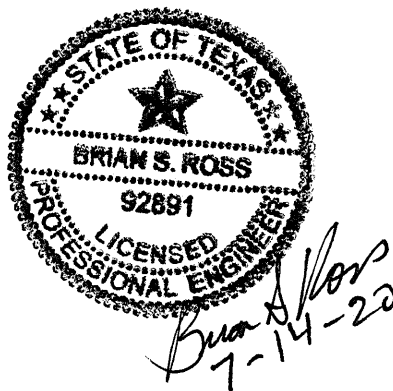




COUNTY OF GALVESTON
SPECIFICATIONS AND CONTRACT DOCUMENTS

GALVESTON COUNTY BEACH POCKET PARK NO. 2

Bid Number B201036

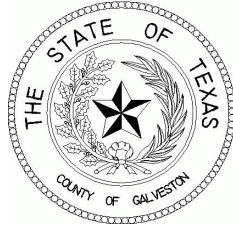


July 2020

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**GALVESTON COUNTY
PURCHASING DEPARTMENT**



INVITATION TO BID

ITB #B201036

GALVESTON COUNTY BEACH POCKET PARK NO. 2

BID DUE DATE: 08/13/2020

2:00 P.M. CST

***Rufus Crowder, CPPO, CPPB
Purchasing Agent
Galveston County
722 Moody (21st Street)
Fifth (5th) Floor
Galveston, Texas 77550
(409) 770-5372***



INVITATION TO BID
GALVESTON COUNTY BEACH POCKET PARK NO. 2
GALVESTON COUNTY, TEXAS

Sealed bids in **sets of three (3), one (1) unbound original and two (2) copies** will be received in the office of the County Purchasing Agent until **2:00 P.M. CST, on Thursday, August 13, 2020** and opened immediately in that office in the presence of the Galveston County Auditor and the Purchasing Agent. Sealed bids are to be delivered to Rufus G. Crowder, CPPO CPPB, Galveston County Purchasing Agent at the Galveston County Courthouse, 722 Moody (21st Street), Floor 5, Purchasing, Galveston, Texas 77550, (409) 770-5372. **The time stamp clock located in the Purchasing Agent's office shall serve as the official time keeping piece for this solicitation process. Any bids received after 2:00 P.M. CST on the specified date will be returned unopened.**

Purpose:

Galveston County is seeking for vendors to make repairs to Pocket Park No. 2 to restore off beach parking and public beach access at this location. The project includes reconstruction of sand dunes, dune walkover, asphalt paving and striping.

Pocket Park No. 2 is located at 11745 FM 3005, Galveston, TX 77554.

All bids must be marked on the outside of the envelope:

ITB #B201036, Galveston County Beach Pocket Park No. 2

Bids name and return address, should be prominently displayed on the bid package for identification purposes.

Bid Specifications can be obtained by visiting the Galveston County website @ <http://www.galvestoncountytexas.gov/pu/Pages/BidListing.aspx>

Bid prices shall be either lump sum or unit prices as shown on the bid sheet, if applicable. The net price will be delivered to Galveston County, including all freight, shipping, and license fees. Galveston County is tax exempt and no taxes should be included in your proposal pricing.

A non-mandatory pre-bid conference will be held on Tuesday, July 28, 2020 at 10:00 a.m.

Due to the COVID-19 pandemic, the County of Galveston has instituted measures to guard against the spread of the virus. This includes the prohibition of in-person meetings, social distancing, and stay-at-home requirements for employees.

The Pre-Bid Conference shall take place via video/tele-conference and the instructions are listed below and on the County's Purchasing website:

Minimum System Requirements for Video Conferencing:

1. High-resolution webcam;
2. Computer processing minimum: 2 GB of RAM and a quad-core processor;
3. Network bandwidth: 1 Mbps is sufficient for 15 fps at 720p resolution;

Calling from a mobile device:

1. Front facing camera;
2. In ear headphone with built in mic

Instructions for Video Conferencing:

1. [Click here](#) or navigate to <https://guest.lifesize.com/1907077>
2. Enter Name and email (optional);
3. Click the Terms of Service and Privacy Policy checkbox;

4. Click Join Meeting

***Note - be sure to enable audio and video.**

Copies of bid/Contract Documents may also be obtained from www.Civcast.com search Galveston County Beach Pocket Park No. 2. Bidders must register on this website in order to view and/or download specifications and plans for this project. There is NO charge to view or download documents. If copies of the bidding documents are to be mailed, please contact Amani Engineering, Inc. at 713.270.5700 for postage and handling. Return of documents is not required and no refund will be granted.

Upon satisfaction of contractual terms (e.g., goods delivered in promised condition, services rendered as agreed, etc.), contractor shall be paid via Galveston County's normal accounts payable process.

Bonding Requirements:

- **PROPOSAL GUARANTEE:** Evidencing its firm commitment to engage in the contract if Proposer is selected for award of contract, each Proposer is required to furnish with their proposal a Cashier's Check, or an acceptable Bidder's Bond, in the amount of five percent (5%) of the total contract price. The Bidder's Bond must be executed with a surety company authorized to do business in the State of Texas. Failure to furnish the bid/proposal guarantee in the proper form and amount, by the time set for opening of bids may be cause or rejection of the proposal.
- **PERFORMANCE AND PAYMENT BONDS:** Successful proposer, before beginning work, shall execute a performance bond and a payment bond, each of which must be in the amount of the contract. The required payment and performance bonds must each be executed by a corporate surety in accordance with Section 1, Chapter 87, Acts of the 56th Legislature, Regular Session, 1959 (Article 7.19-1, Vernon's Texas Insurance Code).

Attention is called to the fact that not less than, the federally determined prevailing (Davis-Bacon and Related Acts) wage rate, as issued by the Office of Rural Community Affairs and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex age or national origin.

The Galveston County Commissioners' Court reserves the right to waive any informality and to reject any and all bids and to accept the bid or bids which, in its opinion, is most advantageous to Galveston County with total respect the governing laws.

All contractors/subcontractors that are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

**INVITATION TO BID
GALVESTON COUNTY BEACH POCKET PARK NO. 2
GALVESTON COUNTY, TEXAS**

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**GENERAL PROVISIONS – INVITATION TO BID
GALVESTON COUNTY BEACH POCKET PARK NO. 2
GALVESTON COUNTY, TEXAS**

1. BID PACKAGE

*The Invitation to Bid, general and special provisions, drawings, specifications/line item details, contract documents and the Bid sheet are all part of the Bid package. **BIDs must be submitted in sets of three (3), one (1) unbound original and two (2) copies** on the forms provided by the County if County forms are provided, including the Bid sheets completed in their entirety and signed by an authorized representative by original signature. Failure to complete and sign the Bid sheets/contract page(s) may disqualify the Bid from being considered by the Commissioners' Court. Any individual signing on behalf of the Bidder expressly affirms that he or she is duly authorized to tender this Bid and to sign the Bid sheet/contract under the terms and conditions in this bid on behalf of the Bidder and to bind the Bidder to the terms and conditions of this bid and the Bidder's response hereto. Bidder further understands that its' signing of the contract shall be of no effect unless the contract is subsequently awarded by the Commissioners' Court and the contract properly executed by the Commissioners' Court. All figures must be written in ink or typed. Figures written in pencil or with erasures are not acceptable. However, mistakes may be crossed out, corrections inserted, and initialed in ink by the individual signing the bid. If there are discrepancies between unit prices quoted and extensions, the unit price shall prevail. Each Bidder is required to thoroughly review this entire Bid package to familiarize themselves with the Bid procedures, the plans and specifications for the requested work, as well as the terms and conditions of the contract the successful Bidder will execute with the County.*

2. BIDDER'S RESPONSIBILITY

The Bidder must affirmatively demonstrate its responsibility. The Bidder must also meet the following minimum requirements:

- A. have adequate financial resources or the ability to obtain such resources as required;
- B. be able to comply with all federal, state, and local laws, rules, regulations, ordinances and orders regarding this Invitation to Bid;
- C. have a satisfactory record of performance;
- D. have a satisfactory record of integrity and ethics; and
- E. be otherwise qualified and eligible to receive an award.

3. TIME FOR RECEIVING BIDS

Bids may be submitted by mail or hand delivery and **must be submitted only to the Galveston County Purchasing Agent**. If by delivery, the Bidder must deliver to the reception desk in the County Purchasing Agent's Office. The delivery and mailing instructions for the Galveston County Purchasing Agent are the following:

**Rufus Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550**

Bids will **not** be accepted by facsimile transmission or by electronic mail (email) unless superseded by instructions within the Special Provisions sections of this solicitation. Bids must be received by the County Purchasing Agent on or before the deadline for the opening of the bids. For clarity, mailing date/postmark is **not** sufficient – bids **must be received** by the County Purchasing Agent on or before the deadline. Late bids will not be accepted and will be

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GALVESTON COUNTY BEACH POCKET PARK NO. 2
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returned to the bidder unopened. Bids received prior to the submission deadline will be maintained unopened until the specified time for opening.

The County Purchasing Agent will accept bids from 8:00 a.m. to 5:00 p.m. on each business day up to the submission deadline. Business days do not include Saturdays and Sundays, and do not include other days in which the County is closed for business in observance of holidays or for other reasons.

The time-stamp clock within the County Purchasing Agent's Office shall be the official time-clock for the purpose of this solicitation and thus shall be the determinant of whether the bid was timely received.

The bidder should prominently identify the procurement number and name on the outside of the envelope/ mailing package. A label shall be provided for this purpose and usage of the label is preferred. If the bidder fails to identify the bid on the outside of the envelope as required, the Purchasing Agent will open the envelope for the sole purpose of identifying the bid number for which the submission was made. The envelope will then be resealed. No liability will attach to a County office or employee for the premature opening of a bid.

If a bid is not submitted, return this Invitation to Bid and state reason (s), otherwise your name may be removed from the Purchasing Agent's mailing list.

4. COMPETITIVENESS, INTEGRITY, INQUIRIES AND QUESTIONS

To prevent biased evaluations and to preserve the competitiveness and integrity of the procurement process, **bidders are to direct all communications regarding this invitation to bid only to the Galveston County Purchasing Agent**, unless otherwise specifically noted.

Do not contact the requesting department. Attempts by offering firms to circumvent this requirement will be viewed negatively and may result in rejection of the bid of the firm found to be in non-compliance.

All questions regarding this Invitation to Bid must be submitted in writing to:

**Rufus Crowder, CPPO CPPB, Purchasing Agent
722 Moody
Fifth (5th) Floor
Galveston, Texas 77550
Fax: (409) 621-7997
E-mail: purchasing.bids@co.galveston.tx.us**

All questions received and the responses thereto will be mailed, emailed, or faxed to all prospective bidders by addendum. No inquiries except clarification of instructions will be addressed by telephone.

Bidder is advised to carefully review this Invitation to Bid – it provides specific information necessary to aid participating firms in formulating a thorough response. Bidder's failure to examine all documents shall not entitle the bidder to any relief from the conditions imposing in the Invitation to Bid and the resultant contract.

An authorized person from the bidder must sign the bid. This signatory must be a person from the submitting firm who is duly authorized to tender and sign the bid on behalf of the bidder and to bind the bidder to the terms and conditions of this Invitation to Bid, the bidder's response, and all other terms and conditions of the contract. By this

**GENERAL PROVISIONS – INVITATION TO BID
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signature, the bidder further acknowledges that the bidder has read the bid documents thoroughly before submitting a bid and will fulfill the obligations in accordance to the terms, conditions, and specifications detailed herein.

5. BID OPENING

The Purchasing Agent shall open the bids on the date and time specified herein. Information read aloud at the bid opening is at the sole discretion of the Purchasing Agent. The Purchasing Agent will examine bids promptly and thoroughly.

6. WITHDRAWAL OF BID/FIRM BID RULE

Bidders may request withdrawal of their sealed bid prior to the scheduled bid opening time provided the request for withdrawal is submitted to the Purchasing Agent in writing. No bids may be withdrawn for a period of sixty (60) calendar days after opening of the bids.

7. COMMISSIONERS COURT

No contract is binding on the County until it is properly placed on the Commissioners Court agenda, approved in open Court, authorized to be executed by the County Judge, and fully executed by both parties.

Department heads and elected officials are not authorized to enter into any type of agreement or contract on behalf of the County. Only the Commissioners Court acting as a body may enter into a contract on behalf of and contractually bind the County. Additionally, department heads and elected officials are not authorized to agree to any type of supplemental agreements or contracts for goods or services. Supplemental agreements are subject to review by the County Legal Department prior to being accepted and signed by the County's authorized representative.

8. REJECTION OF BIDS/DISQUALIFICATION

Galveston County, acting through its Commissioners Court, reserves the right to:

- reject any and all Bids in whole or in part received by reason of this Invitation to Bid;
- waive any informality in the Bids received;
- disregard the Bid of any Bidder determined to be not responsible;
- disregard the Bid of any Bidder determined to have not submitted its Bid timely; and/or;
- discontinue its efforts for any reason under this Bid package at any time prior to actual execution of contract by the County.

Bidders may be disqualified and rejection of Bids may be recommended to the Commissioners Court for any of (but not limited to) the following causes:

- A. Failure to use the bid forms furnished by the County, if applicable;
- B. Lack of signature by an authorized representative of bidder;
- C. Failure to properly complete the bid;
- D. Engaging in communications regarding this procurement during the pendency of this procurement with County officials and/or personnel who are not within the Purchasing Agent's Office;
- E. Failure to meet the mandatory requirements of this invitation to bid; and/or

**GENERAL PROVISIONS – INVITATION TO BID
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F. Evidence of collusion among bidders.

9. RESTRICTIVE OR AMBIGUOUS SPECIFICATIONS

It is the responsibility of the prospective Bidder to review the entire Invitation to Bid packet and to notify the Purchasing Agent if the specifications are formulated in a manner that would restrict competition or appear ambiguous. Any protest or question(s) regarding the specifications or Bid procedures must be received in the Purchasing Agent's Office not less than seventy-two (72) hours prior to the time set for Bid opening. Bidders are to submit their Bid as specified herein or propose an approved equal.

10. SUBSTITUTES/DESCRIPTION OF MATERIALS AND EQUIPMENT

Any brand name or manufacturer reference used herein is intended to be descriptive and not restrictive, unless otherwise noted, and is used to indicate the type and quality of material. The term "or equal" if used, identifies commercially produced items that have the essential performance and salient characteristics of the brand name stated in the item description. All supplies, material, or equipment shall be new and of the most suitable grade for the purpose intended. For clarification, "new" includes products containing recovered materials that are EPA-designated items and additionally see Section 63 of these General Provisions on contracts involving federal funds. It is not the County's intent to discriminate against any materials or equipment of equal merit to those specified. However, if Bidder desires to use any substitutions, prior written approval must be obtained from the Purchasing Agent and sufficiently in advance such that an addendum may be issued. All material supplied must be one hundred percent (100%) asbestos free. Bidder, by submission of its bid, certifies that if awarded any portion of this procurement, the bidder will supply only material and equipment that is 100% asbestos free.

11. EXCEPTIONS TO BID

The Bidder will list on a separate sheet of paper any exceptions to the conditions of the bid. This sheet will be labeled, "Exceptions to Bid Conditions", and will be attached to the bid. If no exceptions are stated, it will be understood that all general and special conditions will be complied with, without exception.

The Bidder must specify in its Bid any alternatives it wishes to propose for consideration by the County. Each alternative should be sufficiently described and labeled within the Bid and should indicate its possible or actual advantage to the program being offered.

The County reserves the right to offer these alternatives to other Bidders.

12. PRICING

Bids will be either lump sum or unit prices as shown on the Bid sheet. The net priced items will be delivered to Galveston County, including all freight, shipping, and delivery charges.

Cash discount must be shown on bid, otherwise prices will be considered net. Unless prices and all information requested are complete, Bid may be disregarded and given no consideration.

In case of default by the contractor, the County of Galveston may procure the articles or services from other sources and may deduct from any monies due, or that may thereafter become due to the contractor, the difference between the

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price named in the contract of purchase order and the actual cost thereof to the County of Galveston. Prices paid by the County of Galveston shall be considered the prevailing market price at the time such purchase is made. Periods of performance may be extended if the facts as to the cause of delay justify such extension in the opinion of the Purchasing Agent and the Commissioners' Court.

13. PROCUREMENT CARD (P-CARD) PROGRAM

The County of Galveston participates in a Procurement Card (P-Card) program that allows payments made to a vendor by credit card. This method typically results in substantially faster bill payments, sometimes within three (3) to five (5) days of the actual transaction date. All transaction fees from the card provider are to be paid by the successful contractor. If your company will accept payment via credit card (Visa, MasterCard), please notate this in your Bid submittal.

14. PASS THROUGH COST ADJUSTMENTS

Except in instances of extreme extenuating circumstances Contractor prices shall remain firm throughout the contract period and any renewals. Examples of extreme extenuating circumstances include such situations as a nationwide rail strike, oil shortage or oil embargo.

In extreme extenuating circumstances, Contractors may be allowed to temporarily "pass through" additional costs they are forced to incur through no fault of their own. A request for a pass through cost increase will not be considered unless a Contractor's cost for the Contractor's product exceeds 10% over the original cost for the product. Also, the increase in cost must be nationwide and consistent for a minimum period of sixty (60) days. Costs that historically are anticipated to rise over a period of time (for example only, such as wages or insurance costs) do not qualify for pass through. If a Contractor thinks he will be asking for a pass through cost adjustment during the term of the contract, then the original cost of the product to Contractor must be stated in Contractor's original bid.

A request for a pass through cost does not guarantee that one will be granted. Contractors must submit such information on each request as required by the County Purchasing Agent. The County Purchasing Agent will review each request on a case-by-case basis and if valid, submit the request to Commissioners Court for authorization and determination of the appropriateness of each request as well as amount and duration of increase. Contractors will not be permitted any additional compensation for mark-ups or profits based on the increase in price. Rather, such additional compensation will be limited to the actual increase in original cost to the Contractor as such increase is reflected by the original cost stated in the bid. But in no event will the amount of additional compensation exceed 25% increase in Contractor's original cost for the product as such cost is reflected in Contractor's original Bid or the duration exceed a period of sixty (60) days. In addition should the cost, during the period of the pass through, return to normal or decrease to below pre pass through prices, appropriate downward adjustments shall be made. No more than one pass through adjustment will be permitted per year.

15. MODIFICATION OF BIDS

A Bidder may modify a bid by letter at any time prior to the submission deadline for receipt of Bids. Modification requests must be received prior to the submission deadline. Modifications made before opening time must be initialed by Bidder guaranteeing authenticity. Bids may not be amended or altered after the official opening with the single exception that any product literature and/or supporting data required by the actual specifications, if any, will be accepted at any time prior to the Commissioners' Court considering of same.

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16. PRE-BID CONFERENCE

A pre-bid conference for the purpose of discussing contract requirements and answering questions of prospective bidders may be conducted in this procurement. A pre-bid conference may be mandatory or voluntary. If the pre-bid conference is mandatory, then the County is authorized to condition acceptance of a bid on compliance with attendance. The Special Provisions of this procurement shall specify if a pre-bid conference is to be held and shall specify whether the pre-bid conference is mandatory or voluntary. Only a principal, officer, or employee of the bidder may represent the bidder at the pre-bid conference and no person may represent more than one bidder at the pre-bid conference.

17. SIGNATURE OF BIDS

Each Bid shall give the complete mailing address of the Bidder and be signed by an authorized representative by original signature with the authorized representative's name and legal title typed below the signature line. Each bid shall include the Bidder's Federal Employer Identification Number (FEIN). Failure to sign the Contract page(s) and bid response sheets may disqualify the bid from being considered by the County. The person signing on behalf of the Bidder expressly affirms that the person is duly authorized to tender the bid and to sign the bid sheets and contract under the terms and conditions of this Invitation to Bid and to bind the Bidder thereto and further understands that the signing of the contract shall be of no effect until it is properly placed on the Commissioners' Court agenda, approved in open Court, authorized to be executed by the County Judge, and fully executed by both parties.

18. AWARD OF BIDS – EVALUATION CRITERIA AND FACTORS

The award will be made to the responsible Bidder whose bid is determined to be the lowest and best evaluated offer demonstrating the best ability to fulfill the requirements set forth in this Invitation to Bid. **The proposed cost to the County will be considered firm and cannot be altered after the submission deadline.**

“Lowest and best” means a bid or offer providing the best value considering associated direct and indirect costs, including transport, maintenance, reliability, life cycle, warranties, and customer service after a sale.

In determining the lowest and best bid for a contract for the purchase of earth-moving, material-handling, road maintenance, or construction equipment, the Commissioners Court may also consider the information submitted under Section 262.0255 of the Local Government Code; and in determining the lowest and best bid for a contract for the purchase of road construction material, the Commissioners Court may consider the pickup and delivery locations of the bidders and the cost to the county of delivering or hauling the material to be purchased. The Commissioners Court may award contracts for the purchase of road construction material to more than one bidder if each of the selected bidders submits the lowest and best bid for a particular location or type of material.

Each Bidder, by submitting a bid, agrees that if its' bid is accepted by the Commissioners' Court, such Bidder will furnish all items and services upon which prices have been tendered and upon the terms and conditions in this bid and contract.

The contractor shall commence work only after the transmittal of a fully executed contract and after receiving written notification to proceed from the County Purchasing Agent. The contractor will perform all services indicated in the bid in compliance with this contract.

Neither department heads nor elected officials are authorized to sign any binding contracts or agreements prior to being properly placed on the Commissioners' Court agenda and approved in open court. Department heads and other elected officials are not authorized to enter into any type of agreement or contract on behalf of Galveston County. Only the Commissioners' Court, acting as a body, may enter into a contract on behalf of the County. Additionally,

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department heads and other elected officials are not authorized to agree to any type of supplemental agreements or contracts for goods or services. Supplemental agreements are subject to review by the County Legal Department prior to being signed by the County's authorized representatives.

The County of Galveston reserves the right to accept bids on individual items listed, or group items, or on the bid as a whole; to reject any and all bids; to waive any informality in the bids; to disregard the bids that are not submitted timely; to disregard the bids of bidders determined to be not responsible; and to accept the bid that appears to be in the best interest of the County. The selection process may, however, include a request for additional information or an oral presentation to support the written bid.

In determining and evaluating the best bid, the pricing may not necessarily be controlling, but quality, equality, efficiency, utility, general terms, delivery, suitability of the service offered, and the reputation of the service in general use will also be considered along with any other relevant items. The Commissioners' Court shall be the sole judge in the determination of these matters.

The County reserves the right to reject any or all Bids in whole or in part received by reason of this Invitation to Bid and may discontinue its efforts under this Invitation to Bid for any reason or no reason or solely for the County's convenience at any time prior to actual execution of the contract by the County.

A Bidder whose bid does not meet the mandatory requirements set forth in this Invitation to Bid may be considered non-compliant.

The invitation to submit a bid which appears in the newspaper, or other authorized advertising mediums, these general provisions, the specifications which follow, the Bid sheets, and any addenda issued are all considered part of the Bid.

Each Bidder, by submitting a bid, agrees that if its bid is accepted by the Commissioners' Court, such Bidder will furnish all items and services upon the terms and conditions in this Invitation to Bid and the resultant contract.

Notice of contract award is anticipated to be made within ninety (90) days of opening of Bids to the lowest responsive and responsible contractor, whose bid complies with all the requirements in the Invitation to Bid.

Contractor shall submit to the County, for approval, within ten (10) days from notice of contract award, all Certificates of Insurance evidencing the required coverage as described under Section 35, Requirement of and Proof of Insurance, or if different, then as described within the Special Provisions or resultant contract.

The contractor shall not commence work under these terms and conditions of the contract until all applicable Purchase Orders, Certificates of Insurance, Performance and Payment Bonds, and Irrevocable Letters of Credit (if required) have been approved by the County of Galveston and the Contractor has received notice to proceed in writing and an executed copy of the contract from the County Purchasing Agent.

19. DISPUTE AFTER AWARD/PROTEST

Any actual or prospective Bidder who is allegedly aggrieved in connection with the solicitation of this Invitation to Bid or award of a contract resulting therefrom may protest. The protest shall be submitted in writing to the Purchasing Agent within seven (7) calendar days after such aggrieved person knows of or should have known of the facts giving rise thereto. If the protest is not resolved by mutual agreement, the Purchasing Agent will promptly issue a decision in writing to the protestant. If the protestant wishes to appeal the decision rendered by the Purchasing Agent, such appeal must be made to the Commissioners' Court through the Purchasing Agent. The decision of the

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Commissioners' Court will be final. The Commissioners' Court need not consider protests unless this procedure is followed.

