



THE COUNTY OF GALVESTON

RUFUS G. CROWDER, CPPO CPPB
PURCHASING AGENT

GWEN MCLAREN, CPPB
ASST. PURCHASING AGENT

COUNTY COURTHOUSE
722 Moody (21st Street)
Fifth (5th) Floor
GALVESTON, TEXAS 77550
(409) 770-5371

August 11, 2016

RE: ADDENDUM #1
Bid #B161018 Construction-Bolivar Peninsula Beach and Dune Restoration

To All Prospective Bidders,

Attached you will find Addendum #1 for Bid #B161018 Construction-Bolivar Peninsula Beach and Dune Restoration.

As a reminder, all questions regarding this bid must be submitted in writing to:

Rufus G. Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550
E-mail: rufus.crowder@co.galveston.tx.us

If you have any further questions regarding this bid, please address them to Rufus Crowder, CPPO CPPB, Purchasing Agent, via e-mail at rufus.crowder@co.galveston.tx.us, or contact the Purchasing Department at (409) 770-5371.

Please excuse us for any inconvenience that this may have caused.

Sincerely,

A handwritten signature in black ink, appearing to read "Rufus G. Crowder", written over a horizontal line.

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

GALVESTON COUNTY

ADDENDUM NO. 1

CONSTRUCTION – BOLIVAR PENINSULA BEACH AND DUNE RESTORATION

AUGUST 10, 2016

TO ALL POTENTIAL BIDDERS:

This addendum shall be considered part of the Contract Documents and is issued to change, amplify, or delete from or otherwise explain the drawings and specifications where provisions of this addendum differ from those of the original contract documents. This addendum shall have precedence over the original drawings and specifications and shall govern.

Respondents are hereby notified that they shall incorporate this addendum in their proposal, and it shall be construed that the Contractor's Bid shall reflect with full knowledge, all items, changes and modifications to the Contract Documents herein specified.

RESPONDENTS SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE PROPOSAL FORM.

SPECIFICATIONS DIVISION 2 SITEWORK:

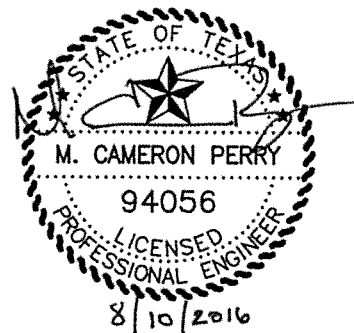
Include the attached Specification Section 02900 "Dune Planting" as part of Division 2 Sitework.

END OF ADDENDUM NO. 1

OWNER: GALVESTON COUNTY.

ENGINEER: HDR, INC.

ATTACHMENTS: Section 02900 "Dune Planting"



DIVISION 02 – SITEWORK
SECTION 02900 – DUNE PLANTING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

The work includes furnishing materials, labor, equipment, and supervision for planting dunes and installing sand fence in accordance with these specifications and applicable drawings.

1.02 REFERENCES

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American National Standards Institute (ANSI) Publications

Z60.1 American Standard for Nursery Stock

1.03 SUBMITTALS

Submittals under this section include the following:

1. Planting Sequence (Paragraph 1.04, A)
2. Daily Activities Reports (Paragraph 1.04, B)
3. Name and Location of Nursery (Paragraph 1.04, C)
4. Permits for Plant Stock (Paragraph 1.04, D)
5. Installer Qualifications (Paragraph 1.04, E)
6. Dune Vegetation Plan (Paragraph 2.01)
7. Plant Photographic Documentation (Paragraph 3.04, B)
8. Plant Survival Report (Paragraph 3.04, D)

1.04 QUALITY ASSURANCE / QUALITY CONTROL

- A. Planting Sequence: Within 10 days prior to commencing planting, provide a detailed planting sequence that complies with scheduling requirements of Paragraph 3.01 and includes:
 1. Anticipated schedule for each area of planting
 2. Plan for delivery, storage, and handling of plant material
 3. Equipment to be utilized
 4. Methods of planting
 - B. Daily Activities Reports: Provide a daily record of activities starting on the Notice to Proceed date and continuing through final acceptance. Records shall document general construction activities such as status of pre-construction submittals, mobilization/demobilization, equipment and personnel on-site, percent project completion, number and location of plugs planted, and adverse weather or other problems that cause delays. Submit reports on a weekly basis.
 - C. Plant Source(s): Prior to commencing planting activities, provide the name and location of the nursery and/or donor site that will provide plants for the project for approval by Owner/Engineer. Provide certification that plant materials meet the requirements of Paragraph 2.01.
-

- D. Permits/Licenses: Contractor shall secure any required permits and/or licenses for propagation, collection, and transportation of nursery and/or donor stock and submit copies of such permits/licenses to Engineer.
- E. Installer Qualifications: Contractor shall have completed a minimum of three prior successful coastal planting projects (dunes and/or wetlands) of 10 acres or larger within the past five years. Provide references, names/affiliations of personnel involved, and detailed description of prior projects.

1.05 PLANT MATERIAL DELIVERY, STORAGE, AND HANDLING

Contractor shall make every effort to protect plants during delivery, storage, and handling to ensure their vitality. Plants shall stay moist during transportation and at the work site prior to planting.

PART 2 - PRODUCTS

2.01 PLANTS

- A. Species: Native Texas coastal species shall be used for dune vegetation. Depending on availability, acceptable species include bitter panicum (*Panicum amarum*), sea oats (*Uniola paniculata*), and marsh hay cordgrass (*Spartina patens*). Plant species may be mixed to reduce the risk of disease or pest infestation. A dune vegetation plan shall be submitted to Engineer for approval. The plan shall include the species that will be planted and the corresponding planting ratio if the species are to be mixed. Owner/Engineer may choose to inspect plant material for compliance with quantity, genus, and species requirements and for size, insects, injuries, and defects.
- B. Substitutions: If any specific species listed above is not available, Contractor may submit a request to Engineer to substitute another species. Submit request to Engineer for approval at least 10 days prior to implementation of substitution. This provision does not relieve Contractor of the responsibility to obtain specified plants in advance if special growing conditions or other arrangements are required.
- C. Planting Stock: Vegetation planting stock shall consist of only healthy, young, vigorous plants, absent of diseased or dead material. Plant size shall consist of transplant plugs with minimum root mass of approximately 2 inches by 2 inches and a minimum stem length of 8 to 12 inches, depending on species type.
- D. Plant Source: Plants shall be obtained from approved nurseries and/or natural beaches. Although Owner's preference is for plants from within the immediate project region, plants from other regions may be supplied if sufficient quantity cannot be obtained from local sources. Contractor is responsible for obtaining any permits/licenses that may be required for plants harvested from a donor site and/or a non-local region.
- E. Plant Stock from Nurseries: Plant stock from nurseries shall be healthy with a vigorous root system and grown in accordance with standard applicable horticultural practices. Nursery-grown plugs shall comply with good horticultural practices as specified by ANSI Z60.1 under climate conditions similar to those of the project.

- F. Unsatisfactory Material: Plant stock containing disease, insects, eggs, larvae, and defects such as sun-scald or injuries shall not be delivered to or planted at the site. Plants shall be relatively free of seed and vegetative propagules of species not listed above. Owner/Engineer reserves the right to reject unsatisfactory, defective, or damaged plants.

2.02 FERTILIZER

Fertilizer shall consist of slow-release nitrate. If pre-mixed fertilizer containing nitrate and phosphate is applied, phosphate content shall be limited to 50% of the nitrate content.

2.03 SAND FENCE

Requirements for sand fence shall be as stated on the drawings.

PART 3 - EXECUTION

3.01 WORK SCHEDULING AND SEQUENCING

- A. Dune planting cannot occur along portions of the associated beach and dune restoration work that have not yet been completed. Approval shall be obtained from Engineer prior to commencing dune planting work within any given area.

3.02 PREPARATION

- A. Verify that dune construction work by others within the immediate area has been completed and obtain approval from Engineer to commence planting within that area.
- B. Verify that dunes are in a condition suitable for planting. Report any discrepancies to Engineer.
- C. Define areas for planting using stakes and string lines.
- D. Remove any trash or debris from planting surfaces.
- E. Contractor shall have on-site a full-time, qualified supervisor when planting is in progress.

