by Corrigan Consulting Inc. 12 February 2010. See attached aerial photographs and interpretation by Taylor Engineering, Inc. Photographs from Google Earth website (http://earth.google.com)

☐ Previous determination(s). File no. and date of response letter: .

X Other information (please specify): Site visit was conducted 6 February 2010 by Steven Walls, USACE/Galveston District, Scott Davis, Corrigan Consulting, Inc. and David Stites, Taylor Engineering. A report describing the findings of that site visit are attached as part of this PJD and includes, plots, maps and other information concerning the site and existing communities. A document showing the evolution a storm-created tidal pool on the southeastern area of the property is also attached.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

3/3/2010

Signature and date of Regulatory Project Manager (REQUIRED)	Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

Aquatic Resource Data Table. Site Numbers refer to figures shown in Corrigan 2010, attached as part of this PJD.

Site Number	Latitude (degrees)	Longitude (degrees)	Cowardin Class	Aquatic Resource Estimated Area (Acres)	Class of aquatic resource
Rollover Pass	29.508750	-94.500587	E1UB	6.06	Section 10 Tidal non-wetland
Wetland A	29.51027606	-94.50227872	E2US3	0.009	section 10 – tidal wetland
Wetland B	29.51025325	-94.50188328	E2US3	0.003	section 10 – tidal wetland
Wetland C	29.51086281	-94.50023604	E2US3	0.085	section 10 – tidal wetland
Tidal Pool A	29.50813263	-94.49923609	M2US2	0.449	section 10 – tidal, non-wetland
Tidal Pool B	29.50812254	-94.49877716	M2US2	0.173	Section 10 – tidal, non-wetland
OSWA A	29.50993494	-94.50195706	LU1B3	0.009	section 10 – non-tidal, non-wetland
OSWA B	29.50978439	-94.5019039	LU1B3	0.020	section 10 – non-tidal, non-wetland
OSWA C	29.50959056	-94.50179287	LU1B3	0.112	section 10 – non-tidal, non-wetland
OSWA D	29.50925147	-94.50159698	LU1B3	0.079	section 10 – non-tidal, non-wetland
OSWA E	29.51070914	-94.50005717	LU1B3	0.031	section 10 – non-tidal, non-wetland
OSWA F	29.51061408	-94.50020608	LU1B3	0.006	section 10 – non-tidal, non-wetland
OSWA G	29.51042155	-94.50018939	LU1B3	0.023	section 10 – non-tidal, non-wetland
OSWA H	29.5101295	-94.49997884	LU1B3	0.117	section 10 – non-tidal, non-wetland

Permit Application No #SWG 2009-00833
Rollover Pass Closure Project
Proposed Avoidance, Minimization, Impact and Mitigation of Wetlands and Other Potential Jurisdictional Aquatic Resources

The Texas General Land Office (GLO) has submitted a Preliminary Jurisdictional Form (PJD) indicating that areas of USACE jurisdiction may exist within and/or adjacent to the Rollover Pass Closure Project work area. Revised permit application drawings and a report from Corrigan Consulting, Inc. (Corrigan Consulting, Inc. 2010) delineate and discuss potential wetland areas and other aquatic resources within and adjacent to the project property. Aquatic resources identified in the PJD include Rollover Pass, existing wetland patches dominated by *Spartina alterniflora*, a number of non-wetland freshwater pools, and two non-wetland tidal pools; the project footprint includes no Special Aquatic Sites. This report discusses proposed avoidance, minimization, impacts, and mitigation of the above potential jurisdictional Aquatic Resources.

Rollover Bay

Rollover Pass, an artificial water body, provides a conduit for tidal waters and associated biota to pass between the Gulf of Mexico and Rollover Bay/East Bay. The habitat within the Pass (open, tidal water, and mud/sand bottom) occurs extensively throughout the adjacent Gulf of Mexico, Bolivar Roads, Galveston Bay (including East Bay), Gulf Intracoastal Waterway, and Rollover Bay. The Texas General Land Office (GLO), the permit applicant, proposes no mitigation (aside from loss of recreational activities) for filling the surface waters of Rollover Pass.

Wetland Patches

The wetland patches dominated by *S. alterniflora* are located well away from the project boundaries; thus, project impacts to these wetland patches are not anticipated or expected. Notably, the wetland patches appear to have existed, based on examination of pre- and post-storm photographs, before Hurricane Ike which occurred in September 2008.