20. PUBLIC INFORMATION ACT (f/k/a Open Records Act)

The bidder acknowledges that the County is a government body for purposes of the Public Information Act, codified as Chapter 552 of the Texas Government Code, and as such is required to release information in accordance with the provisions of the Public Information Act.

If bidder considers any of its submitted information to be proprietary in nature, trade secret, or otherwise confidential, then it must clearly and conspicuously mark such information as proprietary, trade, secret, or confidential. By the submission of its bid, Bidder expressly affirms that it has clearly and conspicuously marked any information within its submission that Bidder considers confidential, proprietary, and/or trade secret.

In the event the County receives a request for information under the Public Information Act seeking information that the Bidder has marked as confidential, proprietary, and /or trade secret, then the County agrees that it shall provide notice to the Bidder of the request for information and the request for decision process under the Public Information Act. Thus, the County will submit the initial correspondence to the Texas Attorney General – however, the burden is and shall be on the Bidder to submit correspondence to the Attorney General if the Bidder wishes its information to be withheld. Bidder is deemed to have knowledge of the Public Information Act. **By the submission of its bid, bidder expressly acknowledges that the burden to withhold its' information from public disclosure lays with the bidder;** thus, bidder further acknowledges and agrees that it shall submit comments to the Texas Attorney General in the request for decision process if bidder wishes to have its' information withheld from public disclosure.

21. BIDDER'S E-MAIL ADDRESSES – CONSENT TO DISCLOSURE

Notwithstanding the foregoing Section 19, Bidder acknowledges and agrees that the confidentiality of any and all email addresses Bidder uses or discloses in communicating with the County are **open** to the public in accordance with Section 552.137 of the Government Code and Bidder consents to the release of its email addresses.

22. RESULTANT CONTRACT

Bidder shall correctly and fully execute the resultant contract first. After this, the contract shall be set for consideration by the Commissioners' Court. If the Commissioners' Court authorizes the execution of the contract, the resultant contract shall become effective upon the Commissioners' Court execution of same, provided that the contract is executed by all parties to the contract. Contract documents shall consist of the contract, the General and Special Provisions, drawings, bid package (including best and final offer(s) if such is utilized), any addenda issued, and any change orders issued during the work. If applicable to the attached bid, bidder must sign three (3) original contracts and return all three with their bid submittal.

Bidder should submit a proposed contract with its Bid or its sample material terms and conditions for review and consideration.

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23. CONTRACT TERM

The term of the resultant contract will begin on the date of full execution or the execution by the Commissioners' Court, whichever is later, and will terminate on the date specified in the resultant contract unless terminated earlier as herein set forth.

24. TERMINATION FOR DEFAULT

Failure of either party in the performance of any of the provisions of this contract shall constitute a breach of contract, in which case either party may require corrective action within ten (10) business days from date of receipt of written notice citing the exact nature of such breach. Failure of the party being notified to take corrective action within the prescribed ten (10) business days, or failure to provide written reply of why no breach has occurred, shall constitute a Default of Contract.

All notices relating to default by Bidder of the provisions of the contract shall be issued by the County through its Legal Department, and all replies shall be made in writing to the County Legal Department. Notices issued by or issued to anyone other than the County Legal Department shall be null and void and shall be considered as not having been issued or received.

Galveston County reserves the right to enforce the performance of this contract in any manner prescribed by law in the event of breach or default of this contract, and may contract with another party, with or without solicitation of bids or further negotiations. At a minimum, Bidder shall be required to pay any difference in service or materials, should it become necessary to contract with another source, plus reasonable administrative costs and attorney fees.

In the event of Termination for Default, Galveston County, its agents or representatives shall not be liable for loss of any profits anticipated to be made by Bidder.

In addition to the remedies stated herein, the County has the right to pursue other remedies permitted by law or in equity.

No waiver by either party of any event of default under this agreement shall operate as a waiver of any subsequent default under the terms of this agreement.

County reserves the right to terminate this contract immediately in the event Bidder:

- A. Fails to meet delivery or completion schedules; and/or
- B. Fails to otherwise perform in accordance with the accepted Bid and the contract.

25. TERMINATION FOR CONVENIENCE

County may terminate this contract upon at least thirty (30) calendar days prior written notice for its convenience or for any reason deemed by the County to serve the public interest. As well, County may terminate this contract upon thirty (30) calendar days prior written notice for any reason resulting from any governmental law, order, ordinance, regulation, or court order. In no event shall County be liable for loss of any profits anticipated to be made hereunder by Bidder should this contract be terminated early.

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26. FORCE MAJEURE

If by reason of Force Majeure either Party shall be rendered unable, wholly or in part, to carry out its responsibilities under this contract by any occurrence by reason of Force Majeure, then the Party unable to carry out its responsibility shall give the other Party notice and full particulars of such Force Majeure in writing within a reasonable time after the occurrence of the event, and such notice shall suspend the Party's responsibility for the continuance of the Force Majeure claimed, but for no longer period.

Force Majeure means acts of God, floods, hurricanes, tropical storms, tornadoes, earthquakes, or other natural disasters, acts of a public enemy, acts of terrorism, sovereign conduct, riots, civil commotion, strikes or lockouts, and other causes that are not occasioned by either Party's conduct which by the exercise of due diligence the Party is unable to overcome and which substantially interferes with operations.

27. ESTIMATED QUANTITIES

Any reference to quantities shown in the Invitation to Bid is an estimate only. Since the exact quantities cannot be predetermined, the County reserves the right to adjust quantities as deemed necessary to meet its requirements.

28. CONTRACTOR INVESTIGATION

Before submitting a bid, each Bidder shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the County upon which the contractor will rely. Bidder shall exercise due diligence and is further charged with knowledge of the local, State, and Federal laws, rules, and regulations applicable to this contract. If the bidder receives an award as a result of its bid submission in this procurement, the bidder's failure to have made such investigations and examinations will in no way relieve the bidder from its obligation to comply in every detail with all provisions and requirements of the contract, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the contractor for additional compensation and/or for excused nonperformance.

29. NO COMMITMENT BY COUNTY OF GALVESTON

This Invitation to Bid does not commit the County of Galveston to award any costs or pay any costs, or to award any contract, or to pay any costs associated with or incurred in the preparation of a bid in response to this Invitation to Bid and does not commit the County of Galveston to procure or contract for services or supplies.

30. BID COSTS BORNE BY BIDDER

Galveston County shall not be liable for any costs incurred by Bidder in preparation, production, or submission of a bid, including but not limited to best and final offer if applicable. As well, Galveston County shall not be liable for any work performed by Bidder prior to issuance of fully executed contract and properly issued notice to proceed. Galveston County shall not be liable for any costs incurred by Bidder by reason of attending a pre-Bid conference. Galveston County shall not be liable for any costs incurred by Bidder by reason of the County invoking use of best and final offers.

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31. BEST AND FINAL OFFIERS (BAFO)

Not applicable.

32. SINGLE BID RESPONSE

If only one bid is received in response to the Invitation to Bid, a detailed cost bid may be requested of the single bidder. A cost/price analysis and evaluation and/or audit may be performed of the cost bid in order to determine if the price is fair and reasonable.

33. CHANGES IN SPECIFICATIONS

If it becomes necessary to revise any part of this bid, a written notice of such revision will be provided to all Bidders in the form of addenda. The County is not bound by any oral representations, clarifications, or changes made in the written specifications by the County's employees or officials, unless such clarification or change is provided to Bidders in a written addendum from the Purchasing Agent. Bidders are advised to inquire prior to the submission deadline as to whether any addenda to this invitation to bid have been issued, as the successful bidder will be required to abide by such addenda.

The County of Galveston reserves the right to revise or amend the specifications up to the time set for opening of bids. Such revisions and amendments, if any, shall be announced by form of addenda. Copies of such addenda (or addendum in the event only one addendum is issued in the procurement) shall be furnished to all prospective contractors. Prospective contractors are defined as those contractors listed on the County's Invitation to Bid list for this material/service or those who have obtained documents from the Purchasing Agent's Office subsequent to the advertisement. If revisions and amendments require changes in quantities or prices proposed, or both, the date set for opening of bids may be postponed by such number of days as in the opinion of the County shall enable contractors to revise their bids. In any case, the bid opening shall be at least seven (7) business days after the last revising or amendment addendum and the addendum shall include an announcement of the new date, if applicable, for the opening of bids.

34. BID IDEAS AND CONCEPTS

The County reserves to itself the right to adopt or use for its benefit, any concept, plan, or idea contained in any bid.

35. BID DISCLOSURES

While this procurement is pending, the names of those who submitted bids will not be made public unless in conformity with the County Purchasing Act. Likewise, no pricing or staffing information will be released unless in conformity with the County Purchasing Act. Bidders are requested to withhold all inquiries regarding their bid or other submissions until after an award is made. No communication is to be had with any County employee or official, other than the County Purchasing Agent, regarding whether a bid was received - violations of this provision may result in the rejection of a bid.

36. INDEMNIFICATION

The contractor agrees to assume all risks and responsibility for, and agrees to indemnify, defend, and save harmless, the County of Galveston, its elected and appointed officials and department heads, agents and

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employees from and against all claims, demands, suits, actions, recoveries, judgments, and costs and expenses including reasonable attorney’s fees for the defense thereof arising out of or in connection therewith on account of the loss of life, property or injury or damage to the person which shall arise from contractor’s operations under this contract, its use of County facilities and/or equipment or from any other breach on the part of the contractor, its employees, agents or any person(s), in or about the County’s facilities with the expressed or implied consent of the County. Contractor shall pay any judgment with cost which may be obtained against Galveston County resulting from contractor’s operations under this contract.

Contractor agrees to indemnify and hold the County harmless from all claims of subcontractors, laborers incurred in the performance of this contract. Contractor shall furnish satisfactory evidence that all obligations of this nature herein above designated have been paid, discharged or waived. If Contractor fails to do so, then the County reserves the right to pay unpaid bills of which County has written notice direct and withhold from Contractor’s unpaid compensation a sum of money reasonably sufficient to liquidate any and all such lawful claims.

37. REQUIREMENT OF AND PROOF OF INSURANCE

The successful Bidder shall furnish evidence of insurance to the County Purchasing Agent and shall maintain such insurance as required hereunder or as may be required in the Special Provisions or resultant contract, if different. Contractor shall obtain and thereafter continuously maintain in full force and effect, commercial general liability insurance, including but not limited to bodily injury, property damage, and contractual liability, with combined single limits as listed below or as may be required by State or Federal law, whichever is greater.

- A. For damages arising out of bodily injury to or death of one person in any one accident :
ONE HUNDRED THOUSAND AND NO/100 (\$100,000.00) DOLLARS.
- B. For damages arising out of bodily injury to or death of two or more persons in any one accident:
THREE HUNDRED THOUSAND AND NO/100 (\$300,000.00) DOLLARS.
- C. For any injury to or destruction of property in any one accident :
ONE HUNDRED THOUSAND AND NO/100 (\$100,000.00) DOLLARS.

Insurance shall be placed with insurers having an A.M. Best’s rating of no less than A. Such insurance must be issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from loss or damage that may arise to any person or property by reason of services rendered by Contractor.

Galveston County shall be listed as the additional insured on policy certificates and shall be provided with no less than thirty (30) calendar days prior notice of any changes to the policy during the contractual period.

Certificates of Insurance, fully executed by a licensed representative of the insurance company written or countersigned by an authorized Texas state agency, shall be filed with the County Purchasing Agent within ten (10) business days of issuance of notification from the County Purchasing Agent to Bidder that the contract is being activated as written proof of such insurance and further provided that Bidder shall not commence work under this contract until it has obtained all insurance required herein, provided written proof as required herein, and received written notice to proceed issued from the County Purchasing Agent.

Proof of renewal/replacement coverage shall be provided prior to the expiration, termination, or cancellation date of any policy and Galveston County shall be named as an additional insured on any such renewal/replacement coverage

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and a certificate of insurance showing such shall be provided to the Purchasing Agent. Said insurance shall not be cancelled, permitted to expire, or changed without at least thirty (30) days prior written notice to the County.

Insurance required herein shall be maintained in full force and effect during the life of this contract and shall be issued on an occurrence basis. Contractor shall require that any and all subcontractors that are not protected under the Contractor's own insurance policies take and maintain insurance of the same nature and in the same amounts as required of Contractor and provide written proof of such insurance to Contractor. Proof of renewed/replacement coverage shall be provided prior to the expiration, termination, or cancellation date of any policy. Contractor shall not allow any subcontractor to commence work on the subcontract until such insurance required for the subcontractor has been obtained and approved.

Workers' Compensation Insurance: Successful Bidder shall carry in full force Workers' Compensation Insurance Policy(ies), if there is more than one employee, for all its' employees, including but not limited to full time, part time, and emergency employees employed by the successful Bidder. Current insurance certificates certifying that such policies as specified above are in full force and effect shall be furnished by successful Bidder to the County.

Insurance is to be placed with insurers having a Best rating of no less than A. The Bidder shall furnish the County with certificates of insurance and original endorsements affecting coverage required by these insurance clauses within ten (10) business days of receiving notification from the County Purchasing Agent that the contract is being activated. The certificates and endorsements for each insurance policy are to be signed by a person authorized by the insurer to bind coverage on its behalf. The Bidder shall be required to submit annual renewals for the term of this contract prior to expiration of any policy.

In addition to the remedies stated herein, the County has the right to pursue other remedies permitted by law or in equity.

The County agrees to provide Bidder with reasonable and timely notice of any claim, demand, or cause of action made or brought against the County arising out of or related to utilization of the property. Bidder shall have the right to defend any such claim, demand, or cause of action at its sole cost and expense and within its sole and exclusive discretion. The County agrees not to compromise or settle any claim or cause of action arising out of or related to the utilization of the property without the prior written consent of the Bidder.

In no event shall the County be liable for any damage to or destruction of any property belonging to the Bidder.

Subrogation Waiver. Bidder and Bidder's insurance carrier waive any and all rights to subrogation against Galveston County in regard to any suit or claim arising out of personal injury or property damage resulting from Bidder's performance under this agreement.

38. BID GUARANTEE

Unless specified differently within the Special Provisions of this procurement, each Bidder shall be required to submit a bid guarantee with its bid as required within this Section.

Evidencing its firm commitment to engage in contract if Bidder is selected for award of contract, each Bidder is required to furnish with their bid a cashier's check or an acceptable Bidder's bond in the amount of five percent (5%) of the total contract price. If Bidder is using a bond, then the Bidder bond must be executed with a surety company authorized to do business in the State of Texas. Failure to furnish the bid guarantee in the proper form and amount, by the time set for opening of bids may be cause for rejection of the bid.

The cashier's check or Bidder/bid bond (as applicable) will be returned to each respective unsuccessful Bidder(s) subsequent to the Commissioners Court award of contract, and shall be returned to the successful Bidder upon the

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completion and submission of all contract documents. Provided however, that the cashier's check or Bidder bond will be forfeited to the County as liquidated damages should successful Bidder fail to execute the contract within thirty (30) days after receiving notice of the acceptance of its bid.

39. PERFORMANCE AND PAYMENT BONDS (if required)

Successful Bidder, before beginning work, shall execute a performance bond and a payment bond, each of which must be in the amount of the contract. The required payment and performance bonds must each be executed by a corporate surety authorized to write surety bonds in the State of Texas and in accordance with Chapter 3503 of the Insurance Code (codified in 2005 and originally within Section 1, Chapter 87, Acts of the 56th Leg., R.S., 1959, and in Article 7.19-1, Vernon's Texas Insurance Code).

The performance and payment bonds must each clearly and prominently display on the bond or on an attachment to the bond:

- a.) The name, mailing address, physical address, and telephone number, including the area code, of the surety company to which any notice of claim should be sent; or
- b.) The toll-free telephone number maintained by the Texas Department of Insurance under Subchapter B, Chapter 521, Insurance Code, and a statement that the address of the surety company to which any notice of claim should be sent may be obtained from the Texas Department of Insurance by calling the toll free-telephone number.

The performance bond shall be solely for the protection of Galveston County, in the full amount of the contract, and conditioned on the faithful performance of the work in accordance with the plans, specifications, and contract documents. The payment bond is solely for the protection and use of payment bond beneficiaries who have a direct contractual relationship with the prime contractor or a subcontractor to supply labor or material, and in the amount of the contract.

The payment and performance bonds required to be furnished herein must be furnished before the contractor begins work and are a requirement for issuance of a Notice to Proceed. Such bonds must be furnished to the Galveston County Purchasing Agent within thirty (30) calendar days after the date of the full execution of the contract or, if applicable, as required under Chapter 2253, Government Code, whichever is earlier. Contractor's failure to provide the required payment and performance bonds within such time period shall constitute an event of default under this contract. Contractor shall not commence work until all applicable certificates of insurance, performance bonds, and payment bonds have been received and approved by the County Purchasing Agent and the Contractor receives notice to proceed in writing that has been issued by the County Purchasing Agent.

Additionally, if this request for bid is for the award of a public works contract, then compliance with Chapter 2253 of the Texas Government Code, which is known as the McGregor Act, is mandatory. Performance and payment bonds are required to be furnished in accordance with Chapter 2253 of the Texas Government Code. Bidder should familiarize itself with the entire provisions of Chapter 2253 of the Texas Government Code.

40. PATENT AND COPYRIGHT PROTECTION

The Bidder agrees at its sole expense to protect the County from claims involving infringement of patents, copyright, trademark, trade secret, or other intellectual property rights. **Bidder shall indemnify and save harmless the County of Galveston, its officers, employees, and agents, from liability of any nature and kind whatsoever, including without limitation cost and expenses, for or on account of any copyrighted, trademarked, trade secret, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, or other intellectual property rights, including its use by the County.** Bidder also agrees that if Bidder is awarded this

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contract, that no work performed hereunder shall be subject to patent, copyright, or other intellectual property by Bidder.

41. CONFLICT OF INTEREST DISCLOSURE REPORTING (FORM CIQ)

Bidder may be required under Chapter 176 of the Texas Local Government Code to complete and file a conflict of interest questionnaire (CIQ Form). The CIQ Form pertains to business relationship, gift giving and family relationship reporting. If bidder is required to file a CIQ Form, then the completed CIQ Form must be filed with the County Clerk of Galveston County, Texas.

Business relationship. If Bidder has an employment or other business relationship with a local government officer of Galveston County or with a family member of a local government officer of Galveston County that results in the officer or family member of the officer receiving taxable income that exceeds \$2,500.00 during the preceding 12-month period, then Bidder **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

Gift-giving. If Bidder has given a local government officer of Galveston County or a family member of a local government officer of Galveston County one or more gifts with an aggregate value of more than one-hundred dollars (\$100.00) during the preceding 12-months, then Bidder **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

Family member. For purposes of the business relationship and gift giving reporting requirements, a “family member” means a person related to another person with the first degree of consanguinity or affinity, as described by Subchapter B, Chapter 573, Texas Government Code. Examples of persons within the first degree by consanguinity or affinity include a son, daughter, father, mother, spouse, son-in-law, daughter-in-law, father-in-law, mother-in-law, stepson, stepdaughter, stepmother, and stepfather.

Family relationship. If Bidder has a “family relationship” with a local government officer of Galveston County then Bidder **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County, regardless of whether Bidder has a business relationship or has given gifts to the local government officer or a family member of the local government officer. For this purpose, “family relationship” means Bidder is related within the third degree by consanguinity or the second degree by affinity, as those terms are defined under Chapter 573 of the Texas Government Code, to a local government officer of Galveston County. Examples of such relationships include a son, daughter, mother, father, brother, sister, grandchild, great-grandchild, grandparent, great-grandparent, niece, nephew, uncle, aunt, spouse, mother-in-law, father-in-law, daughter-in-law, son-in-law, spouse’s grandchild, spouse’s grandparent, grandparent’s spouse, grandchild’s spouse, stepson, stepdaughter, stepmother, and stepfather.

Bidder must file its original CIQ Form with the Galveston County Clerk. The Galveston County Clerk has offices at the following locations:

Galveston County Clerk
Galveston County Justice Center, Suite 2001
600 59th Street
Galveston, Texas 77551

Galveston County Clerk
North County Annex, 1st Floor
174 Calder Road
League City, Texas 77573

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Again, if Bidder is required to file a CIQ Form, the original completed form is filed with the Galveston County Clerk (**not the Purchasing Agent**).

For Bidder's convenience, a blank CIQ Form is enclosed with this bid package. Blank CIQ Form(s) may also be obtained by visiting the Purchasing Agent's website – this website is linked from the Galveston County homepage, at <http://www.galvestoncountytexas.gov>.

Chapter 176 specifies deadlines for the filing of CIQ Forms (both initial filings and updated filings).

It is Bidder's sole responsibility to file a true and complete CIQ Form with the Galveston County Clerk if Bidder is required to file by the requirements of Chapter 176 of the Local Government Code. Bidder is advised that it is an offense to fail to comply with the disclosure reporting requirements dictated under Chapter 176 of the Texas Local Government Code, and the failure to file may be grounds to void the contract, if Bidder is awarded a contract.

If bidder has any questions about compliance with Chapter 176, Bidder may wish to consult its' legal counsel. Compliance is the individual responsibility of each person, business, and agent who is subject to Chapter 176 of the Texas Local Government Code.

42. DISCLOSURE OF INTERESTED PARTIES/FORM 1295

Under Section 2252.908 of the Government Code, any business entity that enters into a contract with Galveston County that requires the approval of the Commissioners Court must submit a "Disclosure of Interested Parties" to the County prior to the execution of the contract. This form, the "Disclosure of Interested Parties" form was promulgated by the Texas Ethics Commission, and is the "Form 1295". **This procurement is subject to these requirements.**

The Texas Ethics Commission was charged with promulgating rules to implement Section 2252.908 of the Government Code. The rules adopted by the Texas Ethics Commission are located at Sections 46.1, 46.3, and 46.5 of Title 1 of the Texas Administrative Code. Thus, the law covering these requirements is located at Section 2252.908 of the Government Code, and in Title 1, Sections 46.1, 46.3, and 46.5 of the Texas Administrative Code.

The Texas Ethics Commission's website is: www.ethics.state.tx.us. The area of the Texas Ethics Commission website pertaining to Form 1295 is:

www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm.

Form 1295 must be completed electronically through the Texas Ethics Commission website (handwritten forms are not allowable). Once the business entity has completed their electronic filing of Form 1295, then the business entity must print out the electronically completed form, and sign and notarize the Form 1295. Once Form 1295 is signed and notarized, the business entity must submit their completed, signed, and notarized Form 1295 to the Galveston County Purchasing Agent.

Successful Proposer is and shall be subject to these requirements, and no resultant contract may be executed by the Commissioners Court until the completed, signed, and notarized Form 1295 is on file with the County Purchasing Agent.

No portion of the Form 1295 process commits the County to any type of award of contract whatsoever.

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After the Purchasing Agent's Office receives the completed, signed, and notarized Form 1295, the Purchasing Agent's Office will, within 30 days, go the Texas Ethics Commission website to submit electronic confirmation of the County's receipt of the completed, signed, and notarized Form 1295.

43. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS & REQUIREMENT TO REGISTER IN SAM

Bidder certifies that neither it, nor any of its Principals, are presently debarred, suspended, proposed for debarment, disqualified, excluded, or in any way declared ineligible for the award of contracts by any Federal agency. Contractor agrees that it shall refund Galveston County for any payments made to Contractor while ineligible. Contractor acknowledges that Contractor's uncured failure to perform under this Agreement, if such should occur, may result in Contractor being debarred from performing additional work for the County, the respecting State Agency administering the grant funding the contract, if applicable, the State, FEMA or HUD (as applicable), and other Federal and State entities. Further, Bidder has executed the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters and returned the fully completed and executed original certification with the submission of its bid. **The truthful and fully completed and executed original of the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters must be included with the submission of Bidder's Bid and is a mandatory requirement of this Invitation to Bid. Bidder's failure to include the fully completed and executed original of this Certification shall be considered non-compliance with the requirements of this Invitation to Bid and grounds for the rejection of Bidder's Bid.** Proposer shall immediately notify the County Purchasing Agent if it becomes debarred or suspended, placed on the Consolidated List of Debarred Contractors, or in any other way becomes ineligible for award of contract by any Federal agency. This Certification is a material fact relied upon by Galveston County; if it is later determined that the contractor did not comply with 2 C.F.R. Part 180 and 2 C.F.R. Part 3000, in addition to the remedies available to Galveston County and the State agency administering this grant, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment of contractor.