3.03 PLANTING

- A. Plugs of specified plant species shall be planted at locations and with spacing as shown on the drawings.
 - B. Following completion of planting, fertilizer shall be applied at a rate of 100 lbs per acre.
 - C. Optional Measures: Contractor is encouraged to implement optional measures described below and/or as otherwise needed to ensure conformance with acceptance requirements described under paragraph 3.04. All cost for optional measures shall be included under Base Work and will not be considered by Owner for additional compensation. Failure to implement optional measures to encourage plant survival shall not relieve Contractor from acceptance requirements.
 - 1. At the time of planting, a water-retaining gel may be applied to the holes so that the roots are in contact with the gel.
-

2. Temporary fencing may be installed as required to protect planted areas from vehicles, pedestrians, grazing animals, etc. during Contractor's acceptance period. Contractor shall be responsible for removal and disposal of any temporary fencing that is damaged or displaced.

3.04 SAND FENCE

Sand fence shall be installed as shown on the drawings.

3.05 ACCEPTANCE

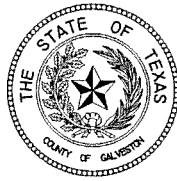
- A. General: Acceptance will be considered by Engineer for completed sections in the increments shown on the Contractor's Proposal Form. Acceptance will be issued in two phases, interim and final.
- B. Photographic Documentation: Prior to interim and final acceptance of each completed section, provide photographic documentation showing the completed work within that section. Photographs shall meet the following requirements:
 1. Photographs shall be taken at maximum 50 ft intervals along the dune.
 2. At each interval, a minimum of three photographs shall be taken, with one showing the seaward side of the dune with sand fence, one showing the top of dune, and one showing the landward side of dune. Camera shall be directed parallel to dune centerline for each photo.
 3. Photographs shall be taken with a high-resolution, digital, color camera.
 4. Photographs shall be submitted in PDF format. Provide one PDF file containing a complete set of photographs for each acceptance section. Each photograph shall be labeled with station number and date.
- C. Interim Acceptance: Upon completion of work within each acceptance section, Contractor shall notify Engineer. Engineer will perform site observation on an approximate weekly basis. Based on Engineer's observation of the completed work and review of photographic documentation, Engineer will recommend interim acceptance to Owner. The date of interim acceptance shall be the beginning of Contractor's required 90-day survivability period (see paragraph 3.04, D) for that section. Once interim acceptance has been issued, Contractor will not be held responsible for damage from erosion by waves.
- D. Final Acceptance: With the exception of damage from waves as described in paragraph 3.04, C, Contractor shall be responsible for proper care, maintenance and protection of all planted areas until final acceptance. Criteria for final acceptance of each section shall be as follows:
 1. For each acceptance section, a plant survival report shall be prepared by Contractor no sooner than 90 days after issuance of interim acceptance by Engineer. Plant survival report shall document approximate percentage of plant survival within that acceptance section supported by photographs following requirements of paragraph 3.05, B. At least 75% plant survival at the specified density is required for final acceptance by Engineer. Areas having less than a 75% survival rate shall be replanted and fertilized by Contractor. The 90 day period described above and re-planting is not included in the overall project completion time and is considered a warranty item.

2. Based on review of plant survival report and additional site observation, Engineer will issue final acceptance.

3.06 SITE CLEANUP

Upon completion of work, Contractor shall remove all stakes and string lines, temporary fencing, and/or other materials placed by Contractor.

END OF SECTION



THE COUNTY OF GALVESTON

RUFUS G. CROWDER, CPPO CPPB
PURCHASING AGENT

GWEN MCLAREN, CPPB
ASST. PURCHASING AGENT

COUNTY COURTHOUSE
722 Moody (21st Street)
Fifth (5th) Floor
GALVESTON, TEXAS 77550
(409) 770-5371

August 24, 2016

RE: ADDENDUM #2
Bid #B161018 Construction-Bolivar Peninsula Beach and Dune Restoration

To All Prospective Bidders,

Attached you will find Addendum #2 for Bid #B161018 Construction-Bolivar Peninsula Beach and Dune Restoration.

As a reminder, all questions regarding this bid must be submitted in writing to:

Rufus G. Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550
E-mail: rufus.crowder@co.galveston.tx.us

If you have any further questions regarding this bid, please address them to Rufus Crowder, CPPO CPPB, Purchasing Agent, via e-mail at rufus.crowder@co.galveston.tx.us, or contact the Purchasing Department at (409) 770-5371.

Please excuse us for any inconvenience that this may have caused.

Sincerely,

A handwritten signature in black ink, appearing to read "Rufus G. Crowder", with a long horizontal flourish extending to the right.

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

GALVESTON COUNTY

ADDENDUM NO. 2

CONSTRUCTION – BOLIVAR PENINSULA BEACH AND DUNE RESTORATION

AUGUST 24, 2016

TO ALL POTENTIAL BIDDERS:

This addendum shall be considered part of the Contract Documents and is issued to change, amplify, or delete from or otherwise explain the drawings and specifications where provisions of this addendum differ from those of the original contract documents. This addendum shall have precedence over the original drawings and specifications and shall govern.

Respondents are hereby notified that they shall incorporate this addendum in their proposal, and it shall be construed that the Contractor's Bid shall reflect with full knowledge, all items, changes and modifications to the Contract Documents herein specified.

RESPONDENTS SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE PROPOSAL FORM.

ATTACHMENTS: Pre-Bid Meeting Minutes, Sign-in Sheet, Agenda, and Meeting Presentation : 26 pages

END OF ADDENDUM NO. 2

OWNER: GALVESTON COUNTY.
ENGINEER: HDR, INC.





Meeting Minutes

Project: **Construction – Bolivar Peninsula Beach & Dune Restoration**

Subject: Pre-Bid Meeting

Date: August 16, 2016

Location: Galveston County Procurement Office

Attendees: See attached Sign-In Sheet

RE: NOTES FROM PRE-BID MEETING FOR CONSTRUCTION – BOLIVAR PENINSULA BEACH AND DUNE RESTORATION

This memorandum documents key information exchanged during the pre-bid meeting held at Galveston County (County) office on August 16, 2016.

Introduction

- Owner (Galveston County). Rufus Crowder, Purchasing Agent for Galveston County, opened the meeting
- Engineer (HDR Engineering) and Cameron Perry is the project engineer and will be the point of contact for HDR.

Bid Proposal / Contract Time

- This project will be subject to Davis Bacon rates.
- County procedure requires Form 1295. This will occur prior to awarding contract (County clarification).
- The Vendor Qualification Package contains several forms that are required, including W-9 form and the Conflict of Interest Questionnaire (CIQ) form. Non-collusion affidavit and Debarment form also required with bid submittal.
- There will be a bid bond required for bid consideration and the successful contractor will be required to provide Payment and Performance bonds.
- All questions to be submitted to County in writing by August 23rd at 5:00 p.m.
- Bid submittals shall include one (1) original and four (4) copies of all required documents.
- Substantial Completion of sand placement items (including surveys) by 12/31/2016 due to funding and regulatory deadlines. There is funding available to continue dune planting after this date.



- Intend to Issue Notice of Award and NTP as soon as possible so that work can begin. Contractor selected for work will need to provide bonds and insurance in a timely manner in order to allow County to prepare contract for agenda and subsequent approval at Commissioner's Court meeting.
- On Contractor's Qualification Statement, there is a section for project references. Utilize space provided to describe work performed for the project, rather than just the project name. Additional information on the projects may be provided. Also, due the specialty nature of the work, note that on the form is a requirement to provide a reference for a beach/dune restoration project completed within the past 5 years.
- Delivery location, date, and time:
Galveston County Procurement office on 5th floor of County Courthouse on August 31, 2016 at 2:00 p.m. Time stamp at County Procurement office is the official time clock for the bid procedure.

Project Description

- Project Location – Project site is west of Rollover Pass. Project sequencing shall be from east to west.
- Project Overview – Project will include construction of dunes on eastern end of the project and then beach nourishment over approximately 4,000 feet of shoreline. There are several access points provided on the drawings at the eastern and western ends of the project.
- Dune construction will include 9,000 cubic yards (cy) of measured in place sand. Beach Nourishment Base Bid will be 81,000 cy of measured in place material. There are three additive bid items for 5,000 cy (each) of additional beach nourishment. Additive items will be awarded based on funding and availability of sand from the supplier.
- The sand source for this project will be the Owner-authorized source provided in the drawings. Contact information for the sand source is also provided in the drawings. The approved sand source is a part of the existing project permit. No new sand sources will be allowed due to delays associated with adding other sources to Owner's permit. Project timeline will not allow those delays.
- Beach and dune dimensions are provided in the drawings. The width of the beach template may change based on results of initial beach survey. It should be noted that the change in beach template is performed in order to maintain contracted volume for overall project. The change in template will not result in a change in project scope or cost.
- Dune planting will be governed by specification 02900 in contract documents. The 90-day survivability warranty will not be in effect for areas that experience erosion or loss from human foot traffic or vehicle traffic.
- Sand fence specifications and layout are provided on the drawings.