Aquatic Resources - Freshwater Pools

The pools located immediately adjacent to but outside the proposed limits of construction on the northeast edge of the project contain fresh water without or with minimal wetland vegetation. These pools, created by Hurricane Ike, lie in upland locations previously associated with parking lots, residences, other buildings, and yards. The project will avoid impacts to these non-wetland pools by establishing the limits of construction 25 feet away from the boundary of the pools and, if necessary, using silt fencing, hay bales, and/or other appropriate protection measures during construction. Notably, the proposed limits of construction west of Rollover Pass include no open waters or other potentially jurisdictional features. Existing aquatic resources occur west of the western property boundary (the limits of construction in that area) and are similar in their appearance and condition to that elsewhere in the general project area.

Aquatic Resources - Tidal Pools

The two non-wetland pools located in the southeast section of the project area contain salt water and may classify as tidal pools. The pools, created by Hurricane Ike (see photographs and interpretation below), are isolated from the Gulf of Mexico except during high tides and lie within

the +5 ft contour between the landward edge (i.e. highest elevation) of the open beach and the sharp slope of the SH 87 shoulder. Depressed within the surrounding elevations, the pools contain building debris, at least one large tree trunk, and other debris likely generated by Hurricane Ike; the pools contain no significant biological community. The eastern-most pool lies well outside of the project boundary, thus project activities will not impact this pool. The other pool, located closer to Rollover Pass, lies within the proposed limits of construction. The proposed project will clear any remaining hurricane debris from the latter tidal pool and will fill whatever remains of the pool with beach quality sand. GLO proposes no mitigation for this fill, because the pool represents a temporary landscape feature that is currently filling naturally as discussed below.

Aerial photographs from Google Earth® show the southeast portion of the project area before and after Hurricane Ike (Figures 1-3). Prior to Hurricane Ike, an upland parking lot existed on the land currently containing the tidal pools (Figure 1). The hurricane gouged a series of shore-perpendicular finger channels from the Gulf of Mexico toward SH 87 (Figure 2). Four months after the hurricane, naturally occurring long shore and cross shore transport of sand (wave- and wind-generated) had largely filled the finger channels (Figure 3). This natural filling process has continued since that time (personal observation during a February 6, 2010 site visit, David Stites, Taylor Engineering). The area seaward of the tidal pool shown in Figure 3 resembles its' pre-hurricane condition and the remaining pools have continued to fill, albeit more slowly, due to their more upland location. Based on the above information, the proposed fill activity expedites the natural filling process.

Taylor Engineering also considered the following construction avoidance and minimization alternatives for the tidal pool:

- complete avoidance of the pool with construction of seawalls or other permanent structures to maintain the pool at it's current boundaries while grading the project area to its original design elevations, and
- avoidance of any direct fill with development of a grading plan sloped toward the pool edge; this would minimize (but not eliminate) deposition of eroded fill sediments into the pool and maintain the current pool boundaries, at least until the end of construction

The first alternative would require significant structures (such as seawalls) to maintain the pool edges, as storm runoff and very high tides would carry fill and existing materials into the natural pool depression. This attempt to sustain the temporary pool would be expensive, require maintenance of the structure, and would likely fail over time as the natural filling process continues. Constructing seawalls and funding a perpetual maintenance program for a temporary pool presents an environmentally inappropriate solution and an ineffective use of public funds.

The second alternative avoids direct fill of the pools. However, due to the nature of sediments and the site, the pool would fill from surface sediments carried in stormwater runoff and high tides as mentioned above. As this occurs, the eroded project areas would require additional fill to maintain the finished grade. This solution would require regular maintenance — additional fill and grading over an extended period — and eventually result in complete filling of the pool. Thus, this alternative lengthens the use requirements of construction vehicles while not affecting the end-result of the proposed plan.

Summary

Potential wetland areas and non-wetland areas that lie within and adjacent to the project area include Rollover Pass, existing wetland patches dominated by *Spartina alterniflora*, a number of non-wetland freshwater pools, and two non-wetland tidal pools. The proposed project

will affect Rollover Pass and one tidal pool by directly filling these features. The project will not affect any other wetland areas or non-wetland areas. Based on the discussions presented in this report, mitigation does not appear necessary and is thus not proposed by the permit applicant.

Figure 1 Rollover Pass prior to Hurricane Ike, September 15, 2007

Figure 2 Rollover Pass, Immediately After Hurricane Ike, September 14, 2008.

Figure 3 Rollover Pass, Post Hurricane Conditions, January 31, 2009

References

Corrigan Consulting, Inc. 2010. Wetland Delineation Report, Rollover Pass, 09-141, Task 6. Letter Report from Corrigan Consulting, Inc. to David L. Stites, Ph.D. Taylor Engineering, Inc. 10151 Deerwood Park Blvd, Building 300, Suite 300, Jacksonville, FL 32256. Submitted 12 February 2010.