If the contract to be awarded pursuant to this procurement involves the use of Federal funds, then bidder must also be registered in the Federal Contractor Registry through the System for Award Management (SAM) to be eligible for award of contract pursuant to this procurement.

Information regarding the SAM is available at:

<http://www.federalcontractorregistry.com/?gclid=CIG1hf2rr8wCFYkCaQoducANZw> or at <https://www.sam.gov/portal/SAM/#1>.

No contract involving the use of Federal funds may be awarded to any bidder unless and until such registration is current and in good standing under SAM. Successful bidder must maintain SAM registration throughout the entire term of the agreement with the County. If this contract involves the use of Federal funds, then bidder must enclose proof of such SAM registration within its response, which is also a mandatory requirement of this procurement; failure to enclose such proof shall be considered non-compliance with the requirements of this procurement and grounds for the rejection of bidder's response to this procurement (i.e., bid, proposal, or qualifications statement, as applicable).

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44. SOVEREIGN IMMUNITY

The County specifically reserves any claim it may have to sovereign, qualified, or official immunity as a defense to any action arising in conjunction with this contract.

45. CONTROLLING LAW AND VENUE

Bidder acknowledges and agrees that the contract is and shall be governed and construed by the laws of the State of Texas and that venue shall lie exclusively in a court of competent jurisdiction in Galveston County, Texas.

46. MERGERS, ACQUISITIONS

The Bidder shall be required to notify the County of any potential for merger or acquisition of which there is knowledge at the time that a bid is submitted.

If subsequent to the award of any contract resulting from this Invitation to Bid the Bidder shall merge or be acquired by another firm, the following documents must be submitted to the County:

- A. Corporate resolutions prepared by the awarded Bidder and the new entity ratifying acceptance of the original contract, terms, conditions and prices;
- B. New entity's Federal Identification Number (FEIN);
- C. New entity's proposed operating plans;
- D. New entity's proof of registration in SAM for contracts involving Federal funds;
- E. New entity's certification regarding debarment;
- F. New entity's certification regarding lobbying; and
- G. W-9 Form for new entity.

Moreover, Bidder is required to provide the County with notice of any anticipated merger or acquisition as soon as Bidder has actual knowledge of the anticipated merger or acquisition. The New Bidder's proposed plan of operation must be submitted prior to merger to allow time for submission of such plan to the Commissioners Court for its approval.

47. DELAYS

The County reserves the right to delay the scheduled commencement date of the contract if it is to the advantage of the County. There shall be no additional costs attributed to these delays should any occur. Bidder agrees it will make no claims for damages, for damages for lost revenues, for damages caused by breach of contract with third parties, or any other claim by Bidder attributed to these delays, should any occur. In addition, Bidder agrees that any contract it enters into with any third party in anticipation of the commencement of the contract will contain a statement that the third party will similarly make no claim for damages based on delay of the scheduled commencement date of the contract.

48. ACCURACY OF DATA

Information and data provided through this Invitation to Bid are believed to be reasonably accurate.

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49. SUBCONTRACTING/ASSIGNMENT

Bidder shall not assign, sell, or otherwise transfer its contract in whole or in part without prior written permission of the County acting by and through its Commissioners' Court. Such consent, if granted, shall not relieve the Bidder of any of its responsibilities under this contract.

50. INDEPENDENT CONTRACTOR

Bidder expressly acknowledges that it is an independent contractor. Nothing in this agreement is intended nor shall be construed to create an agency relationship, an employer/employee relationship, a joint venture relationship, or any other relationship allowing County to exercise control or direction over the manner or method by which Bidder or its subcontractors perform in providing the requirements stated in the Invitation to Bid.

51. MONITORING PERFORMANCE

The County shall have the unfettered right to monitor and audit the Bidder's work in every respect. In this regard, the Bidder shall provide its full cooperation and insure the cooperation of its employees, agents, assigns, and subcontractors. Further, the Bidder shall make available for inspection and/or copying when requested, original data, records, and accounts relating to the Bidder's work and performance under this contract. In the event any such material is not held by the Bidder in its original form, a true copy shall be provided.

52. SUBJECT TO APPROPRIATION OF FUNDS

State law prohibits the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved by the Commissioners' Court. Galveston County anticipates this to be an integral part of future budgets to be approved during the periods of this contract, except for unanticipated needs or events which may prevent such payments against this contract. However, Galveston County cannot guarantee the availability of funds, and enters into this contract only to the extent such funds are made available through appropriation (allocation) by the Commissioners' Court. This contract shall not be construed as creating any debt on behalf of the County of Galveston in violation of TEX. CONST. art. XI, § 7, and it is understood that all obligations of Galveston County are subject to the availability of funds.

53. CONTRACTS SUBJECT TO GRANT FUNDING

Notwithstanding the foregoing, if the contract to be awarded by this procurement is funded with Federal or State grant funds, the bidder acknowledges that the obligations of the County under the contract are contingent upon the continued availability of grant funding to meet the County's obligations. If the grant(s) to the County is reduced, de-obligated, or otherwise discontinued or terminated, Contractor agrees that the County may immediately terminate the contract without penalty or any liability whatsoever on the part of the County, the State, or the Federal awarding agency.

54. PROCUREMENT ETHICS

Galveston County is committed to the highest ethical standards. Therefore, it is a serious breach of the public trust to subvert the public purchasing process by directing purchases to certain favored vendors, or to tamper with the competitive bidding process, whether it's done for kickbacks, friendship or any other reason. Since misuse of the

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purchasing power of a local government carries criminal penalties, and many such misuses are from a lack of clear guidelines about what constitutes an abuse of office, the Code of Ethics outlined below must be strictly followed.

Galveston County also requires ethical conduct from those who do business with the County.

CODE OF ETHICS – Statement of Purchasing Policy:

Public employment is a public trust. It is the policy of Galveston County to promote and balance the objective of protecting the County's integrity and the objective of facilitating the recruitment and retention of personnel needed by Galveston County. Such policy is implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public office.

Public employees must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the Galveston County procurement organization.

To achieve the purpose of this Article, it is essential that those doing business with Galveston County also observe the ethical standards prescribed herein.

General Ethical Standards:

It shall be a breach of ethics to attempt to realize personal gain through public employment with Galveston County by any conduct inconsistent with the proper discharge of the employee's duties.

It shall be a breach of ethics to attempt to influence any public employee of Galveston County to breach the standards of ethical conduct set forth in this code.

It shall be a breach of ethics for any employee of Galveston County to participate directly or indirectly in a procurement when the employee knows that:

- The employee or any member of the employee's family, has a financial interest pertaining to the procurement;
- A business or organization in which the employee or any member of the employee's family, has a financial interest pertaining to the procurement; or
- Any other person, business, or organization with which the employee or any member of the employee's family is negotiating or has an arrangement concerning prospective employment is involved in the procurement.

Gratuities:

It shall be a breach of ethics for any person to offer, give, or agree to give any employee or former employee of Galveston County, or for any employee or former employee of Galveston County to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or bid pending before this government.

Kickbacks:

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It shall be a breach of ethics for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor for any contract for Galveston County, or to any person associated therewith, as an inducement for the award of a contract, subcontract or order.

Contract Clause:

The prohibition against gratuities and kickbacks prescribed above shall be conspicuously set forth in every contract and solicitation by Galveston County.

Confidential Information:

It shall be a breach of ethics for any employee or former employee of Galveston County to knowingly use confidential information for actual or anticipated personal gain, or for the actual or anticipated gain of any other person.

Prohibition against Contingent Fees:

It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a Galveston County contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. Failure to abide by this section constitutes a breach of ethical standards.

Representation:

Bidder represents and warrants, by signing and submitting its bid, that it has not retained anyone in violation of this section prohibiting contingent fees.

Contract Clause:

The representation prescribed above shall be conspicuously set forth in every contract and solicitation thereof.

55. NON-COLLUSION AFFIDAVIT

Bidder certifies, by signing and submitting a bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the contractor has not directly or indirectly induced or solicited another contractor to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any contractor or anyone else to put in a sham bid or that anyone shall refrain from bidding; that the contractor has not in any manner, directly or indirectly, sought by agreement, communications, or conference with anyone to fix the bid price of the contractor of any other bidder, or to fix any overhead, profit or cost element of the bid price, or that of any other contractor, or to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the contractor has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any cooperation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

A blank Non-Collusion Affidavit is included with this Bid packet. Bidder must enclose a truthful and fully executed original Non-Collusion Affidavit with the submission of its bid. This is a mandatory requirement of this Invitation to Bid. Failure to include the truthfully and fully executed Non-Collusion Affidavit in the submission of its Bid shall be considered non-compliance with the requirements of this Invitation to Bid by the Bidder and grounds for the rejection of Bidder's submission.

No negotiations, decisions, or actions shall be initiated by any company as a result of any verbal discussion with any County employee prior to the opening of responses to this Invitation to Bid.

No officer or employee of the County of Galveston, and no other public or elected official, or employee, who may exercise any function or responsibilities in the review or approval of this undertaking shall have any personal or

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financial interest, direct or indirect, in any contract or negotiation process thereof. The above compliance request will be part of all County of Galveston contracts for this service.

56. CERTIFICATION REGARDING LOBBYING

Bidder certifies that:

- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the bidder, to any person for influencing or attempting to influence a department or employee of an agency, a member of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
- b. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence a department or employee of any agency, a member of Congress, a department or employee of congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the bidder shall complete and submit Standard Form LLL, “Disclosure Form to Report Lobbying”, in accordance with its instructions.
- c. Bidder shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

The truthful and fully completed and executed original of the Certification Regarding Lobbying (included with bid packet) must be included with the submission of Bidder’s Bid and is a mandatory requirement of this Invitation to Bid. Bidder’s failure to include the fully completed and executed or original of this Certification shall be considered non-compliant with the requirements of this Invitation to Bid and grounds for the rejection of the Bidder’s Bid. Submission of the certification is a prerequisite for making or entering into a contract with Bidder and is imposed by Section 1352, Title 31, United States Code. Further, any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

57. NON-DISCRIMINATION

- a. **Equal Employment Opportunity:** Bidder will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, genetic information or veteran status. Bidder will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, sex, disability, genetic information or veteran status. Such action shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Bidder agrees to post in conspicuous places, available to employees and applicants for employment, notices of employment.

Bidder will, in all solicitation or advertisements for employees placed by or on behalf of Bidder, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, disability, genetic information, or veteran status.

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Bidder will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this Agreement so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.

Bidder will include the provisions herein in every subcontract or purchase order unless exempted.

- b. Drug Free Work Place Act: Bidder shall comply with all applicable requirements of the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D; 41 U.S.C. § 8102, et seq.) and implementing regulations thereunder.
- c. Americans with Disabilities Act: Bidder shall comply with all applicable provisions of the Americans with Disabilities Act of 1990 (Public Law 101-136) and implementing regulations thereunder.
- d. OSHA Regulations: Bidder agrees to maintain and to display any applicable materials for its employees in accordance with OSHA regulations.
- e. Compliance with Immigration Laws and Use of E-Verify: Bidder agrees to comply with all requirements of the U.S. Immigration Reform and Control Act of 1986, as amended, and any implementing regulations thereto. Bidder further agrees to utilize the E-Verify system through the Department of Homeland Security on its employees. Bidder shall not employ unauthorized aliens, and shall not assign services to be performed to any supplier or subcontractor who are unauthorized aliens. If any personnel performing any services hereunder are discovered to be an unauthorized alien, then Bidder will immediately remove such personnel from performing services hereunder and shall replace such personnel with personnel who are not unauthorized alien(s).
- f. State and Federal Law Compliance: Bidder agrees to comply with all other State and Federal laws and regulations applicable to the provision of services under this contract.

58. RECORD RETENTION AND RIGHT TO AUDIT

Bidder shall keep and maintain all records associated with this contract for a minimum of five (5) years from the close of the contract or as required by Federal or State law or regulation, whichever period is longer. If awarded this contract, Bidder shall allow the County reasonable access to the records in Bidder's possession, custody, or control that the County deems necessary to assist it in auditing the services, costs, and payments provided hereunder. If this contract involves the use of Federal or State funds, then Bidder shall also allow reasonable access to representatives of the Office of Inspector General, the General Accounting Office, the State Auditor's Office, and the other Federal and/or State agencies overseeing the funds that such entities deem necessary to facilitate review by such agencies and Bidder shall maintain fiscal records and supporting documentation for all expenditures in a manner that conforms with OMB Circular A-87 (relocated to 2 C.F.R. Part 225) and this contract.

59. TITLE VI ASSURANCES/TxDOT

The County is subject to Title VI of the Civil Rights Act of 1964 and the Federal and State laws and regulations of the United States Department of Transportation and Texas Department of Transportation (TxDOT). Pursuant to these requirements, the County must have its contractors provide required assurances on compliance with non-discrimination by itself and its subcontractors. The Title VI Assurances within this Subsection are not exhaustive – whenever any Federal, State, or Local requirement requires additional clauses, this list shall not be construed as limiting. Contractor agrees as follows:

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- (1) **Compliance with Regulations:** The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, DOT) Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are incorporated herein by reference and made a part of this contract.
- (2) **Non-discrimination:** The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the basis of race, color, national origin, religion, sex, age, disability or Veteran status in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3) **Solicitations for Subcontractors, Including Procurement of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, religion, sex, age, disability or Veteran status.
- (4) **Information and Reports:** The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the Galveston County or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to Galveston County or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) **Sanctions for Non-compliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, Galveston County shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:
 - (a) withholding of payments to the Contractor under the contract until the Contractor complies, and/or;
 - (b) cancellation, termination, or suspension of the contract, in whole or in part.
- (6) **Incorporation of Provisions.** The Contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as Galveston County or the Texas Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request Galveston County to enter into such litigation to protect the interests of Galveston County, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

60. SECTION 231.006, FAMILY CODE/DELINQUENT CHILD SUPPORT

Pursuant to Title 5, Section 231.006 of the Texas Family Code, as applicable, Bidder certifies that it, including all of its principals, is/are current in child support payments and that it is eligible to receive payments from State funds under a contract for property, materials, or services. Bidder acknowledges and agrees that if it is awarded this contract, then the ensuing agreement may be terminated and payment withheld if this certification is inaccurate.

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Finally, by the submission of its bid, the Bidder certifies that it has included the names and social security numbers of each person with at least 25% ownership interest in Bidder within its response to the Invitation to Bid and that all such persons are current in child support payments.

61. ANTITRUST

Pursuant to 15 U.S.C. § 1, et seq., and Texas Business and Commerce Code, Chapter 15, Contractor, by the submission of its bid, certifies that neither Contractor nor any natural person, proprietorship, firm, corporation, partnership, association, or institution represented by Contractor or anyone acting for such natural person, proprietorship, firm, corporation, partnership, association, or institution has violated any Federal or State antitrust laws or communicated the nature of the offer, directly or indirectly, to any competitor or other person engaged in a similar line of business.

62. LABOR STANDARDS

On contracts funded under a federal grant: Bidder acknowledges that the contract to be awarded pursuant to this solicitation is on a grant program funded with Federal funds. Bidder shall comply with the requirements of 29 CFR Part 5 and Part 30 and shall be in conformity with Executive Order 11246, entitled “Equal Employment Opportunity”, Copeland, “Anti-Kickback” Act (40 U.S.C. 3145, 29 C.F.R. Part 3), the Davis-Bacon and Related Acts (40 U.S.C. 3141-3148, 29 C.F.R. Parts 1,3, and 5), the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.), and all other applicable Federal, State, and local laws and regulations pertaining to labor standards, insofar as those acts apply to the performance of this Agreement. Bidder is also responsible for ensuring that all subcontractors comply with the requirements of 29 CFR Part 5 and Part 30 and shall be in conformity with Executive Order 11246, entitled “Equal Employment Opportunity”, Copeland “Anti-Kickback” Act, the Davis-Bacon and Related Acts (29 CFR Parts 1, 3 and 5), the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.), and all other applicable Federal, State, and local laws and regulations pertaining to labor standards, insofar as those acts apply to the performance of this Agreement.

63. PROCUREMENT LAWS

- a. Bidder shall comply with all applicable local, State, and Federal procurement laws, rules, and regulations.
- b. If this contract is made pursuant to a federal award, then Contractor acknowledges that the contract is subject, without limitation, to applicable provisions within 2 C.F.R. Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Contractor shall comply with applicable provisions within 2 C.F.R., Sections 200.319 through 200.326, including but not limited to the following:
 - 1.) **Equal Employment Opportunity**, 41 C.F.R. Part 60-1.4(b) (applicable to federally assisted construction contracts).
 - (a) During the performance of this contract, the contractor agrees as follows:
 - (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national original, disability, or veteran status. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, national original, disability or veteran status. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and

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applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, or veteran status.
 - (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and by rules, regulations, and relevant orders of the Secretary of Labor.
 - (5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to contractor's books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
 - (7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
- 2.) **Small and minority business, women's business enterprises, and labor surplus area firms (2 C.F.R. § 200.321).** The County is required to take affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. This includes requiring the prime contractor, if subcontracts are to be let in the performance of this contract, to itself take affirmative steps in letting the subcontract. Accordingly, if subcontracts are to be let in the performance of this contract, the contractor must take affirmative steps in the letting of the subcontract(s), which must include:
- (a) placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - (b) assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - (c) dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises; and

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- (d) using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

In accordance with FEMA procurement guidance:

A small business is a business that is independently owned and operated, not dominant in the field of operation in which it is bidding on Galveston County contracts, and qualified as a small business under the Small Business Administration criteria and size standards at 13 C.F.R. Part 121.

A women's business enterprise is a business enterprise that is: (a) at least 51 percent owned by one or more women or, in the case of a publicly owned business, at least 51 percent of the stock is owned by one or more women; and (b) whose management and daily operations are controlled by one or more women.

A minority business is a business that is (a) at least 51 percent owned by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of the stock is owned by one or more minority group members; and (b) whose management and daily operations are controlled by one or more minority group members.

- 3.) **Davis-Bacon Act as amended (40 U.S.C. 3141-3148).** When required by Federal program legislation, all prime construction contracts in excess of \$2,000 must include a provision for compliance with the Davis-Bacon Act as supplemented by the Department of Labor regulations (29 C.F.R. Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractor must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity (the County) must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be condition upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contract must also include a provision for compliance with the Copeland Anti-Kickback Act (40 U.S.C. § 3145) as supplemented by the Department of Labor regulations (29 C.F.R. Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").
- 4.) **Compliance with the Copeland "Anti-Kickback" Act.** Contractor is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which the person is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. "Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by any other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined under this title [Title 18, U.S.C.] or imprisoned not more than five years, or both." 18 U.S.C. § 874.
- (a) Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable, which are incorporated by reference into this contract.
- (b) The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the Federal awarding agency may be appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

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- (c) Breach. A breach of the contract clause above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

5.) Contract Work Hours and Safety Standards Act.

- (a) Where applicable, all contracts awarded by the County in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by the Department of Labor regulations at 29 C.F.R. Part 5. Under 40 U.S.C. 3702 of the Contract Work Hours and Safety Standards Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.S. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchase of supplies or material or articles ordinarily available on the open market, or contractors for transportation or transmission of intelligence.
- (b) Compliance with the Contract Work Hours and Safety Standards Act.
- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this subsection the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this subsection, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard work week of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this subsection.
- (3) Withholding for unpaid wages and liquidated damages. The awarding Federal agency, State agency, or the County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this subsection.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this subsection and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this subsection.

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6.) Rights to Inventions Made Under a Contractor Agreement.

- (a) If the Federal award meets the definition of “funding agreement” under 37 C.F.R. § 401.2(a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under the “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 C.F.R. Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.
- (b) Stafford Act Disaster Grants. This requirement does not apply to Public Assistance, Hazard Mitigation Grant Program, Crisis Counseling Assistance and Training Grant program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of “funding agreement.”
- (c) The regulations and 37 C.F.R. § 401.2(a) currently defines “funding agreement” as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

7.) Clean Air Act (42 U.S.C. §§ 7401 – 7671q) and the Federal Water Pollution Control Act 933 U.S.C. §§ 1251-1387), as amended.

- (a) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401, et seq., and agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Contract Act, as amended, 33 U.S. C. § 1251, et seq.
- (b) The contractor agrees to report each violation of the Clean Air Act and/or the Federal Water Pollution Control Act to the Federal awarding agency, the State agency administering the grant, and the Regional Office of the Environmental Protection Agency (EPA) and understands and agrees that the Federal awarding agency, the State agency, and the EPA will, in turn, report each violation as required to assure notification to Galveston County, the Federal Emergency Management Agency, and the appropriate EPA Regional Office.

8.) Debarment and Suspension (Executive Orders 12549 and 12689). A contract award must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. Part 180 that implement Executive Orders 12549 and 12689. The Contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

Contractor must comply with 2 C.F.R. Part 180, Subpart C and 2 C.F.R. Part 3000, Subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. Bidder agrees to comply with the requirements of 2 C.F.R. Part 180, Subpart C, and 2 C.F.R. Part 3000, Subpart C, while this offer is valid and through the period of any contract that may arise from this offer. The bidder further agrees to include a provision requiring such compliance in its lower tier covered transactions.

9.) Procurement of Recovered Materials.

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- (a.) A non-Federal entity that is a State agency or agency of a political subdivision of the State and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, Public Law No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962).
- (b.) In the performance of this contract, the contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
 - (1) Competitively within a timeframe providing for compliance with the contract performance schedule;
 - (2) Meeting contract performance requirements; or
 - (3) At a reasonable price.
- (c) Information about this requirement is available at EPA’s Comprehensive Procurement Guidelines website, <http://www.epa.gov/cpg/>. The list of EPA-designated items is available at <https://www.epa.gov/cpg/products.htm>.

In the event of any discrepancy between the provisions in this Section 61 of General Provisions and provisions on the same subject elsewhere within this procurement, the most stringent shall control.

64. ENTIRETY OF AGREEMENT AND MODIFICATION

This contract contains the entire agreement between the parties. Any prior agreement, promise, negotiation or representation not expressly set forth in this contract has no force or effect. Any subsequent modification to this contract must be in writing, signed by both parties.

An official representative, employee, or agent of the County does not have the authority to modify or amend this contract except pursuant to specific authority to do so granted by the Galveston County Commissioners’ Court.

65. NOTICE

All notices or other communications required or permitted under this contract shall be in writing and shall be deemed to have been duly given if delivered personally in hand, transmitted by facsimile, or mailed certified mail, return receipt requested with proper postage affixed and addressed to the appropriate party at the following address or at such other address as may have been previously given in writing to the parties (Bidder shall provide its notice information with its Bid submission). If mailed, the notice shall be deemed delivered when actually received, or if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, duly certified, return receipt requested, with proper postage affixed. If delivered in person, notice shall be deemed delivered when receipted for by, or actually received by, the receiving Party. If transmitted by facsimile, notice shall be deemed delivered when receipt of such transmission is acknowledged.

To the County at:

Hon. Mark Henry,
County Judge of Galveston County
722 Moody (21st Street), Second (2nd) Floor
Galveston, Texas 77550
Fax: (409) 765-2653

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With copies to:

Rufus Crowder, CPPO CPPB,
Galveston County Purchasing Agent
722 Moody (21st Street), Fifth (5th) Floor
Galveston, Texas 77550
Fax: (409) 621-7997

To the Contractor at:

(Bidder to provide its contact name, address, and facsimile number for notice under the contract.)

66. USE OF DHS SEAL, LOGO, AND FLAGS PROHIBITED WITHOUT PRIOR APPROVAL

Contractor must obtain permission from the U.S. Department of Homeland Security financial assistance office (DHS FAO) **prior** to using DHS seals(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials, including use of the United States Coast Guard seal, logo, crests or reproductions of flags or likenesses of Coast Guard Officials.

67. FEDERAL GOVERNMENT NOT A PARTY

Contractor acknowledges that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to Galveston County, contractor, or any other party pertaining to any matter resulting from the contract.

68. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

In contracts funded through Federal grants, Contractor acknowledges that 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements (31 U.S.C. § 3801, et seq.) and the implementing regulations thereunder, 49 C.F.R. Part 79, apply to Contractors actions pertaining to the contract.