- Survey requirements and associated items for survey plots/deliverables are provided within specification 02000. These requirements should be provided to project surveyors. Properly prepared and delivered survey submittals will expedite review and acceptance of beach/dune sections.
- Initial Survey for beach nourishment sections will be limited to an area within 500 ft of leading edge of beach nourishment work. This requirement is in place in order to measure the existing condition of the beach prior to placement and provide an accurate accounting of volumes placed.
- Initial survey for the dune template can be performed at one time.
- Acceptance Aerial Photograph: A vertical aerial and a series of oblique photos are required. The survey specification provides aerial photograph requirements.

Permits

- USACE Permit by Owner and provided in the Project Manual.
- Galveston County Beach and Dune Permit to be provided by Owner.
- Any other permits responsibility of Contractor (SWPPP at upland staging areas, local building permits, etc.). It was noted that sand source contractor/owner will need to provide measures to limit sand on to County roads/highways. Project Contractor will also be required to keep County roads/highways clear and free from sediment.

Construction Considerations

- Examination of the Site: Contractor shall be familiar with the site and the conditions associated with the project area. The site is adjacent to the Gulf of Mexico and will occur during fall/winter months, resulting in varying water levels and wave conditions at the site.
- Project will be adjacent to environmentally sensitive habitat and private property. Contractor shall not impact habitat or private property.
- Project shall be constructed during daylight hours.
- The beach is a public area and there will be public use of adjacent areas.
- Project has a short timeline due to funding and regulatory requirements. Owner is working with US Army Corps of Engineers to extend permit, but there are no guarantees this will occur.
- Endangered species concerns. Project will be built after October 1st, which is outside of marine turtle nesting season so there won't be a need for monitors for turtles. However, the project will occur within times that Piping Plover and Red Knots utilize the beach area. These birds do not nest on the beach, but special considerations during construction and training will be required.



- Dune Planting and Sand Fence installation may occur after 12/31/2016 via upland access through County property.

Measurement and Basis of Payment

- Mobilization / Demobilization: There will be a limit on mobilization and demobilization of 10% of the Base Bid price. Also, there will be a 70% / 30% split between mobilization and demobilization.
- Unit Price Provisions will prevail when determining Extended Price.
- Project will be Lump Sum project with Progress Payments (% complete of bid items).
- Project Bid Form includes a base bid with a section for additive work.
- Payment applications must include survey by RPLS of completed beach and dune sections to substantiate progress payment.
- Measurement of beach and dune will be of in-place material and substantiated by survey that shows the beach/dune template has met the lines, grades, and tolerances provided in the plans and specifications. Truck tickets, weights, or other methods will not be used/accepted to substantiate volume placed. Contractor shall perform their own calculations/assessment of volumes as well as any anticipated losses associated with construction of completed template.

Questions/Additional Comments

Q: Will final completion and release of retainage be tied to the 90-day plant survivability warranty?

A The County will allow a partial release of retainage for work completed and final during the 90-day plant survivability warranty period.

Q: Will this be a public bid opening?

A: Yes, bid opening will be public.

Attachments: Sign-In Sheet
Pre-Bid Meeting Agenda
Pre-Bid Meeting Presentation (PDF)



GALVESTON COUNTY

CONSTRUCTION – BOLIVAR PENINSULA BEACH AND DUNE RESTORATION

PRE-BID CONFERENCE AGENDA

Introduction

- Owner (County), funding through Galveston County CIAP grant and Texas General Land Office Coastal Erosion and Protection Response Act (CEPRA) Program
- Engineer (HDR Engineering)

Bid Proposal / Contract Time

- Base Bid (Dune and Beach Nourishment)
- Three Additive Bid Items: 5,000 cy (in place) additional beach nourishment
- Engineer's Estimate (Approx. \$3,800,000 – Base Bid)
- Substantial Completion by 12/31/2016 (For sand placement bid items)
- Intend to Issue Notice of Award and NTP as soon as possible (Start after Oct. 1, 2016 – end of marine turtle nesting season)
- Bid Submittal (1 original and 4 copies)
 - Contractor's Bid Form
 - Acknowledge all Addenda issued
 - Bid Bond / Security (5% Total Bid Amount)
 - Contractor's Qualifications Statement
 - Vendor Qualification Packet
 - Debarment Certification Form
 - Non-Collusion Affidavit
 - Form CIQ
- Last date for questions is Tuesday August 23 , 2016 at 5:00 pm
- Delivery location, date, and time
 - Galveston County Purchasing office, August 31, 2016, 2:00 p.m.
 - Refer to Sealed Bid Instructions in Invitation to Bidders

Project Description

- Project location – Bolivar Peninsula, west of Rollover Pass
 - Previous project background
 - Project overview – Procurement and placement of sand from Owner approved source as beach and dune nourishment, dune planting, and sand fencing
 - Base Bid – Dune and beach nourishment (90,000 cy in place), dune planting and sand fencing, project sign, aerial photographs
 - Three Additive Bid Items: 5,000 cy (in place) additional beach nourishment
 - Awarding of additives based on price, budget, and sand availability
 - Sand source – Utilize only Owner approved source on Drawings
 - Dune and Beach dimensions, tolerances
 - Existing Natural Resources
 - Endangered species considerations
 - Work limits
-



Permits

- USACE Permit by Owner
- Galveston County Beach Construction Permit by Owner
- TPWD Sand, Shell, Gravel and Marl Permit not Required
- Any other permits responsibility of Contractor

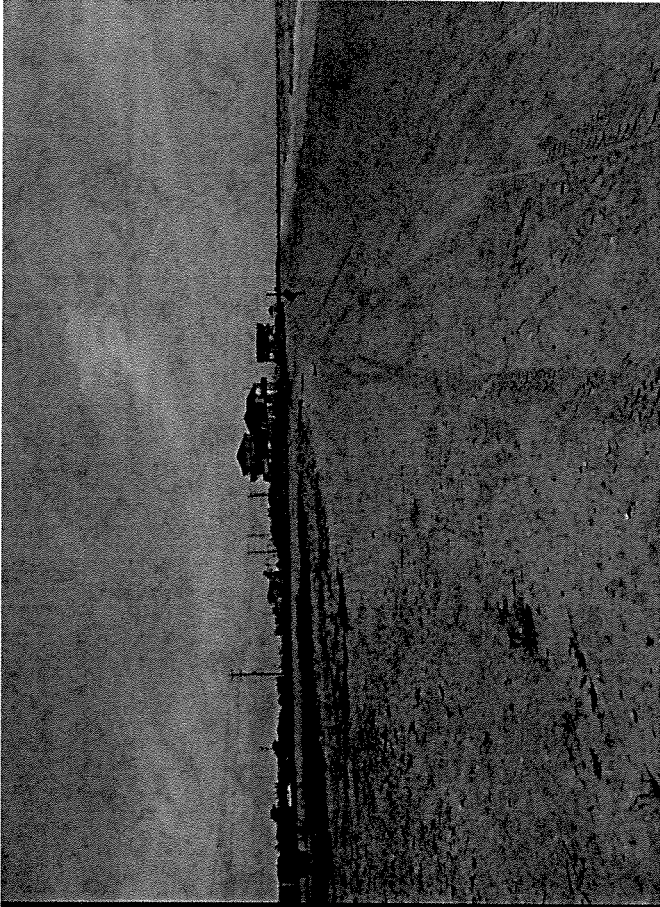
Construction Considerations

- Examination of the Site
- Construction Access and Staging Area
- Sand Source – Utilize only Owner Approved source on Drawings
- Ingress and Egress to the site
- Protection of Vegetation – Dune Considerations
- Planting and Fence Requirements
- Initial and Final Surveys / Acceptance Criteria
 - Survey Specifications
 - Survey Plan in Drawings for Initial & Final Surveys
 - Tolerances
 - Acceptance Aerial Photograph
 - Measurement of in place material only
- Working Restrictions
- Weather conditions, fall winter storms, water levels
- Timeline

Measurement and Basis of Payment

- Mobilization / Demobilization
 - Price for Mobilization / Demobilization not to exceed 10% of Base Bid Price
 - 70% / 30% split between mobilization and demobilization
- Unit Price Provisions
- Lump Sum / Progress Payments
- Surveys shall accompany invoices for beach & dune areas for which payment is requested
- Once accepted/approved, Contractor not responsible for area except for addressing scarp formation
- Sections can be accepted between payment requests
- Measurement and payment are for in place material only. No truck tickets or other means will be accepted for payment

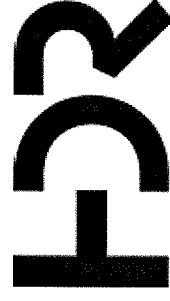
Questions and Answers



HDR
Construction -
Bolivar Peninsula Beach and
Dune Restoration
Pre-Bid Meeting
8/16/2016

INTRODUCTIONS

- Owner: Galveston County
- Funding through Coastal Impact Assistance Program (CIAP) and Texas General Land Office CEPRRA
- Engineer: HDR, Inc.