69. LEAD AND ASBESTOS

If this invitation to bid involves remediation, demolition, reconstruction, rehabilitation, repair, or construction, or other applicable activities, the Contractor shall be responsible for performing investigations of lead and asbestos containing materials, and any required lead and asbestos abatement in compliance with Federal, State, and local laws, rules, regulations, ordinances and orders, relating to lead abatement and asbestos abatement as applicable, including but not limited to the Texas Asbestos Health Protection Act, codified as Chapter 1954 of the Occupations Code; the Texas Asbestos Health Protection Regulations, located at Title 25, Part 1, Chapter 295, Subchapter C of the Texas Administrative Code; Chapter 1955 of the Texas Occupations Code (lead-based paint abatement); the Texas Environmental Lead Reduction regulations, located at Title 25, Part 1, Chapter 295, Subchapter I of the Texas Administrative Code; the federal National Emission Standards for Asbestos regulations, located at Title 40, Part 61, Subpart M of the Code of Federal Regulations, and the National Emission Standards for Hazardous Air Pollutants. Contractor shall perform such inspections, encapsulation, remediation or other actions as required by federal, State, or local requirements in accordance with the federal Environmental Protection Agency (EPA), Texas Department of State Health Services (TXDSHS), and Texas Commission on Environmental Quality (TCEQ) requirements.

**GENERAL PROVISIONS – INVITATION TO BID
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70. ACKNOWLEDGMENT OF GOVERNMENT RECORD

Bidder acknowledges that its submission in this Invitation to Bid, including its response, bid, certifications, affidavits, Vendor Forms (i.e., PEID, W-9, CIQ, etc.) constitutes government records under Chapter 37 of the Texas Penal Code.

71. COMPLIANCE WITH GALVESTON COUNTY PURCHASING POLICIES AND PROCEDURES

Bidder acknowledges, by its submission in this Invitation to Bid, that it shall comply with the Galveston County Purchasing Policies & Procedures Manual approved by Order of the Galveston County Commissioners Court on March 7, 2018.

End of General Provisions Section

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**SPECIAL PROVISIONS
GALVESTON COUNTY BEACH POCKET PARK NO. 2
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The Special Provisions and the General Provisions of this Invitation to Bid and the Exhibits attached hereto are made a part of this agreement between the Parties. In the event of a conflict between the General Provisions and the Special Provisions, the terms of the Special Provisions shall control.

A. PURPOSE

Galveston County is seeking a contractor to make repairs to Pocket Park No. 2 to restore off-beach parking and public beach access at this location. The project includes the reconstruction of sand dunes, dune walkovers, and asphalt paving and striping.

Pocket Park No. 2 is located at 11745 FM 3005, Galveston, TX 77554.

The engineer's construction cost estimate to complete this project is \$576,000.00.

B. DEFINITIONS (As mentioned in FAR Subpart 52.2—Text of Provisions and Clauses)

52.202-1 Definitions.

Definitions (Nov 2013)

When a solicitation provision or contract clause uses a word or term that is defined in the Federal Acquisition Regulation (FAR), the word or term has the same meaning as the definition in FAR [2.101](#) in effect at the time the solicitation was issued, unless—

- (a) The solicitation, or amended solicitation, provides a different definition;
- (b) The contracting parties agree to a different definition;
- (c) The part, subpart, or section of the FAR where the provision or clause is prescribed provides a different meaning; or
- (d) The word or term is defined in FAR [Part 31](#), for use in the cost principles and procedures

C. BID SURETY

A Bid surety/bond is a requirement of this solicitation.

D. PERFORMANCE AND PAYMENT BONDS

Performance and Payment Bonds are a requirement of this solicitation.

E. DAVIS-BACON WAGE RATES

Attention is called to the fact that not less than, the federally determined prevailing (Davis-Bacon and Related Acts) wage rate, as issued by the Office of Rural Community Affairs and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex age or national origin.

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F. BEST AND FINAL OFFERS (BAFO)

The Best and Final Offer process **is not applicable** to this solicitation.

G. PROCUREMENT TIMELINE

A timeline for this Bid and initial process is included below. Galveston County reserves the right to change these dates and will notify Bidders of any changes:

Advertise BID (first date of publication)	Thursday, July 16, 2020
Advertise BID (second date of publication)	Thursday, July 23, 2020
Pre-Bid Conference	Tuesday, July 28, 2020 at 10:00 a.m.
Deadline for Questions & Inquiries	Friday, July 31, 2020 by 5:00 p.m.
Bids due from public/Bid Opening	Thursday, August 13, 2020 at 2:00 p.m.

H. PRE-BID CONFERENCE

A non-mandatory pre-bid conference will be held on Tuesday, July 28, 2020 2020 at 10:00 a.m.

Due to the COVID-19 pandemic, the County of Galveston has instituted measures to guard against the spread of the virus. This includes the prohibition of in-person meetings, social distancing, and stay-at-home requirements for employees.

The Pre-Bid Conference shall take place via video/tele-conference and the instructions are listed below and on the County's Purchasing website:

Minimum System Requirements for Video Conferencing:

1. High-resolution webcam;
2. Computer processing minimum: 2 GB of RAM and a quad-core processor;
3. Network bandwidth: 1 Mbps is sufficient for 15 fps at 720p resolution;

Calling from a mobile device:

1. Front facing camera;
2. In ear headphone with built in mic

Instructions for Video Conferencing:

1. [Click here](https://guest.lifesize.com/1907077) or navigate to <https://guest.lifesize.com/1907077>
2. Enter Name and email (optional);
3. Click the Terms of Service and Privacy Policy checkbox;
4. Click Join Meeting

***Note - be sure to enable audio and video.**

I. PERSONNEL TO CONTACT

Bidders desiring an explanation or interpretation relative to this solicitation must request it in writing. Oral explanations or instructions will not be binding. Any information given to a Bidder, which in the opinion of the County affects all responders or would be prejudicial to other Bidders if not communicated, shall be furnished to all Bidders as an addendum to the solicitation. Bidders **must** direct all inquiries to the following:

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**Rufus G. Crowder, CPPO CPPB
Purchasing Agent
722 21st Street (Moody)
Galveston, Texas 77550
e-mail: purchasing.bids@co.galveston.tx.us**

Bidders must e-mail their requests (with the subject line “Galveston County Beach Pocket Park No. 2 – Bid# B201036– Questions”) for additional information and/or clarification to the address listed above. The request must include the Bidder’s name and the BID number and title. ***Any request for additional information or clarification must be received in writing no later than seven (7) calendar days prior to the Bid due date.*** Late requests or those not delivered to the proper address may not receive a reply. Bidders shall not attempt to contact the County by any other means. The Purchasing Agent’s Office shall post the answers to the County website from the procurement web page and via addendum.

The County will issue responses to inquiries and any other corrections or amendments, it deems necessary, in the form of a written addendum, issued prior to the Bid Submission Date. The County, at its sole discretion, may not issue a response to a RFI submittal. Bidders should not rely on any oral or written representations, statements, or explanations, other than those made in this BID or in any written addendum to this BID. Where there appears to be conflict between the BID and any issued addenda, the last addendum issued will prevail. Addenda will be posted and made available on the County’s procurement web page. It is the Bidder’s sole responsibility to ensure receipt of all addenda prior to submitting its Bid. All Bidders should check the County’s procurement web page for all addenda prior to submitting a response. The County’s procurement web page is located at www.galvestoncountytexas.gov/pu/Pages/default.aspx, and current solicitations are at www.galvestoncountytexas.gov/pu/Pages/OpenSolicitations.aspx.

The Bidder must acknowledge the receipt of all addenda on the forms provided. In the event a Bidder fails to acknowledge receipt of such addenda, the County may, at its sole discretion, determine that such failure to acknowledge any or all addenda does not materially affect the Bid and waive the acknowledgement of one or more addenda.

Bidders who submit inquiries *after* the deadline date for receipt of questions indicated on the Procurement Timeline, risk that its response in the procurement will not be responsive or competitive because the County is not able to respond before the Bid receipt date or in sufficient time for the Bidder to prepare a responsive or competitive submittal.

All questions and responses as posted on the County website pertaining to this BID are considered an addendum to, and part of, this BID. Each Bidder shall be responsible to monitor the County website for new or revised BID information. The County shall not be bound by any verbal information nor shall it be bound by any written information that is not either contained within the BID or formally issued as an addendum by the Purchasing Agent’s Office.

J. PROGRAM ADMINISTRATION & CONTRACT MANAGEMENT

The Program Administrator/Contract Manager that will manage the work to be performed under the resultant contract for the purpose of this bid is:

**Michael Shannon
Galveston County Engineer
722 Moody, (21st St.), 1st Floor
Galveston, TX 77550
(409) 770-5453
Email: michael.shannon@co.galveston.tx.us**

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K. TYPE OF CONTRACT

It is the intent of this solicitation to enter into a contract that meets federal guidelines. It is imperative that all responders seeking a contract under this solicitation effort must familiarize and adhere to the procurement standards as referenced in 2 C.F.R. Part 200, Sections 200.317-200.326, and Appendix II, 2 C.F.R. Part 200. Sections 200.317–200.326 and Appendix II are attached hereto as **Attachment A**.

The resultant contract consists of the following documents: Invitation to Bid, General Provisions, Special Provisions, General Terms and Conditions (including specifications, drawings, and addenda), Bidder's Bid, Bid Sheets, contract award, and any other documents referenced herein or attached hereto for the work. Collectively these documents may also be referred to as the Plans and Specifications.

In an effort to satisfy cost reasonableness responsibilities at the time of any extension period, the County of Galveston reserves the right to obtain additional quotes and current pricing information from the successful contractor and other contractors to perform the work as stated per the specification listed herein and in the resultant. The solicited results may be used by the County to determine if the contract extensions will be considered or other service options be utilized.

L. COLLATERAL CONTRACT

The County reserves the right to provide by separate contract or otherwise, in such manner as not to delay its programs or damage said Contractor, all labor and material essential to the completion of the work that is not included in this contract.

Award prices include all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the work. Whenever the Awardee is required or desires to use any design, device, material or process covered by letters of patent or copyright, the Awardee shall indemnify and save harmless the County, its officers, agents and employees from any and all claims for infringement by reason of the use of any such patented design, tool, material, equipment, or process, to be performed under the contract, and shall indemnify the County its officers, agents, and employees for any costs, expenses and damages which may be incurred by reason of any infringement at any time during the prosecution or after the completion of the work.

M. LABOR

Contractor is encouraged to use local labor, but not at the expense of poor workmanship and higher cost. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. Contractor agrees to post in a conspicuous place a notice setting forth provisions of this non-discrimination clause.

N. INSURANCE

Bidder must submit, with its response, a current certificate of insurance evidencing coverage in the amounts specified below or greater. In lieu of submitting a certificate of insurance, Respondents may submit a notarized statement from an insurance company authorized to conduct business in the State of Texas guaranteeing that Respondent has such insurance. Provided however, that successful Respondent(s) shall be required to provide a current certificate of insurance to the Galveston County Purchasing Agent's Office before Respondent commences any work hereunder. **Insurance shall be placed with insurers having an A.M. Best's rating of no less than A.** Such insurance must be issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by

**SPECIAL PROVISIONS
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the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from loss or damage that may arise to any person or property by reason of services rendered by Contractor.

Galveston County shall be listed as an additional insured on each policy and all certificates of insurance and Contractor shall provide Galveston County with no less than thirty (30) calendar days prior notice of any changes to the policy during the contractual period.

Certificates of Insurance, fully executed by a licensed representative of the insurance company written or countersigned by an authorized Texas state agency, shall be filed with the County Purchasing Agent within ten (10) calendar days of the execution of this Agreement as written proof of such insurance and further provided that Contractor shall not commence work under this Agreement until Contractor has obtained all insurance required herein, provided written proof as required herein, and received written notice to proceed issued from the County Purchasing Agent. **Failure to provide such evidence of insurance within the ten (10) calendar day period shall constitute an event of default.**

Workers' Compensation Insurance. Respondent shall carry in full force Workers' Compensation Insurance Policy(ies), if there is more than one employee, for all its employees, including but not limited to full time, part time, and emergency employees employed by the Contractor.

Commercial General Liability. Respondent shall carry in full force commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the aggregate. The Policy shall, minimally, cover liability for bodily injury, personal injury, and property damage.

Business Automobile Liability. Respondent shall carry in full force business automobile liability coverage with a combined bodily injury/property damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.

Professional Liability. Respondent shall carry in full force professional liability insurance with limits of not less than \$1,000,000.00.

Subrogation Waiver. Contractor and Contractor's insurance carrier shall waive any and all rights to subrogation against Galveston County in regard to any suit or claim arising out of personal injury or property damage resulting from Contractor's performance under this Agreement.

O. EXCEPTIONS

Any exceptions to Bid conditions should be listed on a separated sheet of paper, attached to Bid submittals and submitted with Bid at the specified date and time of Bid opening.

Remainder of page intentionally left blank

EXHIBIT A
GALVESTON COUNTY BEACH POCKET PARK NO. 2
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PROCUREMENT STANDARDS

2 C.F.R. §§ 200.317 – 200.326 &
2 C.F.R. PART 200, APPENDIX II

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PROCUREMENT STANDARDS

2 C.F.R. §§ 200.317 – 200.326 &
2 C.F.R. PART 200, APPENDIX II

2 C.F.R. § 200.317. Procurements by states.

When procuring property and services under a Federal award, a state must follow the same policies and procedures it uses for procurements from its non-Federal funds. The state will comply with §200.322 Procurement of recovered materials and ensure that every purchase order or other contract includes any clauses required by section §200.326 Contract provisions. All other non-Federal entities, including sub-recipients of a state, will follow §§ 200.318 General procurement standards through 200.326 Contract provisions.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013

2 C.F.R. § 200.318. General procurement standards.

(a) The non-Federal entity must use its own documented procurement procedures which reflect applicable State, local and tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in this part.

(b) Non-Federal entities must maintain oversight to ensure that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(c)

(1) The non-Federal entity must maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents of the non-Federal entity may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. However, non-Federal entities may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the non-Federal entity.

(2) If the non-Federal entity has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, the non-Federal entity must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest means that because of

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relationships with a parent company, affiliate, or subsidiary organization, the non-Federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

- (d) The non-Federal entity's procedures must avoid acquisition of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.
- (e) To foster greater economy and efficiency, and in accordance with efforts to promote cost-effective use of shared services across the Federal Government, the non-Federal entity is encouraged to enter into state and local intergovernmental agreements or inter-entity agreements where appropriate for procurement or use of common or shared goods and services.
- (f) The non-Federal entity is encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.
- (g) The non-Federal entity is encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.
- (h) The non-Federal entity must award contracts only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources. See also § 200.213 Suspension and debarment.
- (i) The non-Federal entity must maintain records sufficient to detail the history of procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.
- (j)
- (1) The non-Federal entity may use a time and materials type contract only after a determination that no other contract is suitable and if the contract includes a ceiling price that the contractor exceeds at its own risk. Time and materials type contract means a contract whose cost to a non-Federal entity is the sum of:
- (i) The actual cost of materials; and
 - (ii) Direct labor hours charged at fixed hourly rates that reflect wages, general and administrative expenses, and profit.
- (2) Since this formula generates an open-ended contract price, a time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, each contract must set a ceiling price that the contractor exceeds at its own risk. Further, the non-Federal entity awarding such a contract must assert a high degree of oversight in order to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.

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(k) The non-Federal entity alone must be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the non-Federal entity of any contractual responsibilities under its contracts. The Federal awarding agency will not substitute its judgment for that of the non-Federal entity unless the matter is primarily a Federal concern. Violations of law will be referred to the local, state, or Federal authority having proper jurisdiction.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 43309, July 22, 2015; 80 FR 45395, July 30, 2015

2 C.F.R. § 200.319. Competition.

(a) All procurement transactions must be conducted in a manner providing full and open competition consistent with the standards of this section. In order to ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for proposals must be excluded from competing for such procurements. Some of the situations considered to be restrictive of competition include but are not limited to:

- (1) Placing unreasonable requirements on firms in order for them to qualify to do business;
- (2) Requiring unnecessary experience and excessive bonding;
- (3) Noncompetitive pricing practices between firms or between affiliated companies;
- (4) Noncompetitive contracts to consultants that are on retainer contracts;
- (5) Organizational conflicts of interest;
- (6) Specifying only a “brand name” product instead of allowing “an equal” product to be offered and describing the performance or other relevant requirements of the procurement; and
- (7) Any arbitrary action in the procurement process.

(b) The non-Federal entity must conduct procurements in a manner that prohibits the use of statutorily or administratively imposed state, local, or tribal geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts state licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criterion provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.

(c) The non-Federal entity must have written procedures for procurement transactions. These procedures must ensure that all solicitations:

- (1) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description must not, in competitive procurements, contain features which unduly

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restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured and, when necessary, must set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a "brand name or equivalent" description may be used as a means to define the performance or other salient requirements of procurement. The specific features of the named brand which must be met by offers must be clearly stated; and

(2) Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals.

(d) The non-Federal entity must ensure that all prequalified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough qualified sources to ensure maximum open and free competition. Also, the non-Federal entity must not preclude potential bidders from qualifying during the solicitation period.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014

2 C.F.R. § 200.320. Methods of procurement to be followed.

The non-Federal entity must use one of the following methods of procurement.

(a) Procurement by micro-purchases. Procurement by micro-purchase is the acquisition of supplies or services, the aggregate dollar amount of which does not exceed the micro-purchase threshold (§200.67 Micro-purchase). To the extent practicable, the non-Federal entity must distribute micro-purchases equitably among qualified suppliers. Micro-purchases may be awarded without soliciting competitive quotations if the non-Federal entity considers the price to be reasonable.

(b) Procurement by small purchase procedures. Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not cost more than the Simplified Acquisition Threshold. If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources.

(c) Procurement by sealed bids (formal advertising). Bids are publicly solicited and a firm fixed price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in paragraph (c)(1) of this section apply.

(1) In order for sealed bidding to be feasible, the following conditions should be present:

(i) A complete, adequate, and realistic specification or purchase description is available;

(ii) Two or more responsible bidders are willing and able to compete effectively for the business; and

(iii) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

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(2) If sealed bids are used, the following requirements apply:

(i) Bids must be solicited from an adequate number of known suppliers, providing them sufficient response time prior to the date set for opening the bids, for local, and tribal governments, the invitation for bids must be publicly advertised;

(ii) The invitation for bids, which will include any specifications and pertinent attachments, must define the items or services in order for the bidder to properly respond;

(iii) All bids will be opened at the time and place prescribed in the invitation for bids, and for local and tribal governments, the bids must be opened publicly;

(iv) A firm fixed price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs must be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and

(v) Any or all bids may be rejected if there is a sound documented reason.

(d) Procurement by competitive proposals. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:

(1) Requests for proposals must be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals must be considered to the maximum extent practical;

(2) Proposals must be solicited from an adequate number of qualified sources;

(3) The non-Federal entity must have a written method for conducting technical evaluations of the proposals received and for selecting recipients;

(4) Contracts must be awarded to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and

(5) The non-Federal entity may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

(e) [Reserved]

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(f) Procurement by noncompetitive proposals. Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source and may be used only when one or more of the following circumstances apply:

- (1) The item is available only from a single source;
- (2) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;
- (3) The Federal awarding agency or pass-through entity expressly authorizes noncompetitive proposals in response to a written request from the non-Federal entity; or
- (4) After solicitation of a number of sources, competition is determined inadequate.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 54409, Sept. 10, 2015

2 C.F.R. § 200.321. Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms.

- (a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.
- (b) Affirmative steps must include:
 - (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
 - (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
 - (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
 - (6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (1) through (5) of this section.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise noted

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2 C.F.R. § 200.322. Procurement of recovered materials.

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014

2 C.F.R. § 200.323. Contract cost and price.

(a) The non-Federal entity must perform a cost or price analysis in connection with every procurement action in excess of the Simplified Acquisition Threshold including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, the non-Federal entity must make independent estimates before receiving bids or proposals.

(b) The non-Federal entity must negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration must be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

(c) Costs or prices based on estimated costs for contracts under the Federal award are allowable only to the extent that costs incurred or cost estimates included in negotiated prices would be allowable for the non-Federal entity under Subpart E—Cost Principles of this part. The non-Federal entity may reference its own cost principles that comply with the Federal cost principles.

(d) The cost plus a percentage of cost and percentage of construction cost methods of contracting must not be used.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise noted

2 C.F.R. § 200.324. Federal awarding agency or pass-through entity review.

(a) The non-Federal entity must make available, upon request of the Federal awarding agency or pass-through entity, technical specifications on proposed procurements where the Federal awarding agency or pass-through entity believes such review is needed to ensure that the item or service specified is the one being proposed for acquisition. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the non-Federal entity desires to have the review accomplished after a solicitation has been developed, the Federal awarding agency or pass-through entity may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

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(b) The non-Federal entity must make available upon request, for the Federal awarding agency or pass-through entity pre-procurement review, procurement documents, such as requests for proposals or invitations for bids, or independent cost estimates, when:

(1) The non-Federal entity's procurement procedures or operation fails to comply with the procurement standards in this part;

(2) The procurement is expected to exceed the Simplified Acquisition Threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation;

(3) The procurement, which is expected to exceed the Simplified Acquisition Threshold, specifies a "brand name" product;

(4) The proposed contract is more than the Simplified Acquisition Threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or

(5) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the Simplified Acquisition Threshold.

(c) The non-Federal entity is exempt from the pre-procurement review in paragraph (b) of this section if the Federal awarding agency or pass-through entity determines that its procurement systems comply with the standards of this part.

(1) The non-Federal entity may request that its procurement system be reviewed by the Federal awarding agency or pass-through entity to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews must occur where there is continuous high-dollar funding, and third party contracts are awarded on a regular basis;

(2) The non-Federal entity may self-certify its procurement system. Such self-certification must not limit the Federal awarding agency's right to survey the system. Under a self-certification procedure, the Federal awarding agency may rely on written assurances from the non-Federal entity that it is complying with these standards. The non-Federal entity must cite specific policies, procedures, regulations, or standards as being in compliance with these requirements and have its system available for review.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise noted

2 C.F.R. § 200.325. Bonding requirements.

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

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(b) A performance bond on the part of the contractor for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

69 FR 26280, May 11, 2004; 78FR 78608, Dec. 26, 2013, unless otherwise noted

2 C.F.R. § 200.326. Contract provisions.

The non-Federal entity's contracts must contain the applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise note

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2 C.F.R. Part, 200, Appendix II

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

(A) Contracts for more than the simplified acquisition threshold currently set at \$150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

(B) All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

(C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or

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dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

(F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of “funding agreement” under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

(G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

(H) Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

(I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

(J) See §200.322 Procurement of recovered materials.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75888, Dec. 19, 2014

CERTIFICATION REGARDING LOBBYING
(31 U.S.C.A. § 1352)
This Certification must be completed, signed, dated and
returned to the Galveston County Purchasing Agent

Procurement Number and Description: _____

_____ ITB #B201036, Galveston County Beach Pocket Park No. 2 _____

Proposer **CERTIFIES**, to the best of its knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the proposer, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the proposer shall complete and submit **Standard Form LLL**, "Disclosure Form to Report Lobbying", in accordance with its instructions.
3. Proposer shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Name of Organization/Corporation: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Signature of Authorized Signatory for Proposer: _____ Date Signed: _____

Title of Authorized Signatory of Proposer: _____

State of Texas

§

§

County of Galveston

§

NON-COLLUSION AFFIDAVIT

Before me, the undersigned notary, on this day personally appeared _____ (Affiant), whom being first duly sworn, deposes and certifies that:

- Affiant is the _____ of _____, that
(Individual, Partner, Corporate Officer) (Name of Qualifier)
submitted the attached Qualification in **Bid No. B201036, Galveston County Beach Pocket Park No. 2**
- Affiant is a duly authorized representative of Qualifier and is authorized to make this Non-Collusion Affidavit;
- The attached Qualification is genuine and is not a collusive or sham Qualification;
- The attached Qualification has been independently arrived at without collusion with any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor;
- Qualifier has not colluded, conspired, connived or agreed, directly or indirectly, with any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor, to submit a collusive or sham qualification or that such other qualifier, bidder, proposer, person, firm, competitor, or potential competitor shall refrain from qualifying;
- Qualifier has not in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor to fix the price or prices in the attached Qualification or of the qualification any other qualifier;
- Qualifier has not in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other qualifier bidder, proposer, person, firm, competitor, or potential competitor to fix the overhead, profit or cost element of the Qualification price or prices of any other qualifier, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against Galveston County or any person interested in the proposed contract;
- Affiant has not in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor, paid or agreed to pay any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the price or prices in the attached Qualification or the qualification of any other Qualifier; and
- Affiant certifies that Affiant is fully informed regarding the accuracy of the statements contained herein, and under penalties of perjury, certifies and affirms the truth of the statements herein, such penalties being applicable to the Qualifier as well as to Affiant signing on its behalf.