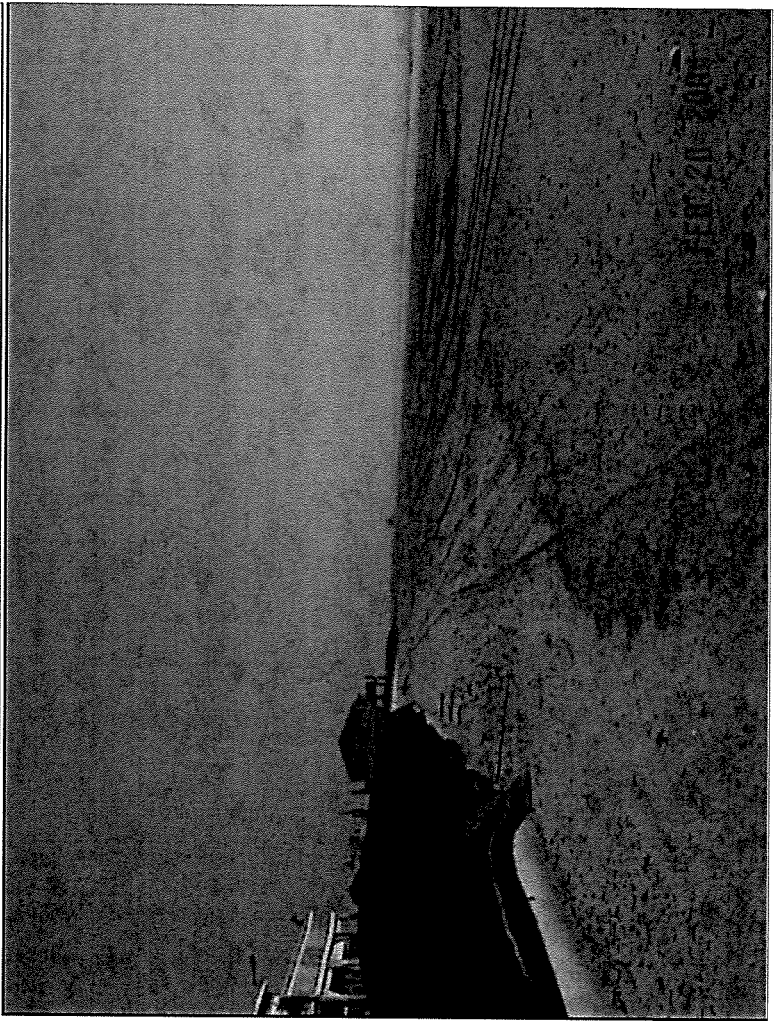
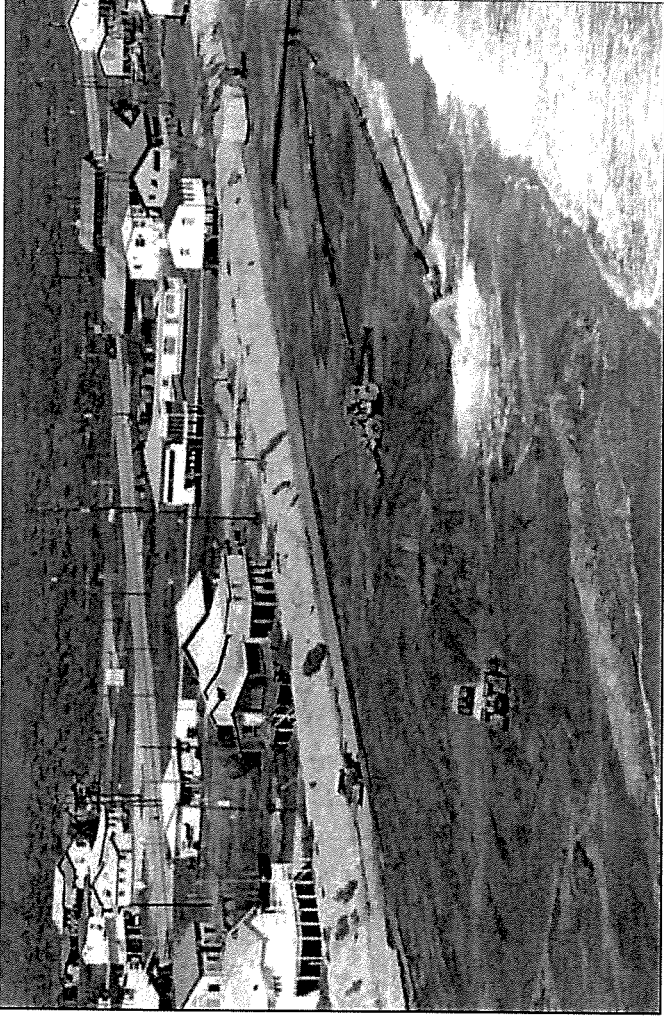
Bid Proposals

- Bid Submittal
 - Contractor's Bid Form
 - Acknowledge Addenda
 - Bid Bond (5% Total Bid Amount)
 - Contractor's Qualifications Statement
 - Vendor Qualification Packet
 - Debarment Certification Form
 - Non-Collusion Affidavit
 - Form CIQ
- Last Day for Written Questions is August 23rd at 5:00 pm to County.
- All communication through County (Rufus Crowder)
- Due August 31, 2016 at 2:00 pm
- Bid Package Delivery to Galveston County
- Refer to Invitation to Bid for Sealed Bid and Delivery Requirements

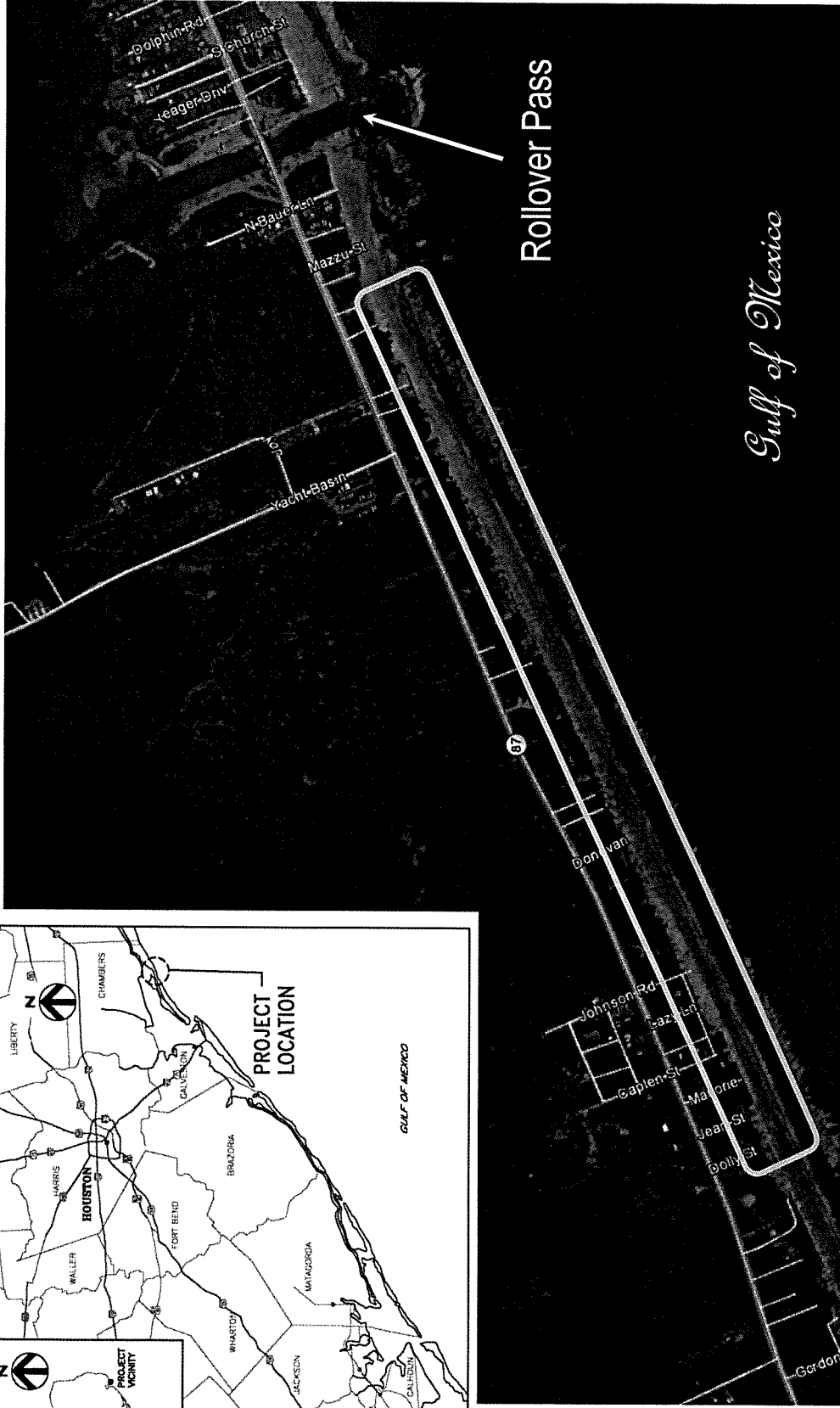
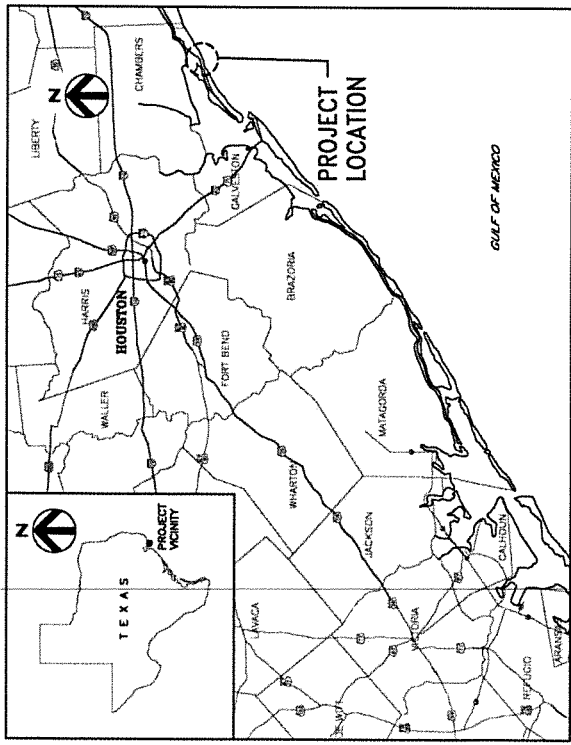


Project Background

- Previous projects included geotextile core dune and sand cover. Beach nourishment also performed.
- Past projects destroyed in Ike.
- New project will improve dune linkage across County property.
- Beach nourishment to improve resiliency of coast and act as a sand source to downdrift beaches.

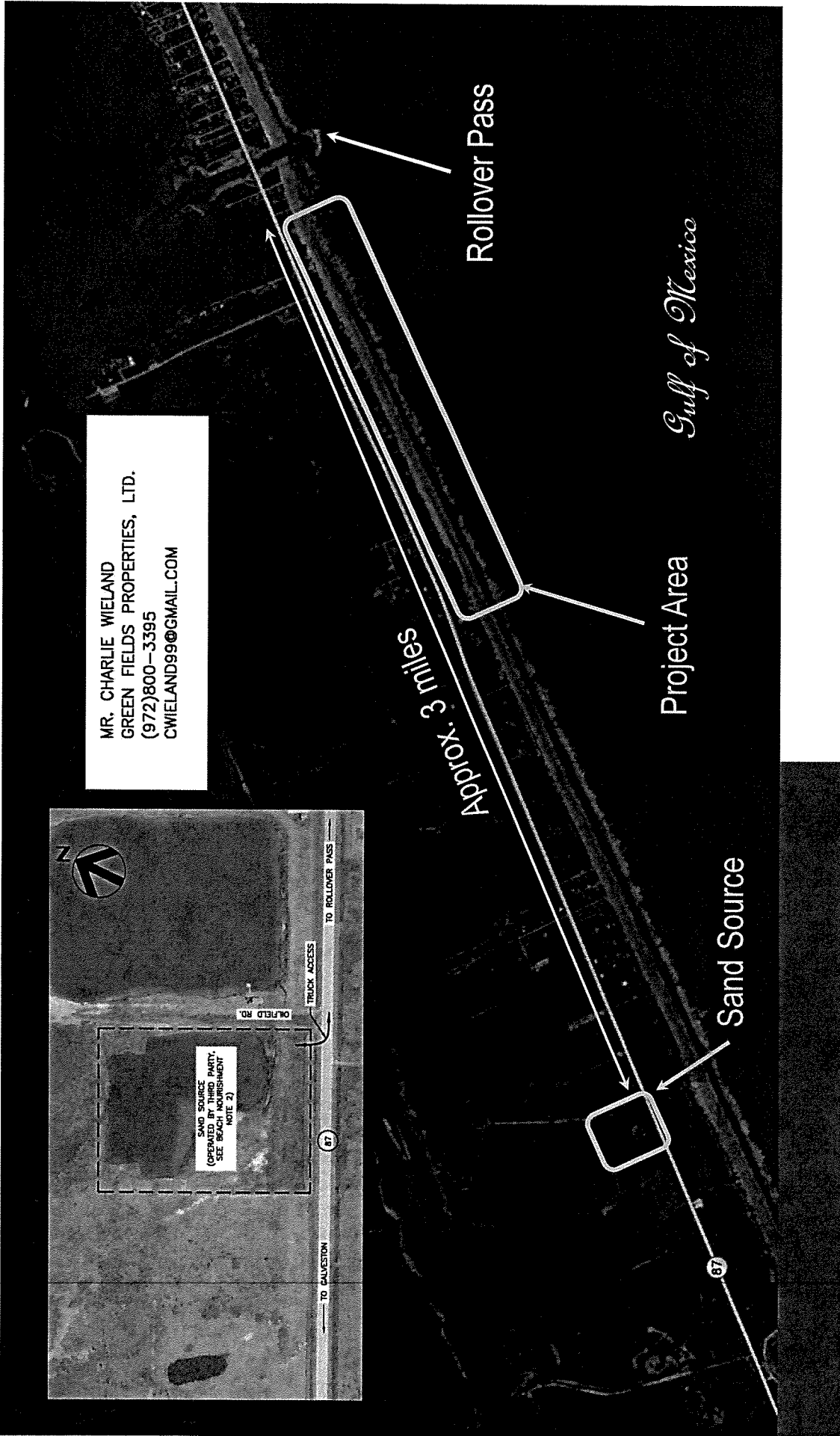
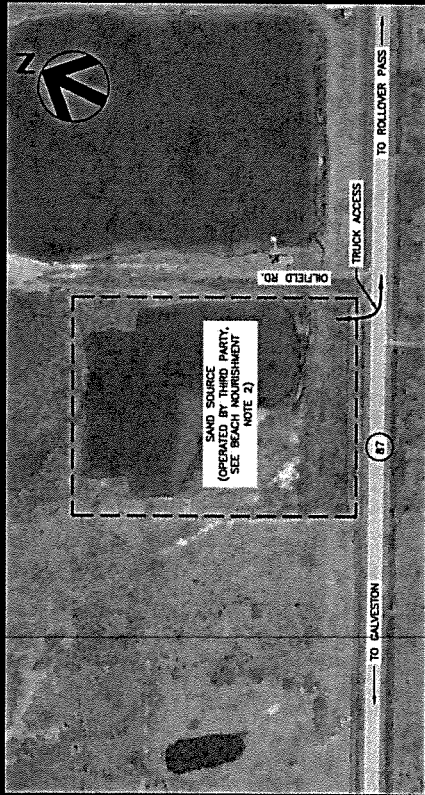