Signature of Affiant

SWORN TO and SUBSCRIBED before me this _____ day of _____, 2020.

Notary Public

My Commission Expires: _____

**BID FORM
GALVESTON COUNTY BEACH POCKET PARK NO. 2
COUNTY OF GALVESTON, TEXAS**

By signing here, the firm does hereby attest that it has fully read the instructions, conditions and general and special provisions and understands them.

THE COMPANY OF: _____

ADDRESS: _____

FEIN (TAX ID): _____

The following shall be returned with your bid. Failure to do so may be ample cause for rejection of bid as non-responsive. It is the responsibility of the Bidder to ensure that bidder has received all addenda.

Items:	Confirmed (X):
1. References (if required)	_____
2. Addenda, if any	#1 _____ #2 _____ #3 _____ #4 _____
3. One (1) original and two (2) copies of submittal	_____
4. Bid Form	_____
5. Vendor Qualification Packet	_____
6. Debarment Certification Form	_____
7. Non-Collusion Affidavit	_____
8. Payment Terms:	_____ net 30 _____ Other
9. Lobbyist Certification	_____
10. Bid Bond	_____

Person to contact regarding this bid: _____

Title: _____ Phone: _____ Fax: _____

E-mail address: _____

Name of person authorized to bind the Firm: _____

Signature: _____ Date: _____

Title: _____ Phone: _____ Fax: _____

E-mail address: _____

BID FORM
GALVESTON COUNTY BEACH POCKET PARK NO. 2
GALVESTON COUNTY, TEXAS

Bidder shall use this form to provide the information for notice.

1. Contact information for notice:

Name: _____
Address: _____

Telephone Number: _____ Facsimile number: _____

2. If a copy of notice is requested, please complete below:

Name: _____
Address: _____

Telephone Number: _____ Facsimile number: _____

3. If second or more copies are requested for notice, please supplement this form and clearly mark the supplement as "Supplementary Notice Information."

Bidder to submit reference information. Bidder shall use this form to provide minimum required reference information. If Bidder wishes to provide more than the minimum, Bidder should supplement this form and should clearly mark the supplement as "Supplementary Reference Information."

1. References who can attest to the Bidder's capability to carry out the requirements set forth in this bid:

Business Name of Organization: _____
Name of Person: _____
Title of Individual within Organization, if applicable _____
Business address: _____

Telephone number: _____ Facsimile number: _____

Business Name of Organization: _____
Name of Person: _____
Title of Individual within Organization, if applicable _____
Business address: _____

Telephone number: _____ Facsimile number: _____

Business Name of Organization: _____
Name of Person: _____
Title of Individual within Organization, if applicable _____
Business address: _____

Telephone number: _____ Facsimile number: _____

BID FORM
GALVESTON COUNTY BEACH POCKET PARK NO. 2
GALVESTON COUNTY, TEXAS

References of major supplier of Bidder who can speak to the financial capability of the Bidder to carry out the requirements set forth in this bid:

- 1. Business Name of Supplier _____
Name of Person: _____
Title of Individual within business: _____
Business address: _____

Telephone number: _____ Facsimile number: _____

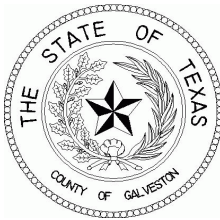
- 2. Business Name of Supplier _____
Name of Person: _____
Title of Individual within business: _____
Business address: _____

Telephone number: _____ Facsimile number: _____

- 3. Business Name of Supplier _____
Name of Person: _____
Title of Individual within business: _____
Business address: _____

Telephone number: _____ Facsimile number: _____

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County of Galveston

**ACKNOWLEDGMENT AND CERTIFICATION REGARDING DEBARMENT,
SUSPENSION, AND OTHER INELGIBILITY
Executive Orders 12549 & 12689 Certification, Debarment and Suspension**

Solicitation Number: ITB #B201036

Solicitation Title: Galveston County Beach Pocket Park No. 2

Contractor hereby CERTIFIES that:

Contractor, and all of its principals, is not presently debarred, suspended, proposed for debarment, proposed for suspension, or declared ineligible under Executive Order 12549 or Executive Order 12689, Debarment and Suspension, and is not in any other way ineligible for participation in Federal or State assistance programs;

Contractor, and all of its principals, were not and have not been debarred, suspended, proposed for debarment, proposed for suspension, or declared ineligible under Executive Order 12549 or Executive Order 12689, Debarment and Suspension, and were not and have not been in any other way ineligible for participation in Federal or State assistance programs at the time its' proposal was submitted in the procurement identified herein and at any time since submission of its' proposal;

Contractor has included, and shall continue to include, this certification in all contracts between itself and any sub-contractors in connection with services performed under this contract; **and**

Contractor shall notify Galveston County in writing immediately, through written notification to the Galveston County Purchasing Agent, if Contractor is not in compliance with Executive Order 12549 or 12689 during the term of its contract with Galveston County.

Contractor **Represents** and **Warrants** that the individual executing this Acknowledgment and Certification on its behalf has the full power and authority to do so and can legally bind the Contractor hereto.

Name of Business

Date

By: _____
Signature

Printed Name & Title



County of Galveston Purchasing Department Vendor Qualification Packet

(rev. 1.4, September 28, 2017)

All interested parties seeking consideration for qualified vendor status with the County of Galveston should complete and return only the following forms to:

Galveston County Purchasing Department
722 Moody Avenue, (21st Street), 5th Floor
Galveston, Texas 77550
(409) 770-5371 office
(409) 621-7987 fax

PEID Form: Person /Entity Information Data

W -9 Form: Request for Taxpayer Identification Number and Certification
(please note that the included form may not be the latest revised form issued by the Internal Revenue Service. Please check the IRS website at <http://www.irs.gov/pub/irs-rd/ffw9.pdf> for the latest revision of this form.)

CIQ Form: Conflict of Interest Questionnaire
(please note that the included form may not be the latest revised form issued by the State of Texas Ethics Commission. Please check the Texas Ethics Commission website at http://www.ethics.state.tx.us/whatsnew/conflict_forms.htm for the latest revision of this form. Please note that Galveston County Purchasing Agent is not responsible for the filing of this form with the Galveston County Clerk per instructions of the State of Texas Ethics Commission).

Debarment: **CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS & REQUIREMENT TO REGISTER IN SAM**
*Vendors/contractor certifies that neither it, nor any of its Principals, are presently debarred, suspended, proposed for debarment, disqualified, excluded, or in any way declared ineligible for the award of contracts by any Federal agency. Vendor agrees that it shall refund Galveston County for any payments made to Contractor while ineligible. Vendor acknowledges that Contractor's uncured failure to perform under any agreement with the County of Galveston, if such should occur, may result in Contractor being debarred from performing additional work for the County, the respecting State Agency administering the grant funding the contract, if applicable, the State, FEMA or HUD (as applicable), and other Federal and State entities. Further, Vendor has executed the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters and returned the fully completed and executed original certification with the submission of this Vendor Qualification Packet. **The truthful and fully completed and executed original of the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters must be included with the submission of this Vendor Qualification Packet and is a mandatory requirement to become a vendor of Galveston County. Vendor's failure to include the fully completed and executed original of this Certification shall be considered non-compliant with the requirements of this vendor qualification request and grounds for the rejection of vendor's request. Vendor shall immediately notify the County Purchasing Agent if it becomes debarred or suspended, placed on***

the Consolidated List of Debarred Contractors, or in any other way becomes ineligible for award of contract by any Federal agency. This Certification is a material fact relied upon by Galveston County; if it is later determined that the vendor did not comply with 2 C. F. R. Part 180 and 2 C.F.R. Part 3000, in addition to the remedies available to Galveston County and the State agency administering a grant, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment of contractor. If the contract to be awarded pursuant to a Galveston County procurement effort involves the use of Federal funds, then vendor must also be registered in the Federal Contractor Registry through the System for Award Management (SAM) to be eligible for award of contract pursuant to the procurement.

Information regarding the SAM is available at:

<http://federalcontractorregistry.com/?gclid=CIGlhF2rr8wCFYkCaQoducANZw> or at <http://sam.gov/portal/SAM/#1>.

No contract involving the use of Federal funds may be awarded to any vendor unless and until such registration is current and in good standing under SAM Successful vendors must maintain SAM registration throughout the entire term of any contractual agreement with the County. If a contract involves the use of Federal funds, then vendor must enclose proof of such SAM registration within its response, which is also a mandatory requirement of County procurement policy; failure to enclose such proof shall be considered non-compliant with the requirements of any procurement effort and grounds for the rejection of vendor's response to any procurement efforts (i.e., bid, proposal, or qualifications statement, as applicable).

Direct Deposit: Direct Deposit Authorization Form – Temporarily suspended until further notice

Certificate(s) of Insurance: If the person or entity seeking qualified vendor status with the County will be performing work at or on any County owned facility and/or property, Certificate(s) of Insurance are required to be submitted prior to performing any work.

Insurance requirements are as follows:

Public Liability and Property Damage Insurance:

Successful vendor agrees to keep in full force and effect, a policy of public liability and property damage insurance issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from any loss or damage that may arise to any person or property by reason of services rendered by vendor. Vendor shall at its own expense be required to carry the following minimum insurance coverages:

1. For damages arising out of bodily injury to or death of one person in anyone occurrence - one hundred thousand and no/100 dollars (\$100,000.00);
2. For damages arising out of bodily injury to or death of two or more persons in anyone occurrence - three hundred thousand and no/100 dollars (\$300,000.00); and
3. For injury to or destruction of property in anyone occurrence - one hundred thousand and no/100 dollars (\$100,000.00).

This insurance shall be either on an occurrence basis or on a claims made basis. Provided however, that if the coverage is on a claims made basis, then the vendor shall be required to purchase, at the termination of this agreement, tail coverage for the County for the period of the County's relationship with the vendor under this agreement. Such coverage shall be in the amounts set forth in subparagraphs (1), (2), and (3) above.

Worker's Compensation Insurance:

Successful vendor shall also carry in full force Workers' Compensation Insurance policy(ies), if there is more than one employee, for all employees, including but not limited to full time, part time, and emergency employees employed by the vendor. Current insurance certificates certifying that such policies as specified above are in full force and effect shall be furnished by the vendor to the County.

The County of Galveston shall be named as additional insured on policies listed in subparagraphs above and shall be notified of any changes to the policy(ies) during the contractual period.

Insurance is to be placed with insurers having a Best rating of no less than A. The vendor shall furnish the County with certificates of insurance and original endorsements affecting coverage required by these insurance clauses. The certificates and endorsements for each insurance policy are to be signed by a person authorized by the insurer to bind coverage on its behalf. The vendor shall be required to submit annual renewals for the term of any contractual agreement, purchase order or term contract, with Galveston County prior to expiration of any policy.

In addition to the remedies stated herein, the County has the right to pursue other remedies permitted by law or in equity.

The County agrees to provide vendor with reasonable and timely notice of any claim, demand, or cause of action made or brought against the County arising out of or related to utilization of the property. Vendor shall have the right to defend any such claim, demand, or cause of action at its sole cost and expense and within its sole and exclusive discretion. The County agrees not to compromise or settle any claim or cause of action arising out of or related to the utilization of the property without the prior written consent of the vendor.

In no event shall the County be liable for any damage to or destruction of any property belonging to the vendor unless specified in writing and agreed upon by both parties.

Procurement Policy - Special Note:

Understand that it is, according to Texas Local Government Code, Section 262.011, Purchasing Agents, subsections (d), (e), and (0), the sole responsibility of the Purchasing Agent to supervise all procurement transactions.

Therefore, be advised that all procurement transactions require proper authorization in the form of a Galveston County purchase order from the Purchasing Agent's office prior to commitment to deliver supplies, materials, equipment, including contracts for repair, service, and maintenance agreements. Any commitments made without proper authorization from the Purchasing Agent's office, pending Commissioners' Court approval, may become the sole responsibility of the individual making the commitment including the obligation of payment.

Code of Ethics - Statement of Purchasing Policy:

Public employment is a public trust. It is the policy of Galveston County to promote and balance the objective of protecting the County's integrity and the objective of facilitating the recruitment and retention of personnel needed by Galveston County. Such policy is implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public office.

Public employees must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the Galveston County procurement organization.

To achieve the purpose of these instructions, it is essential that those doing business with Galveston County also observe the ethical standards prescribed here.

General Ethical Standards: It shall be a breach of ethics to attempt to realize personal gain through public employment with Galveston County by any conduct inconsistent with the proper discharge of the employee's duties.

It shall be a breach of ethics to attempt to influence any public employee of Galveston County to breach the standards of ethical conduct set forth in this code.

It shall be a breach of ethics for any employee of Galveston County to participate directly or indirectly in procurement when the employee knows that:

- The employee or any member of the employee's immediate family has a financial interest pertaining to the procurement.
- A business or organization in which the employee, or any member of the employee's immediate family, has a financial interest pertaining to the procurement.
- Any other person, business or organization with which the employee or any member of the employee's immediate family is negotiating or has an arrangement concerning prospective employment is involved in the procurement.

Gratuities: It shall be a breach of ethics to offer, give or agree to give any employee of Galveston County, or for any employee or former employee of Galveston County to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any program requirement or a contract or subcontract, or to any solicitation or proposal therefore pending before this government.

Kickbacks: It shall be a breach of ethics for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor for any contract for Galveston County, or any person associated therewith, as an inducement for the award of a subcontract or order.

Contract Clause: The prohibition against gratuities and kickbacks prescribed above shall be conspicuously set forth in every contract and solicitation by Galveston County.

Confidential Information: It shall be a breach of ethics for any employee or former employee of Galveston County to knowingly use confidential information for actual or anticipated personal gain, or for the actual or anticipated gain of any person.

Questions/Concerns:

If you have any questions or concerns regarding the information or instructions contained within this packet, please contact any member of the Purchasing Department staff at **(409) 770-5371**.

CONFLICT OF INTEREST DISCLOSURE REPORTING

Proposer may be required under Chapter 176 of the Texas Local Government Code to complete and file a conflict of interest questionnaire (CIQ Form). If so, the completed CIQ Form must be filed with the County Clerk of Galveston County, Texas.

If Proposer has an employment or other business relationship with an officer of Galveston County or with a family member of an officer of Galveston County that results in the officer or family member of the officer receiving taxable income that exceeds \$2,500.00 during the preceding 12-month period, then Proposer **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

If Proposer has given an officer of Galveston County or a family member of an officer of Galveston County one or more gifts with an aggregate value of more than \$250.00 during the preceding 12-months, then Proposer **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County

The Galveston County Clerk has offices at the following locations:

Galveston County Clerk
Galveston County Justice Center, Suite 2001
600 59th Street
Galveston, Texas 77551

Galveston County Clerk
North County Annex, 1st Floor
174 Calder Road
League City, Texas 77573

Again, if Proposer is required to file a CIQ Form, the original completed form is filed with the Galveston County Clerk (not the Purchasing Agent).

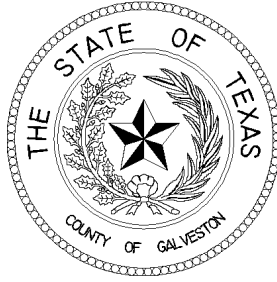
For Proposer's convenience, a blank CIQ Form is enclosed with this proposal. Blank CIQ Forms may also be obtained by visiting the Galveston County Clerk's website and/or the Purchasing Agent's website - both of these web sites are linked to the Galveston County homepage at <http://www.galvestoncountytexas.gov>

As well, blank CIQ Forms may be obtained by visiting the Texas Ethics Commission website, specifically at <http://www.ethics.state.tx.us/whatsnew/conflictfroms.htm>

Chapter 176 specifies deadlines for the filing of CIQ Forms (both initial filings and updated filings).

It is Proposer's sole responsibility to file a true and complete CIQ Form with the Galveston County Clerk if Proposer is required to file by the requirements of Chapter 176. Proposer is advised that it is an offense to fail to comply with the disclosure reporting requirements dictated under Chapter 176 of the Texas Local Government Code.

If you have questions about compliance with Chapter 176, please consult your own legal counsel. Compliance is the individual responsibility of each person, business, and agent who is subject to Chapter 176 of the Texas Local Government Code.



COUNTY of GALVESTON

Purchasing Department

rev. 1.3, March 29, 2010

FORM PEID:	Request for Person-Entity Identification Data
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Instructions: Please type or print clearly when completing sections 1 thru 4 and return completed form to:

Galveston County Purchasing Agent
722 Moody Avenue (21 st. Street), 5th Floor
Galveston, Texas 77550
(409) 770-5371
prodoc@co.galveston.tx.us

1.	Business Name:			
	Attention Line:			
2.	Physical Address:			
	City:		State:	Zip+4:
3.	Billing / Remit Address:			
	City:		State:	Zip+4
4.	Main Contact Person:			
	Main Phone Number:			
	Fax Number:			
	E-mail Address:			

Areas below are for County use only.

Requested By:	Phone / Ext. #
Department:	Date:

Action Requested - Check One:	IFAS PEID Vendor Number:	
<input type="checkbox"/> Add New	<input type="checkbox"/> Change Data	<input type="checkbox"/> Re-activate
<input type="checkbox"/> Inactivate	<input type="checkbox"/> Employee	<input type="checkbox"/> Attorney
<input type="checkbox"/> Landlord	<input type="checkbox"/> Foster Parent	<input type="checkbox"/> Refund
<input type="checkbox"/> OneTime	<input type="checkbox"/> Foster Child	

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p>1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.</p> <hr/> <p>2 Business name/disregarded entity name, if different from above</p> <hr/> <p>3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate</p> <p><input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____</p> <p>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</p> <p><input type="checkbox"/> Other (see instructions) ▶ _____</p>	<p>4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from FATCA reporting code (if any) _____</p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>
	<p>5 Address (number, street, and apt. or suite no.) See instructions.</p> <hr/> <p>6 City, state, and ZIP code</p> <hr/> <p>7 List account number(s) here (optional)</p>	<p>Requester's name and address (optional)</p> <hr/>

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number											
				-			-				
or											
Employer identification number											
				-							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or “doing business as” (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity’s name as shown on the entity’s tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a “disregarded entity.” See Regulations section 301.7701-2(c)(2)(iii). Enter the owner’s name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner’s name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity’s name on line 2, “Business name/disregarded entity name.” If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys’ fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.

You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.

You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions.

You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

*Note: The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes.

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001 (1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2 Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each *officer* with whom the filer has an employment or other business relationship as defined by Section 176.001 (1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

Yes NO

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government *officer* named in this section AND the taxable income is not received from the local governmental entity?

Yes NO

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an *officer* or director, or holds an ownership of 10 percent or more?

Yes NO

D. Describe each employment or business relationship with the local government *officer* named in this section.

4

Signature of person doing business with the governmental entity

Date

SPECIAL PROVISIONS FOR CONSTRUCTION

1. Contract and Contract Documents

- (a) The project to be constructed pursuant to this contract will be financed with assistance from FEMA and is subject to all applicable Federal and State laws and regulations.
- (b) The Plans, Specifications and Addenda, General Provisions shall form part of this contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth.

2. Definitions

Whenever used in any of the contract Documents, the following meanings shall be given to the terms here in defined:

- (a) The term "Contract" means the Contract executed between the County of Galveston, hereinafter called the Owner, and _____, hereinafter called Contractor, of which these GENERAL CONDITIONS, form a part.
- (b) The term "Project Area" means the area within which are the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
- (c) The term "Engineer" means Amani Engineering, Inc., Engineer in charge, serving the Owner with architectural or engineering services, his successor, or any other person or persons, employed by the Owner for the purpose of directing or having in charge the work embraced in this Contract.
- (d) The term "Contract Documents" means and shall include the following: Invitation to Bid, , Signed Copy of Bid, General Conditions, Special Provisions For Construction, Acknowledgement and Certification Regarding Debarment, Non-Collusion Affidavit, Vendor Qualification Packet, Payment and Performance Bonds, Contract Award, Addenda (if any), Technical Specifications, and Drawings (as listed in the Schedule of Drawings).
- (e) The term "Substantially Complete" shall mean that the work is fully completed with the exception of minor miscellaneous work and adjustments.

3. Supervision By Contractor

- (a) Except where the Contractor is an individual and gives his personal supervision to the work, the Contractor shall provide a competent superintendent, satisfactory to the Local Public Agency and the Engineer, on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.
- (b) The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

4. Subcontracts

- (a) The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until he has verified the subcontractor as eligible to participate in federally funded contracts.
- (b) No proposed subcontractor shall be disapproved by the city/county except for cause.
- (c) The Contractor shall be as fully responsible to the city/county for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provisions of the Contract.
- (e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the Owner.

5. Fitting and Coordination of Work

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

6. Payments to Contractor

- (a) Partial Payments
 - 1) The Contractor shall prepare his requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for his approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) Five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices contained in the agreement. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection of the Engineer.
 - 2) Monthly or partial payments made by the Owner to the Contractor are moneys advanced for the purpose of assisting the contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the Owner. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Owner in all details.
- (b) Final Payment
 - 1) After final inspection and acceptance by the Owner of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this contract shall be the amount computed as described above less all previous payments.
 - 2) The Owner before paying the final estimate, shall require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the Owner deems it necessary in order to protect

its interest. The Owner may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.

- 3) Any amount due the Owner under Liquidated Damages shall be deducted from the final payment due the contractor.

(c) Payments Subject to Submission of Certificates

Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his subcontractors.

(d) Withholding Payments

The Owner may withhold from any payment due the Contractor whatever is deemed necessary to protect the Owner, and if so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any moneys for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

7. Changes in the Work

- (a) The Owner may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.
- (b) Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- (c) If applicable unit prices are contained in the Agreement, the Owner may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original the total amount by eighteen percent (18%).
- (d) Each change order shall include in its final form:
 - 1) A detailed description of the change in the work.
 - 2) The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3) A definite statement as to the resulting change in the contract price and/or time.
 - 4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.

- 5) The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

8. Estimated Quantities

This Contract, including the specifications, plans and estimates, is intended to show clearly all the work to be done and material to be furnished hereunder. The estimated quantities of the various classes of work to be done and material to be furnished under this contract are approximate and are to be used as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this contract may differ somewhat from these estimates, and that the basis for payment under this contract shall be the plan quantity or actual amount of such work done whichever is specified. It is further understood that the County does not guarantee any minimum amount of work under this Contract.

Contractor agrees that it will make no claim for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this Contract and the estimated quantities contemplated and contained in the proposals.

9. Claims for Extra Cost

- (a) If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Owner, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.
- (b) Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- (c) Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall be reported at once to the Owner and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Owner.
- (d) If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

10. Time

The Contractor is advised that time for completion will consist of the number of calendar days set out in the Contract Award. The time for completion will begin to run on the day after the issuance of a notice to proceed by the County. The Contractor is required to start work no later than ten (10) working days after the issuance of the written notice to proceed. Failure to timely commence operations may be deemed by the County to be a default. The Contractor will complete the work at that site within the time period specified. If there is more than one site listed on the notice to proceed, work for all sites must be completed not later than is specified for each site.

11. Termination, Delays, and Liquidated Damages

(a) Right of the Owner to Terminate Contract.

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract. The notices shall contain the reasons for such intention to terminate the contract, and unless such violation or delay shall cease and satisfactory arrangement of correction be made within ten days, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor. The Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and complete the project by bid/contract or by force account at the expense of the Contractor and his Surety shall be liable to the Owner for any excess cost incurred. In such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

(b) Liquidated Damages for Delays.

Contractor agrees that time is of the essence of this contract and that for each day of a delay of a day beyond the number of working days or calendar days herein agreed upon the completion of the work herein specified and contracted for (after due allowance for such extension of time as is provided for under Extension of Time hereinabove) County may withhold permanently from Contractor's total compensation the sum of \$1,000.00 for each calendar day of delay, until the work is completed, as liquidated damages for such delay. The Contractor and his sureties shall be liable to the Owner for the amount thereof.

(c) Excusable Delays.

- 1) The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:
 - a. Any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency;
 - b. Any acts of the Owner;
 - c. Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.
- 2) Provided, however, that the Contractor promptly notifies the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

12. Assignment or Novation

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Owner;

provided, however, that assignments to banks or other financial institutions may be made without the consent of the Owner. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

13. Disputes

- (a) All disputes arising under this Contract or its interpretation except those disputes covered by FEDERAL LABOR STANDARDS PROVISIONS whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall, within ten (10) days of commencement of the dispute, be presented by the Contractor to the Owner for decision. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt of the Owner.
- (b) The Contractor shall submit in detail his claim and his proof thereof.
- (c) If the Contractor does not agree with any decision of the Owner, he shall in no case allow the dispute to delay the work but shall notify the Owner promptly that he is proceeding with the work under protest.