Project Area

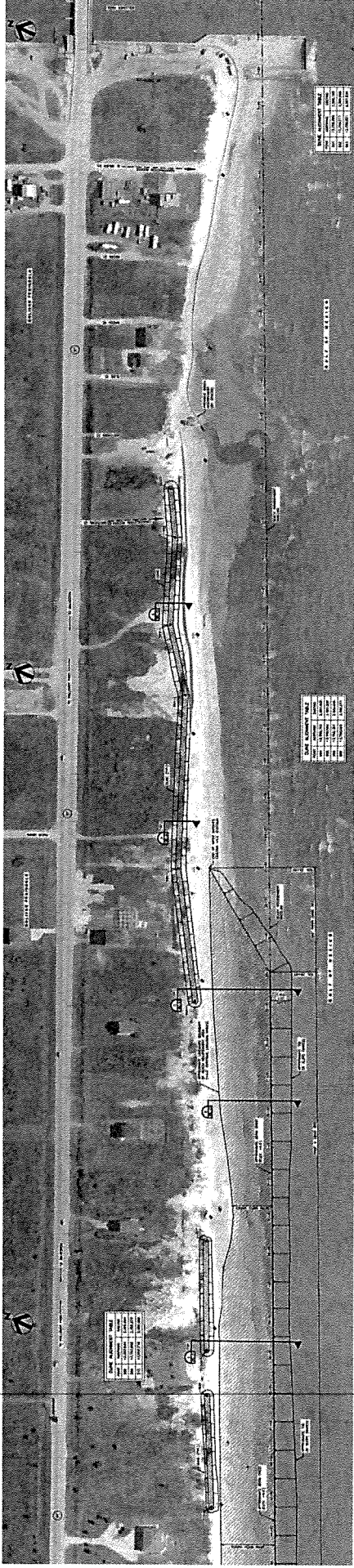


Owner Approved Sand Source

MR. CHARLIE WIELAND
GREEN FIELDS PROPERTIES, LTD.
(972)800-3395
CWIELAND99@GMAIL.COM



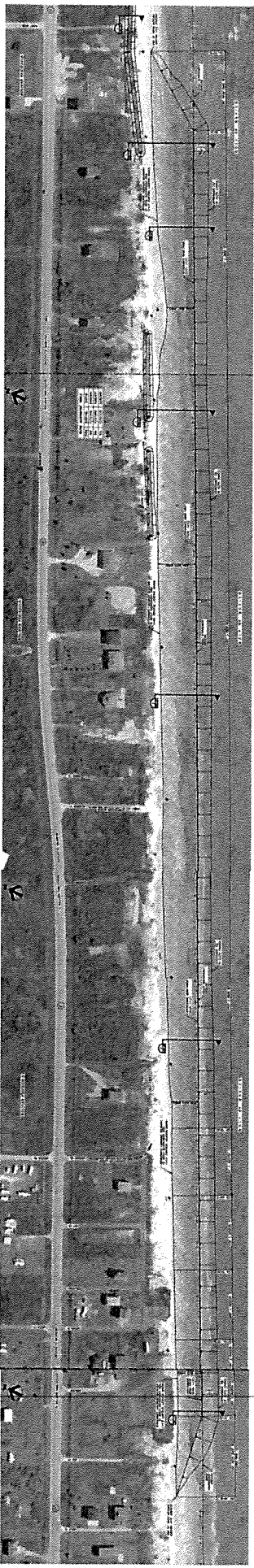
Project Layout



- Dune restoration from STA 14+00 to 29+00, 35+50 to 39+00, and 40+00 to 43+50
- Approx. 9,000 cy in place
- Access points near Rollover and at beginning of dune
- No beach nourishment until STA 25+00



Project Layout

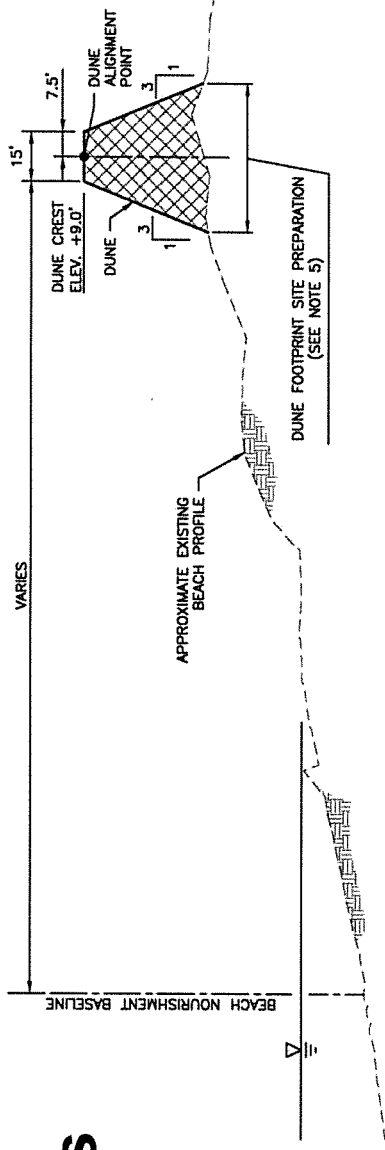


- Base beach nourishment from STA 25+00 to 68+63 (Base ends at 65+63 plus 300' taper)
- Base Bid: 81,000 cy (measured in place)
- Three Additive Bid Items: 5,000 cy
- Western access points at Bluestein Rd and Johnson Road
- 300' tapers
- Landward edge is existing +4.0 ft contour
- Sequencing: Construction from east to west



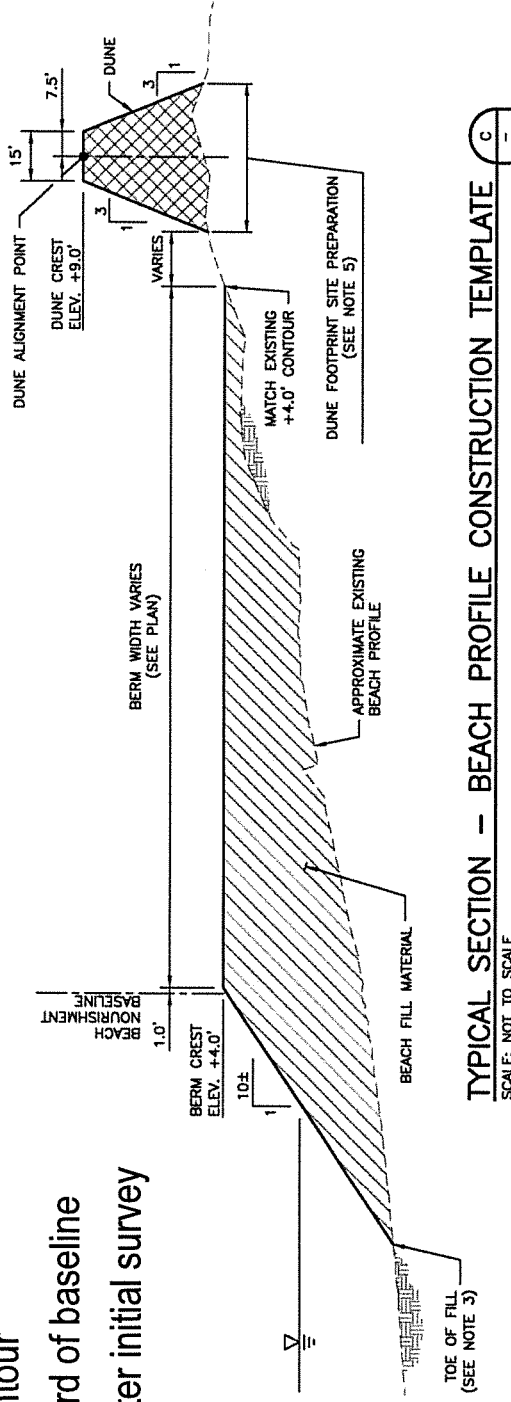
Beach & Dune Sections

- Dune:
 - 15' crest at +9.0 ft NAVD
 - 3:1 slopes
- Beach:
 - Berm crest at +4.0 ft NAVD
 - Crest width varies
 - 10:0 slope
 - Match existing +4.0' contour
 - Current width 1' landward of baseline
 - Berm crest may vary after initial survey