14. Technical Specifications and Drawings

Anything mentioned in the Technical Specifications and not shown on the Drawings, or vice versa, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the Owner, without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

15. Shop Drawings

- (a) All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in copies for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.
- (b) Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.
- (c) If a shop drawing is in accordance with the contract or involves only a minor adjustment in the interest of the owner not involving a change in contract price or time; the engineer may approve the drawing. The approval shall not relieve the Contractor from his responsibility for adherence to the contract or for any error in the drawing.

16. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

17. Materials and Workmanship

- (a) Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- (b) The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval full information concerning all other materials or articles which he proposes to incorporate.
- (c) Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- (d) Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- (e) The Owner may require the Contractor to dismiss from the work such employee or employees as the Owner or the Engineer may deem incompetent, or careless, or insubordinate.

18. Samples, Certificates and Tests

- (a) The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- (b) Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in making a prompt decision regarding the acceptability of the

sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

- (c) Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- (d) Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
 - 1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
 - 2) The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;
 - 3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient;
 - 4) The Owner will pay all other expenses.

19. Permits and Codes

- (a) The Contractor shall give all notices required by and comply with all applicable laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the Owner. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the Owner will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.
- (b) Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the Owner.
- (c) The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- (d) The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements contained in this Contract.

- (e) The Contractor will be required to make arrangements for and pay the water, electrical power, or any other utilities required during construction.
- (f) During construction of this project, the Contractor shall use every means possible to control the amount of dust created by construction. Prior to the close of a day's work, the Contractor, if directed by the Owner, shall moisten the bank and surrounding area to prevent a dusty condition.

20. Care of Work

- (a) The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- (b) The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- (c) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner.
- (d) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.
- (e) The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

21. Accident Prevention

- (a) No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Secretary of Labor.
- (b) The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- (c) The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner with reports concerning these matters.
- (d) The Contractor shall indemnify and save harmless the Owner from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.

- (e) The Contractor shall provide trench safety for all excavations more than five feet deep prior to excavation. All OSHA Standards for trench safety must be adhered to by the Contractor.
- (f) The contractor shall at all times conduct his work in such a manner as to insure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the Owner, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of the streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the Owner at the expense of the Contractor.

22. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

23. Use of Premises

- (a) The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- (b) The Contractor shall comply with all reasonable instructions of the Owner and all existing state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

24. Removal of Debris, Cleaning, Etc.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

25. Inspection

- (a) All materials and workmanship shall be subject to inspection, examination, or test by the Owner and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The Owner shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the Owner may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the Owner.
- (b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the Owner will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- (c) The Contractor shall notify the Owner sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the Owner, the

Contractor shall uncover for inspection and recover such facilities at his own expense, when so requested by the Owner.

- (d) Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, shall be allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.
- (e) Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- (f) Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the Owner or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

26. Review by Owner

The Owner and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

27. Final Inspection

When the Improvements included in this Contract are substantially completed, the Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The Owner will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

28. Deduction for Uncorrected Work

If the Owner deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner and subject to settlement, in case of dispute, as herein provided.

29. Warranty of Title

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed by him to the Owner free from any claims, liens,

or charges. Neither the Contractor nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

30. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements included in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of 12 months from the date of final acceptance of the work.

31. Job Offices

- (a) The Contractor and his subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The Owner shall be consulted with regard to locations.
- (b) Upon completion of the improvements, or as directed by the Owner, the Contractors shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the contract.

32. Partial Use of Site Improvements

The Owner may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- (a) The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- (b) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
- (c) The period of guarantee stipulated in the Section 29 hereof shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

33. Contract Period

The work to be performed under this contract shall commence within the time stipulated by the Owner in the Notice to Proceed, and shall be fully completed within 180 calendar days thereafter.

34. Keeping Of Plans And Specifications Accessible

The Contractor shall keep one (1) copy of all Plans and Specifications constantly accessible at the work site and available for inspection at all times.

35. Utilities

Contractor shall be responsible for any charges which may be made by any city or utility companies for the work to be performed by Contractor.

36. Parking

Contractor shall be responsible for the expense of parking the Contractor's vehicle(s) in a legal manner and at no expense or inconvenience to the County.

37. Fire And Safety

Contractor is completely responsible for fire protection at the job site as well as the safety of its own employees as well as those entering onto the job site.

38. Contractor's Buildings

The building of structures for housing men, or the erection of tents or other forms of protection will be permitted only at such places as the County shall permit, and the sanitary conditions of the grounds in or about such structures shall at all times be maintained in the manner satisfactory to the County.

39. Worksite Security

Contractor shall maintain the security of the worksite.

Contractor shall provide adequate protection to persons on the worksite, adjacent properties, and utilities as is necessary to keep each free of damage or injury. Contractor shall furnish all barricades, warning lights and other safety devices necessary for the safety and protection of the public and shall remove them upon completion of the work performed on those premises under the terms of this contract.

Contractor will have complete control over the work site and shall be fully responsible for any loss of or damage to any County property from any cause and will reimburse County in the event of any loss or damage to County's property from any cause.

Contractor shall take proper means to protect adjacent or adjoining properties which might be injured or seriously affected by construction undertaken under this Agreement from any damage or injury by reason of said process of construction. Contractor shall be liable for any and all claims for such damage on account of its failure to fully protect all adjoining properties.

40. Final Grading

If grading is required, when work is complete, Contractor shall grade the site to fill in holes and make a presentable appearance without disturbing trees and add fill dirt if needed. Contractor may not leave voids in the grading and compaction of the property. The land shall have a smooth appearance without concrete, bricks, building materials, and other debris on the surface.

41. Changes And Alterations

Contractor further agrees that County may make such changes and alterations as County may see fit, in the line, grade, form dimensions, plans or materials for the work herein contemplated, or any part thereof, either before or after the beginning of the contract construction, without affecting the validity of this Contract and the accompanying bonds.

If such changes or alterations diminish the quantity of the work to be done, they shall not constitute the basis for a claim for damages, or anticipated profits on the work that may be dispensed with. If they increase the amount of the work, and the increased work can fairly be classified under the specifications, such increase shall be paid for according to the quantity actually done and at the unit price established for such work under this contract; otherwise such additional work shall be paid for as provided under the paragraph entitled "EXTRA WORK". In case the County shall make such changes or alterations as shall make useless any work already done or material already furnished or used in said work, then County shall recompense Contractor for any material or labor so used, and for any actual loss occasioned by such change due to actual expenses incurred in preparation for the work as originally planned.

42. Extra Work

The term "Extra Work" as used in this contract shall be understood to mean and include all work that may be required by the County to be done by Contractor to accomplish any change, alteration or addition to the work shown in the plans and specifications.

It is agreed that Contractor shall perform all Extra Work under the direction of the County when presented with a Written Work Order signed by the County. It is also agreed that the compensation to be paid Contractor for performing said Extra Work shall be determined by one or more of the following methods:

Method (a) - By agreed unit prices; or

Method (b) - By agreed lump sum: or

Method (c) - If Neither Method (a) nor Method (b) can be agreed upon before the Extra Work is commenced, then Contractor shall be paid the "Actual field cost" of the work plus fifteen (15) percent.

In the event said Extra Work be performed and paid for under Method (c), then the provisions of this paragraph shall apply and the "actual field cost" is hereby defined to include the cost of all workmen, such as foremen, timekeepers, merchants, and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment for time actually employed or used on such Extra Work plus actual transportation charges necessarily incurred, if the kind of equipment or machinery is not already on the job, together with all power, fuel, lubricants, water and similar operating expenses, also all necessary incidental expenses incurred directly on account of such Extra Work including Social Security, Old Age Benefits and other payroll taxes, and a ratable proportion of premiums on Construction and Maintenance Bonds, Public Liability and Property Damage and Workmen's Compensation, and all other insurance as may be required by any law or ordinance. The County may direct the form in which accounts of the "actual field cost" shall be kept and may also specify in writing, before the work commences, the method of doing the work and the type and kind of machinery and equipment to be used, otherwise these matters shall be determined by Contractor. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using the one hundred (100) percent of the actual hourly or daily rate (for the time used plus time in moving to and from Job) of the latest schedule of Equipment Ownership Expense adopted by the Association General Contractors of America. Where practicable the terms and prices for the use of Machinery and Equipment shall be incorporated in the Written Extra Work Order. The fifteen (15) percent of the "Actual Field Cost" to be paid Contractor shall cover and compensate him for his profit, overhead, general superintendence and field office expense, and all other elements of cost and expense not embraced within the 'actual field cost" as herein defined, save that where the Contractor's Camp or Field Office must be maintained primarily on account of such extra work, then the cost to maintain and operate same shall be included in the "actual field cost".

No claim for extra work of any kind will be allowed unless ordered in writing by the County. In case any orders or instructions, either oral or written appear to Contractor to involve extra work for which he should receive compensation, it shall make written request to the County for written order authorizing Extra Work. Should a difference of opinion arise as to what does or does not constitute extra work, or as to the payment therefor, and the County insists upon its performance, Contractor shall proceed with the work after making written order and

shall keep an accurate account of the "actual field cost" thereof, as provided under Method (c) and by this action Contractor will thereby preserve the right to submit the matter of payment to litigation.

43. Salvage

Any materials, equipment and fixtures specifically ordered to be salvaged under these specifications shall remain the property of County and will be delivered to the site designated by the County. All other items shall be disposed of by Contractor in compliance with all applicable laws and regulations.

44. Compliance With Codes

Contractor shall comply with all city, county, and state codes, laws, and ordinances in force at the time of award of contract and applicable to such work. Contractor shall obtain, at Contractor's own expense such permits, certificates, and licenses as may be required in the performance of the specified work.

45. Laws And Ordinances

Contractor shall at all times observe and comply with all Federal, State and Local Laws, ordinances and regulations which in any manner effect the contract or the work, and shall indemnify and save harmless the County against any claim arising from the violation of any such laws and ordinances, whether by Contractor or its employees.

46. Permits And Licenses

Contractor shall be responsible for obtaining and furnishing all necessary permits and licenses, City, County, State or Federal as are required for the performance of this contract.

47. Lines And Grades

The Engineer will furnish points for horizontal and vertical control. Any additional stakes required by the Contractor shall be set at his expense. Whenever necessary, work shall be suspended to permit this work, but such suspension will be as brief as practicable and the Contractor shall be allowed no extra compensation therefor. The Contractor shall give the Engineer ample notice of the time and place where control lines and bench marks will be needed. All control stakes, marks, etc. shall be carefully preserved by the Contractor, and in case of careless destruction or removal by him or his employees, such control stakes, marks, etc. shall be replaced by the Engineer at the Contractor's expense.

48. Excess, Waste Material And Debris

All excess material, waste material and debris shall become the property of the Contractor and shall be properly disposed of off-site. No separate payment shall be made for same.

49. Material Hauling

Hauling of materials will not be paid for directly, but shall be considered as subsidiary work pertaining to the respective bid items. Haul routes for full and empty loads shall be restricted to State Highways. Hauling of equipment is also restricted to State Highways.

50. Abatement And Mitigation Of Excessive Or Unnecessary Construction Noise

Throughout all phases of the construction of this project, including the moving, unloading, operating and handling of construction equipment prior to commencement of work, during the project and after the work is

complete, the contractor shall make every reasonable effort to minimize the noise imposed upon the immediate neighborhood surrounding the area of construction. Particular and special efforts shall be exercised by the Contractor to avoid the creation of unnecessary noise impacts on adjacent sensitive receptors in the placement of non-mobile equipment such as air compressors, generators, pumps, etc. The placement of temporary parked mobile equipment with the engine running shall be such as to cause the least disruption of normal adjacent activities not associated with the work to be performed by the contractor.

All equipment associated with the work shall be equipped with components designed by the manufacturer wholly or in part to suppress excessive noise and these components shall be maintained in their original operating condition considering normal depreciation. Noise-attenuation devices installed by the manufacturer such as mufflers, engine covers, insulation, etc., shall not be removed nor rendered ineffectual nor be permitted to remain off the equipment while the equipment is in use.

51. Working Hours

Work shall not be commenced by the contractor before sunrise and shall be so conducted that all equipment is off the road and safely stored by sunset. Specific permission shall be obtained by the contractor from the Engineer for work during those hours between 7:00 P.M. and 6:00 A.M. of the following day.

52. Pipeline, Utility Locations And Contractor Responsibility

An effort to determine all pipelines and utilities which may impact the project has been made. All known pipelines and utilities have been approximately located and shown on the plans. The Contractor shall notify all utility and pipeline owners before beginning the work. Additional unknown utilities and pipelines may be found. Adjustments of these utilities or pipelines shall be done by others at no expense to the contractor. However, the Contractor shall cooperate and coordinate his work with the adjustment

The Contractor will anticipate this in making his bid. The contractor will not be allowed claims for damages or delays for these adjustments should they be necessary. However, additional time will be considered for the contract period.

This action, however, shall in no way be interpreted as relieving the Contractor of his responsibilities under the terms of the contract as set out in the plans and specifications. The Contractor shall repair any damage to the facilities caused by his operations at the Contractor's expense and shall restore facilities to service in a timely manner.

53. Incidentals

All items of work required under this contract not specifically called for in the proposal as pay items shall be considered incidental to the various bid items and no separate payment shall be made for same.

54. Flagmen

During certain phases of construction flagmen will be required to direct and control traffic. This work will not be paid for directly, but shall be considered incidental the various bid items and no separate payment shall be made for same.

55. Field Office

For this project the Contractor will not have to provide a field office.

56. Wage Rates:

The attached schedule of wages per hour for this Contract follows.

"General Decision Number: TX20200046 01/03/2020

Superseded General Decision Number: TX20190046

State: Texas

Construction Type: Heavy

Counties: Brazoria, Fort Bend, Galveston, Harris, Matagorda,
Montgomery, Waller and Wharton Counties in Texas.

FLOOD CONTROL PROJECTS ONLY, (Does not Include any Water &
Sewer Line work; Sewage Collection and Disposal Lines; Sewers
(Sanitary Storm, etc.), or Shoreline Maintenance Water Mains
and Water Supply Lines).

Note: Under Executive Order (EO) 13658, an hourly minimum wage
of \$10.80 for calendar year 2020 applies to all contracts
subject to the Davis-Bacon Act for which the contract is awarded
(and any solicitation was issued) on or after January 1, 2015.

If this contract is covered by the EO, the contractor must pay
all workers in any classification listed on this wage
determination at least \$10.80 per hour (or the applicable
wage rate listed on this wage determination, if it is higher)
for all hours spent performing on the contract in calendar
year 2020. If this contract is covered by the EO and a

classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0 01/03/2020

SUTX1998-009 03/26/1998

Rates Fringes

ASPHALT DISTRIBUTOR.....\$ 9.47

Asphalt Paving Machine.....\$ 10.05

Asphalt Raker.....\$ 8.28

Asphalt Shoveler.....\$ 7.45

Batching Plant Weigher.....\$ 11.11

Broom or Sweeper Operator.....\$ 8.01

Bulldozer.....\$ 9.91

CARPENTER.....\$ 10.35

Concrete Curbing Mach.....\$ 8.80

Concrete Finisher-Paving.....\$ 9.87

Concrete Finisher-Structures.....\$ 9.86

Concrete Finishing Machine.....\$ 11.79

Concrete Joint Sealer.....\$ 10.50

Concrete Paving Float.....\$ 9.30

Concrete Paving Saw.....\$ 10.01

Concrete Paving Spreader.....\$ 9.32

Concrete Rubber.....\$ 9.00

Crane, Clamshell, Backhoe,
Derrick, Dragline, Shovel.....\$ 11.35

Crusher or Screening Plant
Operator.....\$ 11.00

ELECTRICIAN.....\$ 16.15

Flagger.....\$ 7.25

Form Builder (Structures).....\$ 9.96

Form Liner - Paving & Curb.....\$ 9.03

Form Setter (PAVING/CURB).....\$ 8.86

Form Setter-Structures.....\$ 9.05

Foundation Drill Operator,
Crawler Mounted.....\$ 12.59

Foundation Drill Operator,
Truck Mounted.....\$ 12.73

Front End Loader.....\$ 9.29

Labor Common.....\$ 7.45

Laborer-Utility.....\$ 8.53

Lineperson.....\$ 7.50

MANHOLE BUILDER (Brick).....\$ 8.49

MECHANIC.....\$ 11.38

Milling Machine Operator.....\$ 10.43

Mixer.....\$ 7.94

Motor Grader

 FINE GRADE.....\$ 11.11

 Other.....\$ 10.67

Oiler.....\$ 9.56

Painter-Structures.....\$ 14.00

Pavement Marking Machine.....\$ 7.45

Piledriver.....\$ 10.96

Pipe layer.....\$ 8.49

Reinforcing Steel Setter

Paving.....\$ 12.50

Reinforcing Steel Setter
Structures.....\$ 12.47

Roller, Pneumatic, Self
Propelled.....\$ 7.96

Roller, Steel Wheel Other
Flatwheel or Tamping.....\$ 7.61

Roller, Steel Wheel Plant Mix
Pavements.....\$ 9.25

Scraper.....\$ 8.69

Servicer.....\$ 9.51

SIGN ERECTOR.....\$ 10.06

Sign Installer.....\$ 7.45

Slipform Machine Operator.....\$ 9.20

Spreader Box Operator.....\$ 9.08

Steelworker Structural.....\$ 10.35

Tractor-Crawler Type.....\$ 10.12

Tractor-Pneumatic.....\$ 8.99

Traveling Mixer.....\$ 9.35

Trenching Machine, Heavy.....\$ 13.56

Trenching Machine, Light.....\$ 10.50

Truck Driver Lowboy Float.....\$ 11.29

Truck Driver Single Axle Heavy...\$ 8.76

Truck Driver Single Axle,
Light.....\$ 8.15

Truck Driver Tandem Axle
Semi-Trailer.....\$ 8.00

Wagon Drill, Boring Machine.....\$ 10.15

WELDER.....\$ 10.43

Work Zone Barricade.....\$ 7.45

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification

and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date

for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

BID PROPOSAL

The bidder hereby proposes to furnish all labor, material, equipment and incidentals for:
Galveston County Beach Pocket Park No. 2

Enclosed is a Cashier's Check or Bid Bond in the sum of 5% of the greatest amount bid.

Bidder agrees to perform in accordance with the requirements of the contract documents in consideration of payment by the County of the prices in this proposal.

IN CASE OF DISCREPANCY BETWEEN UNIT PRICES AND EXTENDED PRICES, UNIT PRICES WILL GOVERN.

This bid sheet must be completely filled out in ink or typewritten with any necessary supplemental information attached.

The undersigned hereby agrees to all of the foregoing terms and provisions and to all terms and provisions of the contract, if awarded, which includes all provisions of this bid package.

BIDDER _____

SIGNATURE _____

PRINT NAME _____

TITLE _____

ADDRESS _____

CITY, STATE _____

ZIP _____

TELEPHONE _____

FAX NO _____

DATE _____

TAX I.D. No. _____

BID PROPOSAL

Item No.	TxDOT 2014	Item Description⁽¹⁾	Unit	Unit Quantity	Unit Price⁽²⁾	Total
GENERAL						
1.	500	Mobilization including all permit fees.	LS	1	\$ _____	\$ _____
2.	734 735	General Cleanup and Litter Removal	LS	1	\$ _____	\$ _____
3.		TDLR – ADA Post Construction Inspection	EA	1	\$ _____	\$ _____
4.		Traffic Control	LS	1	\$ _____	\$ _____
EARTH WORK						
5.	110	Back Dune Excavation	CY	1,179	\$ _____	\$ _____
6.	132	Fore Dune Embankment	CY	1,179	\$ _____	\$ _____
7.	GLO Manual/ Timeline	Vegetation Mitigation- Establish Native Vegetation in area shown.	SY	2,333	\$ _____	\$ _____
8.		Filter Fabric Fence	LF	1,430	\$ _____	\$ _____

BID PROPOSAL

PAVEMENT						
Item No.	TxDOT 2014	Item Description⁽¹⁾	Unit	Unit Quantity	Unit Price⁽²⁾	Total
9.	351	Asphalt Pavement Repair	SY	1,703	\$ _____	\$ _____
10.	358	Asphalt Concrete Surface Rehabilitation	SY	4,147	\$ _____	\$ _____

11.	340	Hot Mix Asphalt Surface Course	SY	4,147	\$ _____	\$ _____
12.	662	Parking Lot Striping including Handicap markings and signs	LS	1	\$ _____	\$ _____

STRUCTURES

13.	490 491 492	Dune Walk Over Structure, Complete in place	LS	1	\$ _____	\$ _____
14.	550	Dumpster Enclosure	EA	1	\$ _____	\$ _____
15.	441 445	Structural Steel Gate	EA	1	\$ _____	\$ _____
16.		50 Gallon Trash Can with 4 – 4"x4" Treated Posts	EA	6	\$ _____	\$ _____

TOTAL BASE BID

\$ _____

BID PROPOSAL

PAVEMENT Proposed Access Road (ALTERNATE)						
Item No.	TxDOT 2014	Item Description⁽¹⁾	Unit	Unit Quantity	Unit Price⁽²⁾	Total
1.	351	Asphalt Pavement Repair	SY	459	\$ _____	\$ _____

Subtotal General Items	\$ _____
Subtotal Earthwork Items	\$ _____
Subtotal Paving	\$ _____
Subtotal Structures	\$ _____
TOTAL BASE BID (SUM OF ITEMS ABOVE)	\$ _____
 PAVEMENT (ALTERNATE)	 \$ _____
 TOTAL BASE BID + ALTERNATE	 \$ _____

Notes:

⁽¹⁾ The intent of the Contract Documents is for the Contractor to include all items necessary for the proper execution and completion of the Work described in the Contract Documents. No separate measurement and payment shall be made for any work unless identified as a pay item in the BID. Include the cost of work not identified as a separate pay item in Contract price bid for items of which this work is a component. In case of discrepancy between measurement and payment within the BID and Technical Specification Section, the BID shall govern.

⁽²⁾ In the event of a discrepancy, this column shall govern.

CONTRACT AWARD

CONTRACT FOR: Galveston County Beach Pocket Park No. 2

THIS CONTRACT IS ENTERED INTO BETWEEN GALVESTON COUNTY AND THE CONTRACTOR NAMED BELOW PURSUANT TO SUBCHAPTER B, CHAPTER 271, TEXAS LOCAL GOVERNMENT CODE, AND THE REFERENCED INVITATION TO BID.

Contract No: 20-1108

Bid No: _____

Contractor: _____

The Specifications and Drawings are enumerated as follows:

Standard Specifications: **Standard Specifications For Construction And Maintenance Of Highways, Streets And Bridges; adopted by the Texas Department Of Transportation, 2014**

Special Provisions: **To Items 1 thru 9**

Special Items: **GLO Dune Protection Manual
GLO Mitigation Timeline**

- DRAWINGS:
- 1 Cover Sheet
 - 2 Boundary and Topographic Survey
 - 3 Dune Protection Mitigation and Grading Plan
 - 4 Site Plan
 - 5 Site Improvements Plan
 - 6 Proposed Grading Plan
 - 7 Dune Walkover Plan
 - 8 Dune Walkover Elevations
 - 9 Dune Walkover Elevations
 - 10 Dune Walkover Details
 - 11 Miscellaneous Details
 - 12 Traffic Control Plan
 - 13 Storm Water Pollution Prevention Plan
 - 14 SWPPP Details

ADDENDA: _____

Contract Award (continued)

Invitation to Bid, General Provisions, Special Provisions, Bid Forms, Certification Regarding Lobbying, Non-Collusion Affidavit, Vendor Qualification Packet, Debarment Form, Special Provisions for Construction, Bid Proposal, Affidavit and Surety Forms, Wage Rates, Specifications, Plans and any Addenda attached to this Contract Award are all made a part of this Contract and collectively evidence and constitute the entire contract. Contractor shall furnish all materials, perform all of the work required to be done and do everything else required by these documents.

Time of Completion: The Contractor shall complete the work within 180 Calendar Days of the issuance of the notice to proceed. The time set forth for completion of the work is an essential element of the Contract.

The Contract Sum: The County shall pay the Contractor for performance of the Contract, the sum of _____ Dollars and ___/100 (\$ _____), payments to be made as described herein.

Performance Bond required: (x) yes () no
Payment Bond required: (x) yes () no

This Contract is issued pursuant to award made by Commissioners' Court on _____, 20__.

EXECUTED this ____ day of _____, 20__.

COUNTY OF GALVESTON, TEXAS

BY: _____
MARK HENRY, County Judge

ATTEST:

DWIGHT SULLIVAN, County Clerk

CONTRACTOR

BY: _____
Signature - Title

Printed Name

CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIEN

TO (Owner):

PROJECT NO:

CONTRACT FOR:

PROJECT:
(name, address)

CONTRACT DATE:

State of:

County of:

The undersigned, hereby certifies that, to the best of his knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write "None". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Sub-contractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR:

Address:

BY:

Subscribed and sworn to before me this

day of _____ 20

Notary Public:

My Commission Expires:

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

TO (Owner):

PROJECT NO:

CONTRACT FOR:

PROJECT:
(name, address)

CONTRACT DATE:

State of:

County of:

The undersigned, hereby certifies that, except as listed below, he has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or his property might in any way be held responsible.

EXCEPTIONS: (If none, write "None". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment.
Whenever Surety is involved, consent of Surety is required. CONSENT OF SURETY, may be used for this purpose.
Indicate attachment: yes _____ no _____

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers to the extent required by the Owner, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Liens.

CONTRACTOR:

Address:

BY:

Subscribed and sworn to before me this

day of _____ 20

Notary Public:

My Commission Expires:

CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE

TO (Owner):

PROJECT NO:

PROJECT:
(name, address)

CONTRACT FOR:

CONTRACT DATE:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(here insert name and address of Surety as it appears in the bond).

, SURETY,

on bond of (here insert name and address of Contractor as it appears in the bond)

, CONTRACTOR,

hereby approves the reduction in or partial release of retainage to the contractor as follows:

The Surety agrees that such reduction in or partial release of retainage to the Contractor shall not relieve the Surety of any of its
obligations to (here insert name and address of Owner)

, OWNER,

as set forth in the said Surety's bond.

IN WITNESS WHEREOF,
the Surety has hereunto set its had this

day of

20 .

Surety

Signature of Authorized Representative

Title

ATTEST:
(Seal):

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

TO (Owner):

PROJECT NO:

PROJECT:
(name, address)

CONTRACT FOR:

CONTRACT DATE:

CONTRACTOR:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(here insert name and address of Surety as it appears in the bond).

, SURETY COMPANY,

on bond of (here insert name and address of Contractor)

, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety
Company of any of its obligations to (here insert name and address of Owner)

, OWNER,

as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,
the Surety Company has hereunto set its had this

day of _____ 20__ .

Surety Company

Signature of Authorized Representative

Title

ATTEST:
(Seal):

NOTE: This form is to be use as a companion document to Contractor's Affidavit of Payment of Debts and Claims.

GALVESTON COUNTY BEACH POCKET PARK NO. 2 **SPECIFICATIONS**

TXDOT	Special Provisions 1-9
TXDOT 110	Excavation
TXDOT 132	Embankment
TXDOT 340	Dense-Graded Hot Mix Asphalt
TXDOT 351	Flexible Pavement Structure Repair
TXDOT 358	Asphalt Concrete Surface Rehabilitation
TXDOT 441	Steel Structures
TXDOT 445	Galvanizing
TXDOT 490	Timber Structures
TXDOT 491	Timber for Structures
TXDOT 492	Timber Preservative and Treatment
TXDOT 500	Mobilization
TXDOT 550	Chain Link Fence
TXDOT 662	Work Zone Pavement Markings
TXDOT 734	Litter Removal
TXDOT 735	Debris Removal
GLO	Dune Protection Manual
GLO	Mitigation Timeline

SPECIAL PROVISION TO ITEM 1

"DEFINITION OF TERMS"

For this project, Item 1 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby:

THE TERM "DEPARTMENT," "STATE," "STATE HIGHWAY DEPARTMENT OF TEXAS", "TxDOT", "TEXAS DEPARTMENT OF TRANSPORTATION", STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION," "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION COMMISSION," "COMMISSION," AND "STATE HIGHWAY COMMISSION," SHALL, IN THE USE OF THE STANDARD SPECIFICATIONS FOR ALL WORK IN CONNECTION WITH THIS PROJECT, BE DEEMED TO MEAN GALVESTON COUNTY, PARTY OF THE FIRST PART IN ACCOMPANYING CONTRACT OR CONTRACTS. ANY REFERENCE IN THE TEXAS STANDARD SPECIFICATIONS TO THE STATE OF TEXAS, ITS OFFICIALS, EMPLOYEES, OR AGENTS SHALL BE DEEMED TO MEAN GALVESTON COUNTY, ITS OFFICIALS, EMPLOYEES, OR AGENTS.

Articles 1.26, "Certificate of Insurance" ; 1.28, "Commission", 1.47, "Department", 1.70 "Letting Official " and 1.124 "State" are deleted.

Article 1.53, "ENGINEER", is revised to read in its entirety as follows:

1.53 ENGINEER. Galveston County Engineer or his authorized representatives. If a representative is authorized to function as the ENGINEER'S representative with respect to certain ENGINEER'S activities that representative's responsibilities and obligations shall be limited as provided in Article 1.148.

Article 1.64, "INSPECTOR," is revised to read in its entirety as follows:

1.64 INSPECTOR. The representative of the ENGINEER assigned and authorized to observe or inspect any or all parts of the work and the material to be used therein. A representative is authorized to function as the ENGINEER'S representative with respect to certain activities, and that representative's responsibilities and obligations shall be limited as provided in Article 1.148.

Special Provisions to Item 1

"DEFINITION OF TERMS"

ADDITIONAL ARTICLES ARE ADDED AS FOLLOWS:

1.148 CONSULTING ENGINEER. Independent engineering firms contracting with Galveston County for the providing of professional engineering services. The engineering firms are the representatives of Galveston County only to the extent provided in the Contract documents and in such special instances where they are specifically authorized by Galveston County so to act. All powers and rights assigned by Galveston County to the engineering firms with respect to the work are solely and exclusively for the benefit of Galveston County and not for the CONTRACTOR. In carrying out of its powers and rights assigned by Galveston County the engineering firms shall function as a representative of Galveston County and shall act by and for Galveston County. Irrespective of what authority may be assigned by Galveston County to the engineering firms, CONTRACTOR remains fully and solely responsible and liable for its obligations to perform the work in accordance with the requirements of the plans and specifications; to insure against failures in safety precautions; to carry out his work pursuant to safe methods of construction; to select and fulfill the proper manner, means, and methods in performing the work in order to meet the plans and specifications; and to complete the work in accordance with the contract documents.

SPECIAL PROVISION TO ITEM 2
INSTRUCTIONS TO BIDDERS

For this project, Item 2 of the Texas Standard Specifications is hereby deleted in its entirety.
The Instructions to Bidders is included elsewhere in the Contract Documents.

SPECIAL PROVISION TO ITEM 3
AWARD AND EXECUTION OF CONTRACT

For this project, Item 3 of the Texas Standard Specifications is hereby deleted in its entirety.

The Award and Execution of Contract is included elsewhere in the Contract Documents.

SPECIAL PROVISION TO ITEM 4

SCOPE OF WORK

For this project, Item 4 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

ARTICLE 4.2 "CHANGES IN WORK;" ARTICLE 4.3 "DIFFERING SITE CONDITIONS" and ARTICLE 4.4 "REQUESTS AND CLAIMS FOR ADDITIONAL COMPENSATION" are deleted in their entirety and replaced by Article 41 "CHANGES and ALTERATIONS" and ARTICLE 42 "EXTRA WORK" of "Special Provisions for Construction".

SPECIAL PROVISION TO ITEM 5

CONTROL OF THE WORK

For this project, Item 5 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

ARTICLE 5.2 "PLANS AND WORKING DRAWINGS." The first sentence of the first paragraph is hereby revised to read as follows:

When required, the Contractor shall provide working drawings to supplement the plans with all necessary details not included on the Contract plans.

ARTICLE 5.5 "COOPERATION OF CONTRACTOR." The last sentence of the first paragraph is hereby revised to read as follows:

The Contractor will be supplied with three (3) copies of the plans, specifications and special provisions and he shall have one (1) copy of each available on the project at all times.

ARTICLE 5.6 "CONSTRUCTION SURVEYING," is hereby deleted in its entirety.

ARTICLE 5.7 "INSPECTION." The sixth sentence of the second paragraph is hereby revised to read as follows:

If the uncovered work is acceptable, the costs to uncover, remove and replace or make good the parts removed will be paid for in accordance with Article 41. "Changes and Alterations" of "Special Provisions for Construction".

ARTICLE 5.8 "FINAL ACCEPTANCE," is hereby deleted in its entirety. It is replaced by Article 6(b). "PAYMENTS TO CONTRACTOR, FINAL PAYMENT" of "Special Provisions for Construction".

SPECIAL PROVISION TO ITEM 6

CONTROL OF MATERIALS

For this project, Item 6 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

ARTICLE 6.1 "SOURCE CONTROL." Paragraph A. "Buy America" and B. "Buy Texas" are hereby deleted in their entirety.

ARTICLE 6.7 "Department-furnished Material" is hereby deleted in its entirety.

SPECIAL PROVISION TO ITEM 7

LEGAL RELATIONS AND RESPONSIBILITIES

For this project, Item 7 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

ARTICLE 7.4 "INSURANCE AND BONDS" is hereby deleted in its entirety.

ARTICLE 7.5 "RESTORING SURFACES OPENED BY PERMISSION." The third sentence of the first paragraph is hereby revised to read as follows:

Payment for repair of surfaces opened by permission will be made in accordance with Article 41. "Changes and Alterations" of "Special Provisions for Construction".

SPECIAL PROVISION TO ITEM 8

PROSECUTION AND PROGRESS

For this project, Item 8 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

ARTICLE 8.1 "PROSECUTION OF WORK" The third sentence in the first paragraph is hereby revised to read as follows:

"The Contractor shall begin the work to be performed under the contract within ten (10) days after the date of the authorization to begin work as shown on the work order.

ARTICLE 8.2 "PROGRESS SCHEDULES", B. "CONSTRUCTION CONTRACTS" The first sentence in the first paragraph is hereby revised to read as follows:

If required by the Engineer, before starting work on a construction Contract, prepare and submit a progress schedule based on the sequence of work and traffic control plan shown in the Contract.

SPECIAL PROVISION TO ITEM 9

MEASUREMENT AND PAYMENT

For this project, Item 9 of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

ARTICLE 9.2 "PLANS QUANTITY MEASUREMENT" is hereby revised to read as follows: Plans quantities may not represent the exact quantity of work performed or material moved, handled, or placed during the execution of the Contract. The estimated bid quantities are designated as final payment quantities.

ARTICLE 9.4 "PAYMENT FOR EXTRA WORK" is hereby revised to read as follows:

Extra work ordered, performed and accepted will be paid for in accordance with ARTICLE 42, "EXTRA WORK" of "Special Provisions for Construction".

ARTICLE 9.5 "FORCE ACCOUNT" is hereby deleted in its entirety.

ARTICLE 9.6 "PROGRESS PAYMENTS" is hereby deleted in its entirety and replaced by ARTICLE 36, "PROGRESS PAYMENTS AND RETAINAGE" of Section IV, "General Terms and Conditions".

ARTICLE 9.8 "FINAL PAYMENT" and ARTICLE 40, "FINAL PAYMENT" are hereby deleted in their entirety and replaced by ARTICLE 6(b), "PAYMENTS TO CONTACTOR, FINAL PAYMENT" of "Special Provisions for Construction".

110.1

ITEM 110 EXCAVATION

110.1. Description. Excavate areas as shown on the plans or as directed. Remove materials encountered to the lines, grades, and typical sections shown on the plans and cross-sections.

110.2. Construction. Accept ownership of unsuitable or excess material and dispose of material in accordance with local, state, and federal regulations at locations outside the right of way.

Maintain drainage in the excavated area to avoid damage to the roadway section. Correct any damage to the subgrade caused by weather, at no additional cost to the Department.

Shape slopes to avoid loosening material below or outside the proposed grades. Remove and dispose of slides as directed.

A. Rock Cuts. Excavate to finish subgrade. Manipulate and compact subgrade in accordance with Article 132.3.D, “Compaction Methods,” unless excavation is to clean homogenous rock at finish subgrade elevation. If excavation extends below finish subgrade, use approved embankment material compacted in accordance with Article 132.3.D to replace undercut material at no additional cost.

B. Earth Cuts. Excavate to finish subgrade. In areas where base or pavement structure will be placed on subgrade, scarify subgrade to a uniform depth at least 6 in. below finish subgrade elevation. Manipulate and compact subgrade in accordance with Article 132.3.D, “Compaction Methods.”

If unsuitable material is encountered below subgrade elevations, take corrective measures as directed. Drying required deeper than 6 in. below subgrade elevation will be paid for in accordance with Article 9.4, “Payment for Extra Work.” Excavation and replacement of unsuitable material below subgrade elevations will be performed and paid for in accordance with the applicable bid items. However, if Item 132, “Embankment,” is not included in the Contract, payment for replacement of unsuitable material will be paid for in accordance with Article 9.4.

C. Subgrade Tolerances. For turnkey construction, excavate to within 1/2 in. in cross-section and 1/2 in. in 16 ft. measured longitudinally. For staged construction, excavate to within 0.1 ft. in cross-section and 0.1 ft. in 16 ft. measured longitudinally.

110.3. Measurement. This Item will be measured by the cubic yard in its original position as computed by the method of average end areas.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantities are required.

Limits of measurement for excavation in retaining wall areas will be as shown on the plans.

Shrinkage or swelling factors will not be considered in determining the calculated quantities.

110.4. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Excavation (Roadway),” “Excavation (Channel),” “Excavation (Special),” or “Excavation (Roadway

110.4 to 112.3

and Channel).” This price is full compensation for authorized excavation; drying; undercutting subgrade and reworking or replacing the undercut material in rock cuts; hauling; disposal of material not used elsewhere on the project; scarification and compaction; and equipment, labor, materials, tools, and incidentals.

When a slide not due to the Contractor’s negligence or operation occurs, payments for removal and disposal of the slide material will be in accordance with Article 9.4, “Payment for Extra Work.” Excavation in backfill areas of retaining walls will not be measured or paid for directly but will be subsidiary to pertinent Items.

ITEM 112 SUBGRADE WIDENING

112.1. Description. Widen the existing subgrade in accordance with the typical sections.

112.2. Materials. Furnish water in accordance with Article 204.2, “Materials.”

112.3. Construction.

- A. Preparation of Embankment.** Scarify to a depth of at least 6 in. into existing adjacent embankment slopes before fill is placed.
- B. Pavement Structure Removal.** Remove material along the edge of the existing pavement. Provide a smooth vertical cut unless otherwise shown on the plans. Conform to the typical sections for the limits of removal unless directed otherwise. Accept ownership of excess material not used in the construction of the subgrade widening. Dispose of excess material in accordance with federal, state, and local regulations.
- C. Widening.** In cut sections, remove material and move to fill sections within the project. Use material from cut sections for embankment. In fill sections, place the material in successive lifts to the line and grades shown on the typical sections. Provide additional embankment in accordance with the applicable bid item or Article 9.4, “Payment for Extra Work,” if all excavation has been performed and additional embankment is required to complete the work.
- D. Compaction.** Compact the widened subgrade in accordance with Article 132.3, “Construction.”

112.4. Measurement. This Item will be measured by the 100-ft. station along the baseline of each roadbed.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantities are required.

112.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Subgrade Widening (Ordinary Compaction)” or “Subgrade Widening (Density Control).” This price is full compensation for excavation; hauling of embankment material from cuts to fills; finishing of the subgrade widening; hauling and disposing of excess excavated material; furnishing and operating equipment; scarifying; shaping; and labor, fuel, materials, tools, and incidentals.

No payment will be made for thickness or width exceeding that shown on the typical sections. “Sprinkling” and “Rolling” will not be paid for directly but will be considered subsidiary to this Item.

Corrections of unstable areas in the widened subgrade will be at the Contractor’s expense. In a cut section, work involved in removing and replacing unsuitable material encountered below the finished subgrade will be paid for as specified under Item 110, “Excavation,” when included; otherwise it will be paid for under Article 9.4, “Payment for Extra Work.”

ITEM 132

EMBANKMENT

132.1. Description. Furnish, place, and compact materials for construction of roadways, embankments, levees, dikes, or any designated section of the roadway where additional material is required.

132.2. Materials. Furnish approved material capable of forming a stable embankment from required excavation in the areas shown on the plans or from sources outside the right of way. Provide 1 or more of the following types as shown on the plans:

- **Type A.** Granular material that is free from vegetation or other objectionable material and meets the requirements of Table 1.

132.3 to 132.3

Table 1
Testing Requirements

Property	Test Method	Specification Limit
Liquid limit	Tex-104-E	≤ 45
Plasticity index (PI)	Tex-106-E	≤ 15
Bar linear shrinkage	Tex-107-E	≥ 2

The Linear Shrinkage test only needs to be performed as indicated in Tex-104-E.

- **Type B.** Materials such as rock, loam, clay, or other approved materials.
- **Type C.** Material meeting the specification requirements shown on the plans.
- **Type D.** Material from required excavation areas shown on the plans.

Retaining wall backfill material must meet the requirements of the pertinent retaining wall Items.

132.3. Construction. Meet the requirements of Item 7, “Legal Relations and Responsibilities to the Public,” when off right of way sources are used. To allow for required testing, notify the Engineer before opening a material source. Complete preparation of the right of way, in accordance with Item 100, “Preparing Right of Way,” for areas to receive embankment.

Backfill tree-stump holes or other minor excavations with approved material and tamp. Restore the ground surface, including any material disked loose or washed out, to its original slope. Compact the ground surface by sprinkling in accordance with Item 204, “Sprinkling,” and by rolling using equipment complying with Item 210, “Rolling,” when directed.

Scarify and loosen the unpaved surface areas, except rock, to a depth of at least 6 in., unless otherwise shown on the plans. Bench slopes before placing material. Begin placement of material at the toe of slopes. Do not place trees, stumps, roots, vegetation, or other objectionable material in the embankment. Simultaneously recompact scarified material with the placed embankment material. Do not exceed the layer depth specified in Section 132.3.D, “Compaction Methods.”

Construct embankments to the grade and sections shown on the plans. Construct the embankment in layers approximately parallel to the finished grade for the full width of the individual roadway cross sections, unless otherwise shown on the plans. Ensure that each section of the embankment

conforms to the detailed sections or slopes. Maintain the finished section, density, and grade until the project is accepted.

- A. Earth Embankments.** Earth embankment is mainly composed of material other than rock. Construct embankments in successive layers, evenly distributing materials in lengths suited for sprinkling and rolling.

Obtain approval to incorporate rock and broken concrete produced by the construction project in the lower layers of the embankment. When the size of approved rock or broken concrete exceeds the layer thickness requirements in Section 132.3.D, "Compaction Methods," place the rock and concrete outside the limits of the completed roadbed. Cut and remove all exposed reinforcing steel from the broken concrete.

Move the material dumped in piles or windrows by blading or by similar methods and incorporate it into uniform layers. Featheredge or mix abutting layers of dissimilar material for at least 100 ft. to ensure there are no abrupt changes in the material. Break down clods or lumps of material and mix embankment until a uniform material is attained.

Apply water free of industrial wastes and other objectionable matter to achieve the uniform moisture content specified for compaction.

When ordinary compaction is specified, roll and sprinkle each embankment layer in accordance with Section 132.3.D.1, "Ordinary Compaction." When density control is specified, compact the layer to the required density in accordance with Section 132.3.D.2, "Density Control."

- B. Rock Embankments.** Rock embankment is mainly composed of rock. Construct rock embankments in successive layers for the full width of the roadway cross-section with a depth of 18 in. or less. Increase the layer depth for large rock sizes as approved. Do not exceed a depth of 2-1/2 ft. in any case. Fill voids created by the large stone matrix with smaller stones during the placement and filling operations.

Ensure the depth of the embankment layer is greater than the maximum dimension of any rock. Do not place rock greater than 2 ft. in its maximum dimension, unless otherwise approved. Construct the final layer with graded material so that the density and uniformity is in accordance with Section 132.3.D, "Compaction Methods." Break up exposed oversized material as approved.

When ordinary compaction is specified, roll and sprinkle each embankment layer in accordance with Section 132.3.D.1, "Ordinary Compaction." When density control is specified, compact each layer to

132.3 to 132.3

the required density in accordance with Section 132.3.D.2, “Density Control.” When directed, proof-roll each rock layer where density testing is not possible, in accordance with Item 216, “Proof Rolling,” to ensure proper compaction.

- C. Embankments Adjacent to Culverts and Bridges.** Compact embankments adjacent to culverts and bridges in accordance with Item 400, “Excavation and Backfill for Structures.”
- D. Compaction Methods.** Begin rolling longitudinally at the sides and proceed toward the center, overlapping on successive trips by at least 1/2 the width of the roller. On super elevated curves, begin rolling at the lower side and progress toward the high side. Alternate roller trips to attain slightly different lengths. Compact embankments in accordance with one of the following methods as shown on the plans:
- 1. Ordinary Compaction.** Use approved rolling equipment complying with Item 210, “Rolling,” to compact each layer. The plans or the Engineer may require specific equipment. Do not allow the loose depth of any layer to exceed 8 in., unless otherwise approved. Before and during rolling operations, bring each layer to the moisture content directed. Compact each layer until there is no evidence of further consolidation. Maintain a level layer to ensure uniform compaction. If the required stability or finish is lost for any reason, recompact and refinish the subgrade at no additional expense to the Department.
 - 2. Density Control.** Compact each layer to the required density using equipment complying with Item 210, “Rolling.” Determine the maximum lift thickness based on the ability of the compacting operation and equipment to meet the required density. Do not exceed layer thickness of 16 in. loose or 12 in. compacted material, unless otherwise approved. Maintain a level layer to ensure uniform compaction.

The Engineer will use Tex-114-E to determine the maximum dry density (D_a) and optimum moisture content (W_{opt}). Meet the requirements for field density and moisture content in Table 2, unless otherwise shown on the plans.

Table 2
Field Density Control Requirements

Description	Density ¹	Moisture Content ¹
	Tex-115-E	
PI ≤ 15	≥ 98% D _a	
15 < PI ≤ 35	≥ 98% D _a and ≤ 102% D _a	≥ W _{opt.}
PI > 35	≥ 95% D _a and ≤ 100% D _a	≥ W _{opt.}

Each layer is subject to testing by the Engineer for density and moisture content. During compaction, the moisture content of the soil should not exceed the value shown on the moisture-density curve, above optimum, required to achieve

- 98% dry density for soils with a PI greater than 15 but less than or equal to 35 or
- 95% dry density for soils with PI greater than 35.

When required, remove small areas of the layer to allow for density tests. Replace the removed material and recompact at no additional expense to the Department. Proof-roll in accordance with Item 216, “Proof Rolling,” when shown on the plans or as directed. Correct soft spots as directed.

E. Maintenance of Moisture and Reworking. Maintain the density and moisture content once all requirements in Table 2 are met. For soils with a PI greater than 15, maintain the moisture content no lower than 4 percentage points below optimum. Rework the material to obtain the specified compaction when the material loses the required stability, density, moisture, or finish. Alter the compaction methods and procedures on subsequent work to obtain specified density as directed.

F. Acceptance Criteria.

1. Grade Tolerances.

- a. Staged Construction.** Grade to within 0.1 ft. in the cross-section and 0.1 ft. in 16 ft. measured longitudinally.
- b. Turnkey Construction.** Grade to within 1/2 in. in the cross-section and 1/2 in. in 16 ft. measured longitudinally.

2. Gradation Tolerances. When gradation requirements are shown on the plans, material is acceptable when not more than 1 of the 5

embankment; hauling; placing, compacting, finishing, and reworking; disposal of waste material; and equipment, labor, tools, and incidentals.

When proof rolling is directed, it will be paid for in accordance with Item 216, "Proof Rolling."

All sprinkling and rolling, except proof rolling, will not be paid for directly, but will be considered subsidiary to this Item, unless otherwise shown on the plans.

Where subgrade is constructed under this contract, correction of soft spots in the subgrade will be at the Contractor's expense. Where subgrade is not constructed under this contract, correction of soft spots in the subgrade will be paid in accordance with Article 9.4, "Payment for Extra Work."