TYPICAL SECTION - BEACH PROFILE CONSTRUCTION TEMPLATE

SCALE: NOT TO SCALE

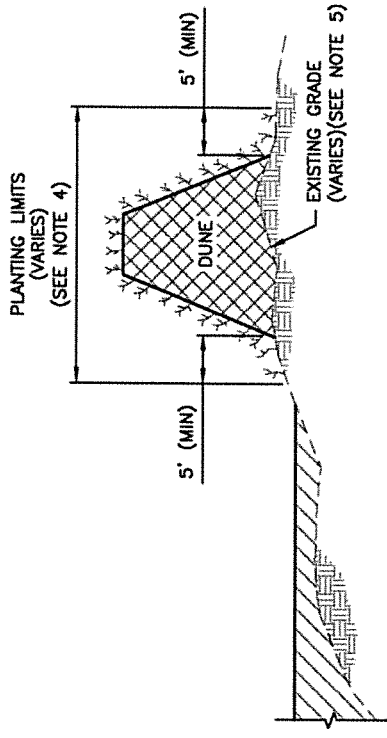


TYPICAL SECTION - BEACH PROFILE CONSTRUCTION TEMPLATE

SCALE: NOT TO SCALE

Dune Planting

- Specification 02900
- Bitter panicum, sea oats, marsh hay cordgrass
- 18" on center planting
- Planting extends 5' beyond toe of dune either side
- 90 day plant survivability warranty (not part of substantial completion timeline)
- Fertilizer requirements



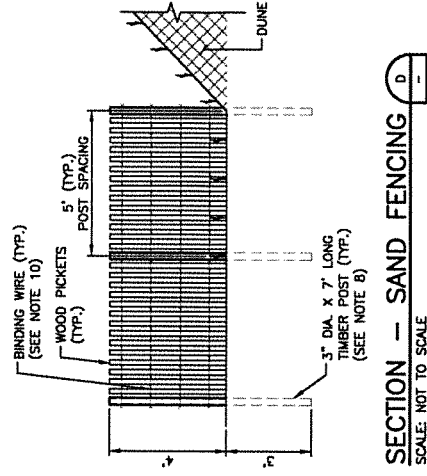
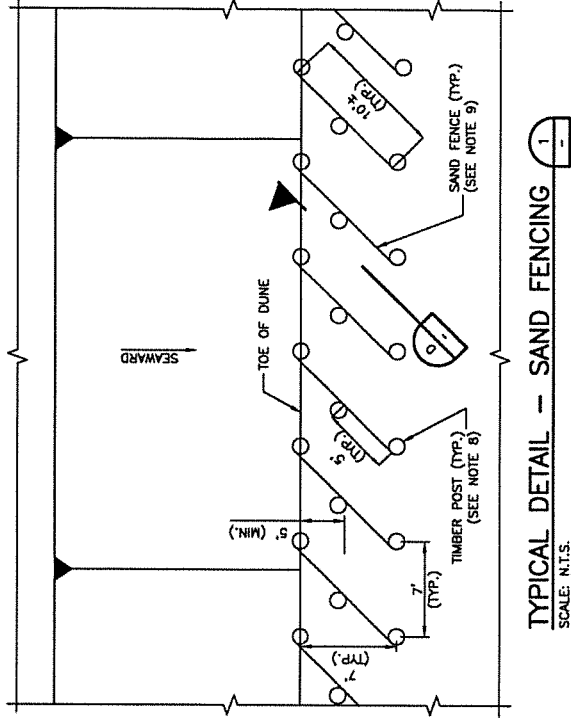
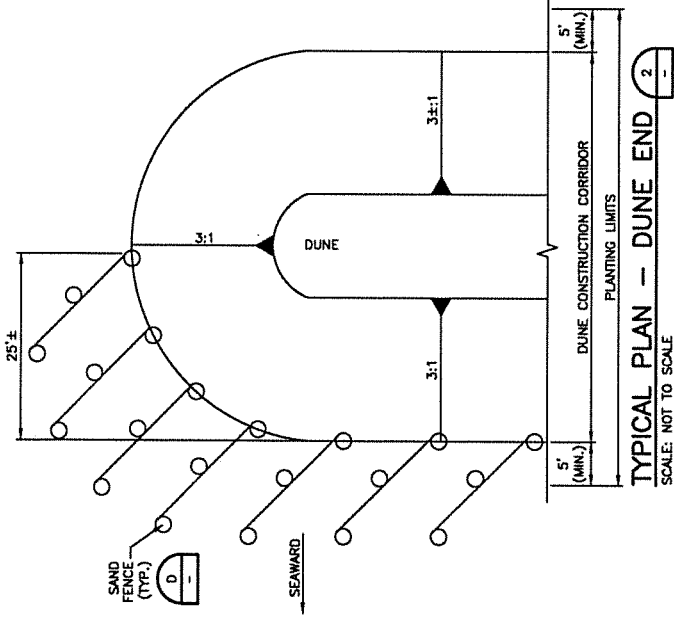
TYPICAL SECTION -- DUNE PLANTING LIMITS

SCALE: NOT TO SCALE

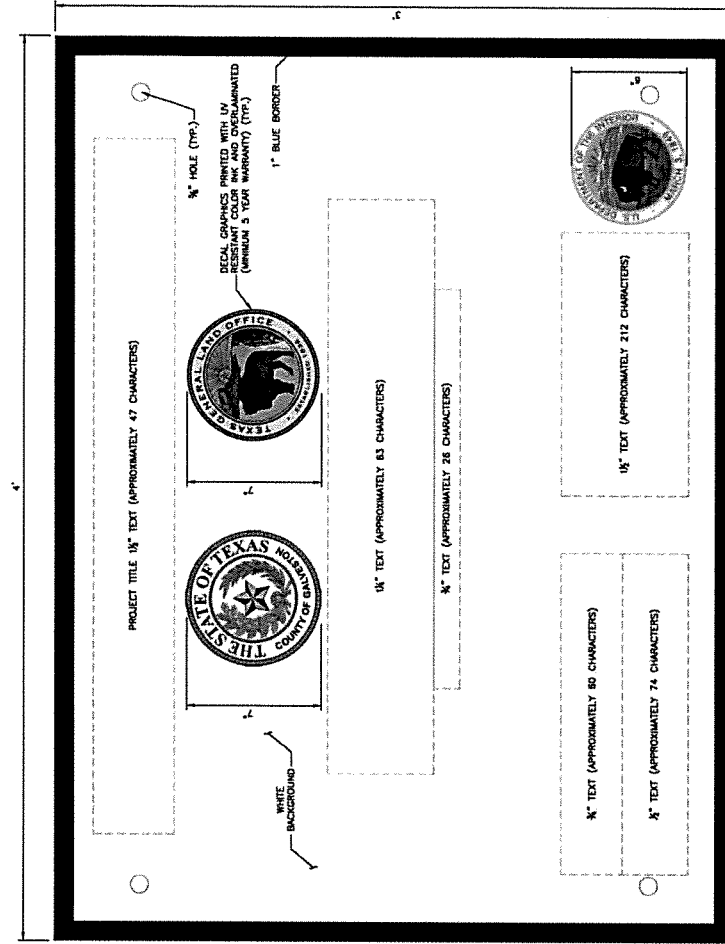


Sand Fencing

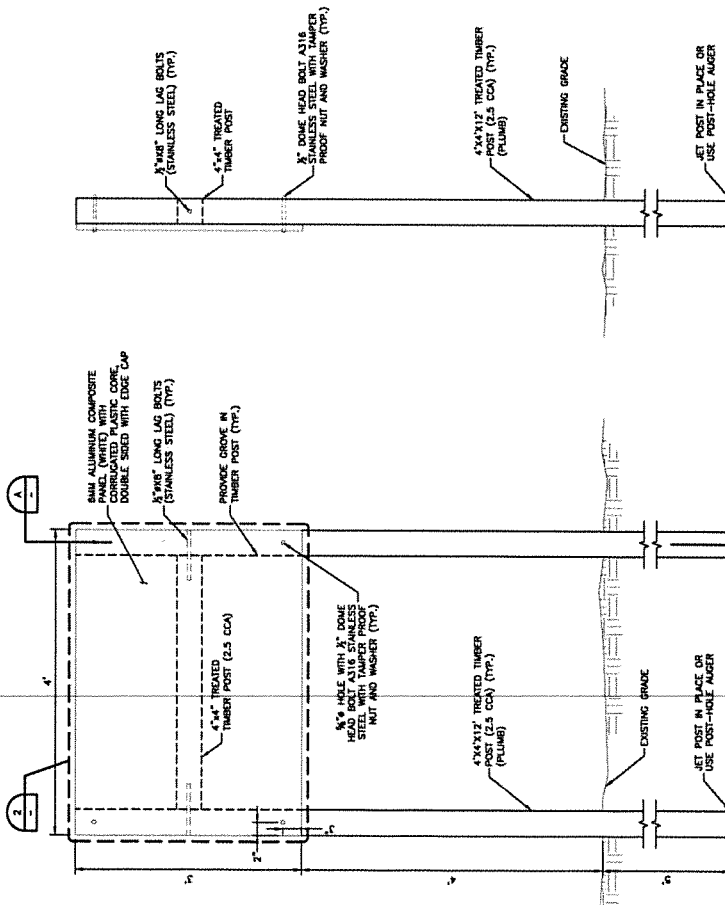
- Typical sand fencing
- Seaward side of dune and halfway around end of dunes
- Specs in drawings



Project Sign



TYPICAL DETAIL —
PERMANENT PROJECT SIGN FACE 2
SCALE: NOT TO SCALE



TYPICAL SECTION —
PERMANENT PROJECT SIGN 1
SCALE: NOT TO SCALE



Surveys – Aerial Photograph

- Survey Specification 02000
- RPLS, plots, techniques, timing
- Notification for surveys – Initial: Engineer review time (template adjustment)
- Provide template on plots
- Provided with payment applications
- Beach nourishment area – initial survey within 500 ft of leading edge of work
- Dune area – initial survey can be completed at one time
- Document survey dates
- Provide Final Complete Set (no additional final survey required)
- Vertical aerial photograph and series of oblique photos

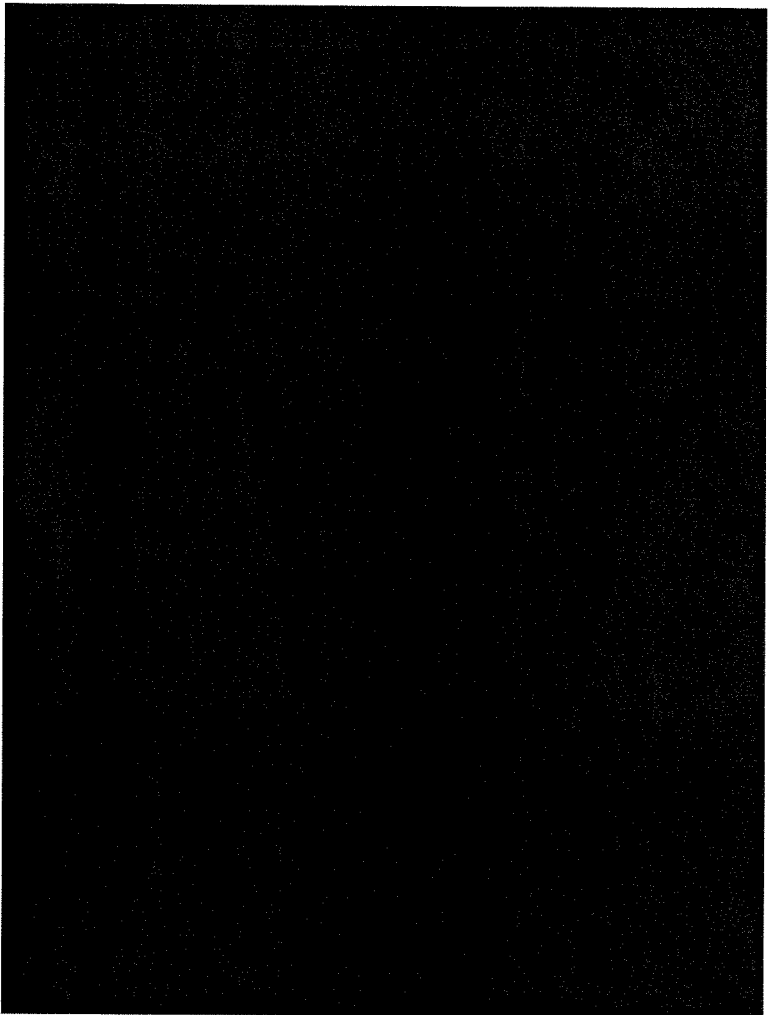
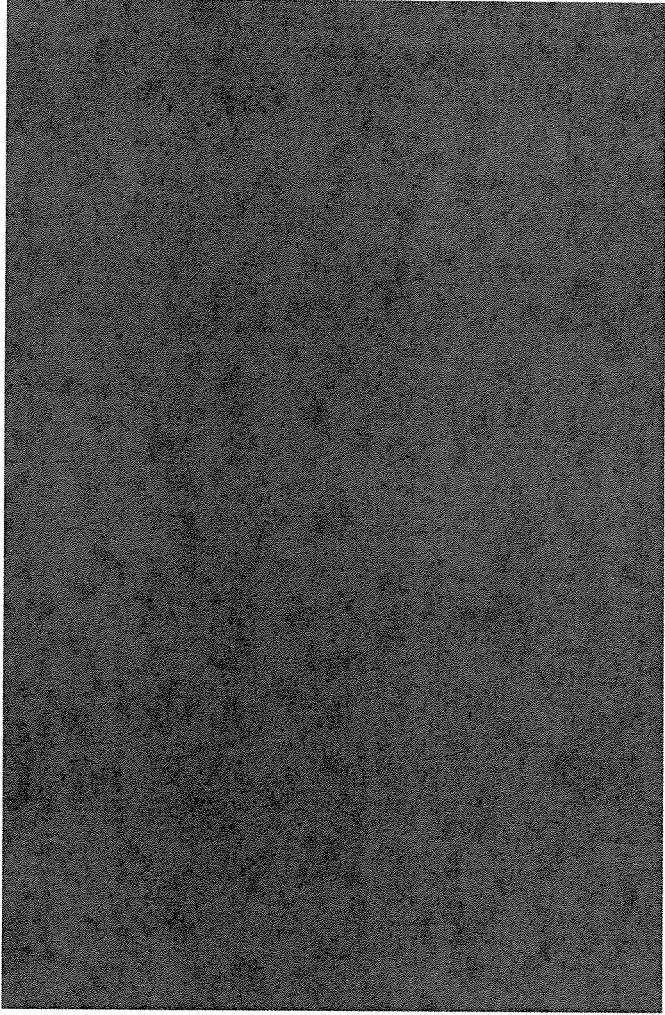


Construction Considerations

- Adjacent environmentally sensitive areas
- Endangered species (Piping Plover and Red Knot)
- Training – Best Practices
- Substantial Completion at 12/31/2016 and will be for sand placement work.
- Working with agencies to extend permit but no guarantees.
- Dune planting/fencing may occur if needed after 12/31/16 through upland site access.

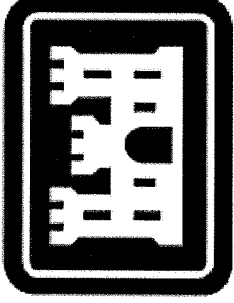
Additional Construction Considerations

- Work hours – Daylight hours
- Public use – work areas
- Fall/Winter weather and water levels
- Dynamic environment

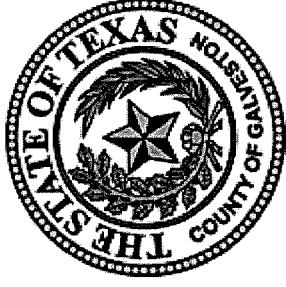


Permits

- USACE Permit SWG-2007-00391
- Galveston County Beach Construction Permit
- Contractor responsible for other permits (SWPPP), local building permits, etc.



**US Army Corps
of Engineers®**



Measurement & Basis of Payment

- Mobilization/Demobilization
 - o 10% Max of Base Bid amount
 - o 70% / 30% split between mob/demob
- Measurement – surveys to lines & grades
- Surveys required at time of Payment Request
- Lump Sum / Progress Payments
- Once survey approved, Contractor not responsible for section
- Surveys can be submitted between payment requests for approval

Progress Payment Applications

- Pay Application – % Complete, LF
- For beach/dune– provide survey drawings
- Timing – End of month

Final Payment

- Retainage Payment
- Address and complete all Substantial Completion Punch List Items
- Final Payment Affidavit
- Affidavit Release of Lien
- Affidavit of Payment of Debts & Claims
- Consent of Surety

Questions