ITEM 134

BACKFILLING PAVEMENT EDGES

134.1. Description. Backfill pavement edges in conformance with the typical sections shown on the plans.

134.2. Materials.

- A. Backfill Material.** Use backfill material capable of sustaining vegetation unless otherwise specified on the plans. Furnish backfill material of one of the following types:
1. **Type A.** Backfill secured from a source outside the right of way and according to the requirements as shown on the plans.
 2. **Type B.** Backfill secured from within the existing right of way as shown on the plans or as directed.
 3. **Type C.** Mulch sodding backfill secured from an approved source in accordance with Article 162.2.B, "Mulch Sod."
- B. Emulsified Asphalt.** Furnish the type specified on the plans and meeting the requirements of Item 300, "Asphalts, Oils, and Emulsions."
- C. Fertilizer.** Furnish fertilizer in accordance with Article 166.2, "Materials," if specified on the plans.
- D. Water.** Furnish water required for proper compaction, promotion of plant growth, or emulsion dilution in accordance with Article 168.2, "Materials."

134.3. Construction. Haul the backfill material to the required location before placing the finish surface course unless directed otherwise. After

132.4 to 132.5

most recent gradation tests is outside the specified limits on any individual sieve by more than 5 percentage points.

3. **Density Tolerances.** Compaction work is acceptable when not more than 1 of the 5 most recent density tests is outside the specified density limits, and no test is outside the limits by more than 3 lb. per cubic foot.
4. **Plasticity Tolerances.** Material is acceptable when not more than 1 of the 5 most recent PI tests is outside the specified limit by no more than 2 points.

132.4. Measurement. Embankment will be measured by the cubic yard. Measurement will be further defined for payment as follows:

- A. **Final.** The cubic yard will be measured in its final position using the average end area method. The volume is computed between the original ground surface or the surface upon which the embankment is to be constructed and the lines, grades, and slopes of the embankment. In areas of salvaged topsoil, payment for embankment will be made in accordance with Item 160, "Topsoil." Shrinkage or swell factors will not be considered in determining the calculated quantities.
- B. **Original.** The cubic yard will be measured in its original and natural position using the average end area method.
- C. **Vehicle.** The cubic yard will be measured in vehicles at the point of delivery.

When measured by the cubic yard in its final position, this is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Shrinkage or swell factors are the Contractor's responsibility. When shown on the plans, factors are for informational purposes only.

Measurement of retaining wall backfill in embankment areas is paid for as embankment, unless otherwise shown on plans. Limits of measurement for embankment in retaining wall areas are shown on the plans.

132.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Embankment (Final)," "Embankment (Original)," or "Embankment (Vehicle)," of the compaction method and type specified. This price is full compensation for furnishing

334.5. Measurement. This Item will be measured by the by the ton of composite asphalt concrete mixture of the type used in the completed and accepted work.

Measurement will be made on scales in accordance with Item 520, “Weighing and Measuring Equipment.”

For mixture produced by a weigh-batch plant or a modified weigh-batch plant, measurement will be determined on the batch scales unless surge-storage or stockpiling is used. Keep records of the number of batches, batch design, and the weight of the composite asphalt concrete mixture. The composite asphalt concrete mixture is defined as the asphalt, primer, aggregate, additives, and any residual moisture that is not designated to be deducted. Where surge-storage or stockpiling is used, measurement of the material taken from the surge-storage bin or stockpile will be made on truck scales or suspended hopper scales.

334.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under Article 334.5, “Measurement,” will be paid for at the unit price bid for “Hot-Mix Cold-Laid Asphalt Concrete Pavement” of the type, surface aggregate classification, and asphalt binder specified.

This price is full compensation for surface preparation, materials including tack coat, placement, equipment, labor, tools, and incidentals.

Pay adjustment for ride quality, when required, will be determined in accordance with Item 585, “Ride Quality for Pavement Surfaces.”

ITEM 340

DENSE-GRADED HOT-MIX ASPHALT (METHOD)

340.1. Description. Construct a pavement layer composed of a compacted, dense-graded mixture of aggregate and asphalt binder mixed hot in a mixing plant.

340.2. Materials. Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources. Notify the Engineer before changing any material source or formulation. When the Contractor makes a source or formulation change, the Engineer will verify that the requirements of this Item are met and may require a new laboratory mixture design, trial

340.2 to 340.2

batch, or both. The Engineer may sample and test project materials at any time during the project to verify compliance.

A. Aggregate. Furnish aggregates from sources that conform to the requirements shown in Table 1, and as specified in this Section, unless otherwise shown on the plans. Provide aggregate stockpiles that meet the definition in this Section for either coarse aggregate or fine aggregate. When reclaimed asphalt pavement (RAP) is allowed by plan note, provide RAP stockpiles in accordance with this Section. Aggregate from RAP is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply mechanically crushed gravel or stone aggregates that meet the definitions in Tex-100-E. The Engineer will designate the plant or the quarry as the sampling location. Samples must be from materials produced for the project. The Engineer will establish the surface aggregate classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests listed in Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in Tex-200-F, Part II. Do not add material to an approved stockpile from sources that do not meet the aggregate quality requirements of the Department's *Bituminous Rated Source Quality Catalog* (BRSQC) unless otherwise approved.

1. Coarse Aggregate. Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Provide aggregates from sources listed in the BRSQC. Provide aggregate from nonlisted sources only when tested by the Engineer and approved before use. Allow 30 calendar days for the Engineer to sample, test, and report results for nonlisted sources.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements apply only to aggregates used on the surface of travel lanes, unless otherwise shown on the plans. The SAC for sources on the Department's AQMP is listed in the BRSQC.

Class B aggregate meeting all other requirements in Table 1 may be blended with a Class A aggregate in order to meet requirements for Class A materials. When blending Class A and B aggregates to meet a Class A requirement, ensure that at least 50% by weight of

the material retained on the No. 4 sieve comes from the Class A aggregate source. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. When blending, do not use Class C or D aggregates. For blending purposes, coarse aggregate from RAP will be considered as Class B aggregate.

2. **RAP.** RAP is salvaged, milled, pulverized, broken, or crushed asphalt pavement. Crush or break RAP so that 100% of the particles pass the 2-in. sieve.

RAP from either Contractor- or Department-owned sources, including RAP generated during the project, is permitted only when shown on the plans. Department-owned RAP, if allowed for use, will be available at the location shown on the plans. When RAP is used, determine asphalt content and gradation for mixture design purposes. Perform other tests on RAP when shown on the plans.

When RAP is allowed by plan note, use no more than 30% RAP in Type A or B mixtures unless otherwise shown on the plans. For all other mixtures, use no more than 20% RAP unless otherwise shown on the plans.

Do not use RAP contaminated with dirt or other objectionable materials. Do not use the RAP if the decantation value exceeds 5% and the plasticity index is greater than 8. Test the stockpiled RAP for decantation in accordance with the laboratory method given in Tex-406-A, Part I. Determine the plasticity index using Tex-106-E if the decantation value exceeds 5%. The decantation and plasticity index requirements do not apply to RAP samples with asphalt removed by extraction.

Do not intermingle Contractor-owned RAP stockpiles with Department-owned RAP stockpiles. Remove unused Contractor-owned RAP material from the project site upon completion of the project. Return unused Department-owned RAP to the designated stockpile location.

3. **Fine Aggregate.** Fine aggregates consist of manufactured sands, screenings, and field sands. Fine aggregate stockpiles must meet the gradation requirements in Table 2. Supply fine aggregates that are free from organic impurities. The Engineer may test the fine aggregate in accordance with Tex-408-A to verify the material is free from organic impurities. At most 15% of the total aggregate may be field sand or other uncrushed fine aggregate. With the

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exception of field sand, use fine aggregate from coarse aggregate sources that meet the requirements shown in Table 1, unless otherwise approved.

If 10% or more of the stockpile is retained on the No. 4 sieve, test the stockpile and verify that it meets the requirements in Table 1 for coarse aggregate angularity (Tex-460-A) and flat and elongated particles (Tex-280-F).

**Table 1
Aggregate Quality Requirements**

Property	Test Method	Requirement
Coarse Aggregate		
SAC	AQMP	As shown on plans
Deleterious material, %, max	Tex-217-F, Part I	1.5
Decantation, %, max	Tex-217-F, Part II	1.5
Micro-Deval abrasion, %, max	Tex-461-A	Note 1
Los Angeles abrasion, %, max	Tex-410-A	40
Magnesium sulfate soundness, 5 cycles, %, max	Tex-411-A	30 ²
Coarse aggregate angularity, 2 crushed faces, %, min	Tex 460-A, Part I	85 ³
Flat and elongated particles @ 5:1, %, max	Tex-280-F	10
Fine Aggregate		
Linear shrinkage, %, max	Tex-107-E	3
Combined Aggregate⁴		
Sand equivalent, %, min	Tex-203-F	45

1. Not used for acceptance purposes. Used by the Engineer as an indicator of the need for further investigation.

2. Unless otherwise shown on the plans.

3. Unless otherwise shown on the plans. Only applies to crushed gravel.

4. Aggregates, without mineral filler, RAP, or additives, combined as used in the job-mix formula (JMF).

**Table 2
Gradation Requirements for Fine Aggregate**

Sieve Size	% Passing by Weight or Volume
3/8"	100
#8	70–100
#200	0–30

B. Mineral Filler. Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, hydrated lime, cement, or fly ash. Mineral filler is allowed unless otherwise shown on the plans. Do not use more than 2% hydrated lime or cement, unless otherwise shown on the plans. The plans may require or disallow specific mineral fillers. When used, provide mineral filler that:

- is sufficiently dry, free-flowing, and free from clumps and foreign matter;
- does not exceed 3% linear shrinkage when tested in accordance with Tex-107-E; and
- meets the gradation requirements in Table 3.

Table 3
Gradation Requirements for Mineral Filler

Sieve Size	% Passing by Weight or Volume
#8	100
#200	55-100

- C. Baghouse Fines.** Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.
- D. Asphalt Binder.** Furnish the type and grade of performance-graded (PG) asphalt binder specified on the plans in accordance with Section 300.2.J, “Performance-Graded Binders.”
- E. Tack Coat.** Unless otherwise shown on the plans or approved, furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, “Asphalts, Oils, and Emulsions.”

Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use. If required, verify that emulsified asphalt proposed for use meets the minimum residual asphalt percentage specified in Item 300, “Asphalts, Oils, and Emulsions.”

The Engineer will obtain at least 1 sample of the tack coat binder per project and test it to verify compliance with Item 300. The Engineer will obtain the sample from the asphalt distributor immediately before use.

- F. Additives.** When shown on the plans, use the type and rate of additive specified. Other additives that facilitate mixing or improve the quality of the mixture may be allowed when approved.

If lime or a liquid antistripping agent is used, add in accordance with Item 301, “Asphalt Antistripping Agents.” Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime back into the drum.

340.3. Equipment. Provide required or necessary equipment in accordance with Item 320, “Equipment for Asphalt Concrete Pavement.”

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340.4. Construction. Design, produce, store, transport, place, and compact the specified paving mixture in accordance with the requirements of this Item. Unless otherwise shown on the plans, provide the mix design. The Department will perform quality assurance (QA) testing. Provide quality control (QC) testing as needed to meet the requirements of this Item.

A. Mixture Design.

- 1. Design Requirements.** Use a Level II specialist certified by a Department-approved hot-mix asphalt certification program to develop the mixture design. Have the Level II specialist sign the design documents. Unless otherwise shown on the plans, use the typical weight design example given in Tex-204-F, Part I, to design a mixture meeting the requirements listed in Tables 1 through 6. Use an approved laboratory to perform the Hamburg Wheel test and provide results with the mixture design, or provide the laboratory mixture and request that the Department perform the Hamburg Wheel test. The Construction Division maintains a list of approved laboratories. Furnish the Engineer with representative samples of all materials used in the mixture design. The Engineer will verify the mixture design. If the design cannot be verified by the Engineer, furnish another mixture design.

The Contractor may submit a new mixture design at anytime during the project. The Engineer will approve all mixture designs before the Contractor can begin production.

Provide the Engineer with a mixture design report using Department-provided software. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level II person or persons who performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

Table 4
Master Gradation Bands (% Passing by Weight or Volume)
and Volumetric Properties

Sieve Size	A Coarse Base	B Fine Base	C Coarse Surface	D Fine Surface	F Fine Mixture
1-1/2"	98.0–100.0	–	–	–	–
1"	78.0–94.0	98.0–100.0	–	–	–
3/4"	64.0–85.0	84.0–98.0	95.0–100.0	–	–
1/2"	50.0–70.0	–	–	98.0–100.0	–
3/8"	–	60.0–80.0	70.0–85.0	85.0–100.0	98.0–100.0
#4	30.0–50.0	40.0–60.0	43.0–63.0	50.0–70.0	80.0–86.0
#8	22.0–36.0	29.0–43.0	32.0–44.0	35.0–46.0	38.0–48.0
#30	8.0–23.0	13.0–28.0	14.0–28.0	15.0–29.0	12.0–27.0
#50	3.0–19.0	6.0–20.0	7.0–21.0	7.0–20.0	6.0–19.0
#200	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0
Design VMA¹, % Minimum					
–	12.0	13.0	14.0	15.0	16.0
Plant-Produced VMA, % Minimum					
–	11.0	12.0	13.0	14.0	15.0

1. Voids in Mineral Aggregates.

Table 5
Laboratory Mixture Design Properties

Property	Test Method	Requirement
Target laboratory-molded density, %	Tex-207-F	96.0 ¹
Tensile strength (dry), psi (molded to 93% ±1% density)	Tex-226-F	85–200 ²
Boil test ³	Tex-530-C	–

1. Unless otherwise shown on the plans.

2. May exceed 200 psi when approved and may be waived when approved.

3. Used to establish baseline for comparison to production results. May be waived when approved.

Table 6
Hamburg Wheel Test Requirements¹

High-Temperature Binder Grade	Minimum # of Passes ² @ 0.5" Rut Depth, Tested @ 122°F
PG 64 or lower	10,000
PG 70	15,000
PG 76 or higher	20,000

1. Tested in accordance with Tex-242-F.

2. May be decreased or waived when shown on the plans.

B. Job-Mix Formula Approval. The job-mix formula (JMF) is the combined aggregate gradation and target asphalt percentage used to establish target values for mixture production. JMF is the original

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laboratory mixture design used to produce the trial batch. The Engineer and the Contractor will verify JMF based on plant-produced mixture from the trial batch unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF. If the JMF is not verified by the Engineer from the trial batch, adjust the JMF or redesign the mix and produce as many trial batches as necessary to verify the JMF.

Provide the Engineer with split samples of the mixtures and blank samples used to determine the ignition oven correction factors. The Engineer will determine the aggregate and asphalt correction factors from the ignition oven using Tex-236-F.

The Engineer will use a Texas gyratory compactor calibrated in accordance with Tex-914-F in molding production samples.

The Engineer will perform Tex-530-C and retain the tested sample for comparison purposes during production. The Engineer may waive the requirement for the boil test.

C. JMF Field Adjustments. Produce a mixture of uniform composition closely conforming to the approved JMF.

If, during initial days of production, the Contractor or Engineer determines that adjustments to the JMF are necessary to achieve the specified requirements, or to more nearly match the aggregate production, the Engineer may allow adjustment of the JMF within the tolerances of Table 7 without a laboratory redesign of the mixture.

The Engineer will adjust the asphalt content to maintain desirable laboratory density near the optimum value while achieving other mix requirements.

Table 7
Operational Tolerances

Description	Test Method	Allowable Difference from JMF Target
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	±5.0 ¹
Individual % retained for sieves smaller than #8 and larger than #200		±3.0 ¹
% passing the #200 sieve		±2.0 ¹
Asphalt content, %	Tex-236-F	±0.3 ¹
Laboratory-molded density, %	Tex-207-F	±1.0
VMA, %, min		Note 2

1. When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the percent passing the #200 sieve will be considered out of tolerance when outside the master grading limits.

2. Test and verify that Table 4 requirements are met.

D. Production Operations. Perform a new trial batch when the plant or plant location is changed. The Engineer may suspend production for noncompliance with this Item. Take corrective action and obtain approval to proceed after any production suspension for noncompliance.

1. Operational Tolerances. During production, do not exceed the operational tolerances in Table 7. Stop production if testing indicates tolerances are exceeded on:

- 3 consecutive tests on any individual sieve,
- 4 consecutive tests on any of the sieves, or
- 2 consecutive tests on asphalt content.

Begin production only when test results or other information indicate, to the satisfaction of the Engineer, that the next mixture produced will be within Table 7 tolerances.

2. Storage and Heating of Materials. Do not heat the asphalt binder above the temperatures specified in Item 300, “Asphalts, Oils, and Emulsions” or outside the manufacturer’s recommended values. On a daily basis, provide the Engineer with the records of asphalt binder and hot-mix asphalt discharge temperatures in accordance with Item 320, “Equipment for Asphalt Concrete Pavement.” Unless otherwise approved, do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr.

3. Mixing and Discharge of Materials. Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck

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before shipping to ensure that it does not exceed 350°F. The Department will not pay for or allow placement of any mixture produced at more than 350°F. Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant.

- E. Hauling Operations.** Before use, clean all truck beds to ensure mixture is not contaminated. When a release agent is necessary to coat truck beds, use a release agent on the approved list maintained by the Construction Division.
- F. Placement Operations.** Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Offset longitudinal joints of successive courses of hot mix by at least 6 in. Place mixture so longitudinal joints on the surface course coincide with lane lines, or as directed. Ensure that all finished surfaces will drain properly. Place mixture within the compacted lift thickness shown in Table 8, unless otherwise shown on the plans or allowed.

Table 8
Compacted Lift Thickness and Required Core Height

Mixture Type	Compacted Lift Thickness	
	Minimum (in.)	Maximum (in.)
A	3.00	6.00
B	2.50	5.00
C	2.00	4.00
D	1.50	3.00
F	1.25	2.50

- 1. Weather Conditions.** Place mixture when the roadway surface temperature is 60°F or higher unless otherwise approved. Measure the roadway surface temperature with a handheld infrared thermometer. Unless otherwise shown on the plans, place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable in the opinion of the Engineer.
- 2. Tack Coat.** Clean the surface before placing the tack coat. Unless otherwise approved, apply tack coat uniformly at the rate directed by the Engineer. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply

a thin, uniform tack coat to all contact surfaces of curbs, structures, and all joints. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Roll the tack coat with a pneumatic-tire roller when directed. The Engineer may use Tex-243-F to verify that the tack coat has adequate adhesive properties. The Engineer may suspend paving operations until there is adequate adhesion.

G. Lay-Down Operations.

1. **Minimum Mixture Placement Temperatures.** Use Table 9 for suggested minimum mixture placement temperatures.
2. **Windrow Operations.** When hot mix is placed in windrows, operate windrow pickup equipment so that substantially all the mixture deposited on the roadbed is picked up and loaded into the paver.

Table 9
Suggested Minimum Mixture Placement Temperature

High-Temperature Binder Grade	Minimum Placement Temperature (Before Entering Paver)
PG 64 or lower	260°F
PG 70	270°F
PG 76	280°F
PG 82 or higher	290°F

H. Compaction. Use air void control unless ordinary compaction control is specified on the plans. Avoid displacement of the mixture. If displacement occurs, correct to the satisfaction of the Engineer. Ensure pavement is fully compacted before allowing rollers to stand on the pavement. Unless otherwise directed, use only water or an approved release agent on rollers, tamps, and other compaction equipment. Keep diesel, gasoline, oil, grease, and other foreign matter off the mixture. Unless otherwise directed, operate vibratory rollers in static mode when not compacting, when changing directions, or when the plan depth of the pavement mat is less than 1-1/2 in.

Use tamps to thoroughly compact the edges of the pavement along curbs, headers, and similar structures and in locations that will not allow thorough compaction with the rollers. The Engineer may require rolling with a trench roller on widened areas, in trenches, and in other limited areas.

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Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. When directed, sprinkle the finished mat with water or limewater to expedite opening the roadway to traffic.

1. **Air Void Control.** Compact dense-graded hot-mix asphalt to contain from 5% to 9% in-place air voids. Do not increase the asphalt content of the mixture to reduce pavement air voids.
 - a. **Rollers.** Furnish the type, size, and number of rollers required for compaction, as approved. Use a pneumatic-tire roller to seal the surface, unless otherwise shown on the plans. Use additional rollers as required to remove any roller marks.
 - b. **Air Void Determination.** Unless otherwise shown on the plans, obtain 2 roadway specimens at each location selected by the Engineer for in-place air void determination. The Engineer will measure air voids in accordance with Tex-207-F and Tex-227-F. Before drying to a constant weight, cores may be predried using a Corelok or similar vacuum device to remove excess moisture. The Engineer will use the average air void content of the 2 cores to calculate the in-place air voids at the selected location.
 - c. **Air Voids Out of Range.** If the in-place air void content in the compacted mixture is below 5% or greater than 9%, change the production and placement operations to bring the in-place air void content within requirements. The Engineer may suspend production until the in-place air void content is brought to the required level, and may require a test section as described in Section 340.4.H.1.d, “Test Section.”
 - d. **Test Section.** Construct a test section of 1 lane-width and at most 0.2 mi. in length to demonstrate that compaction to between 5% and 9% in-place air voids can be obtained. Continue this procedure until a test section with 5% to 9% in-place air voids can be produced. The Engineer will allow only 2 test sections per day. When a test section producing satisfactory in-place air void content is placed, resume full production.
2. **Ordinary Compaction Control.** Furnish the type, size, and number of rollers required for compaction, as approved. Furnish at least 1 medium pneumatic-tire roller (minimum 12-ton weight). Use the control strip method given in Tex-207-F, Part IV, to establish rolling patterns that achieve maximum compaction.

Follow the selected rolling pattern unless changes that affect compaction occur in the mixture or placement conditions. When such changes occur, establish a new rolling pattern. Compact the pavement to meet the requirements of the plans and specifications.

When rolling with the 3-wheel, tandem or vibratory rollers, start by first rolling the joint with the adjacent pavement and then continue by rolling longitudinally at the sides. Proceed toward the center of the pavement, overlapping on successive trips by at least 1 ft., unless otherwise directed. Make alternate trips of the roller slightly different in length. On superelevated curves, begin rolling at the low side and progress toward the high side unless otherwise directed.

- I. Irregularities.** Immediately take corrective action if surface irregularities, including but not limited to segregation, rutting, raveling, flushing, fat spots, mat slippage, color, texture, roller marks, tears, gouges, streaks, or uncoated aggregate particles, are detected. The Engineer may suspend production or placement operations until the problem is corrected.

At the expense of the Contractor and to the satisfaction of the Engineer, remove and replace any mixture that does not bond to the existing pavement or that has other surface irregularities identified above.

- J. Ride Quality.** Use Surface Test Type A to evaluate ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

340.5. Measurement. Hot mix will be measured by the ton of composite hot mix, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."

340.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Dense-Graded Hot-Mix Asphalt (Method)" of the type, surface aggregate classification, and binder specified. These prices are full compensation for surface preparation, materials including tack coat, placement, equipment, labor, tools, and incidentals.

Trial batches will not be paid for unless they are incorporated into pavement work approved by the Department.

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Pay adjustment for ride quality, when required, will be determined in accordance with Item 585, "Ride Quality for Pavement Surfaces."

ITEM 341

DENSE-GRADED HOT-MIX ASPHALT (QC/QA)

341.1. Description. Construct a pavement layer composed of a compacted, dense-graded mixture of aggregate and asphalt binder mixed hot in a mixing plant.

341.2. Materials. Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources. Notify the Engineer before changing any material source or formulation. When the Contractor makes a source or formulation change, the Engineer will verify that the specification requirements are met and may require a new laboratory mixture design, trial batch, or both. The Engineer may sample and test project materials at any time during the project to verify specification compliance.

A. Aggregate. Furnish aggregates from sources that conform to the requirements shown in Table 1, and as specified in this Section, unless otherwise shown on the plans. Provide aggregate stockpiles that meet the definition in this Section for either a coarse aggregate or fine aggregate. When reclaimed asphalt pavement (RAP) is allowed by plan note, provide RAP stockpiles in accordance with this Section. Aggregate from RAP is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply mechanically crushed gravel or stone aggregates that meet the definitions in Tex-100-E. The Engineer will designate the plant or the quarry as the sampling location. Samples must be from materials produced for the project. The Engineer will establish the surface aggregate classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests listed in Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in Tex-200-F, Part II. Do not add material to an approved stockpile from sources that do not meet the aggregate quality requirements of the Department's

ITEM 351

FLEXIBLE PAVEMENT STRUCTURE REPAIR

351.1. Description. Repair localized sections of flexible pavement structure including subgrade, base, and surfacing as shown on the plans.

351.2. Materials. Furnish materials unless otherwise shown on the plans. Provide materials of the type and grade as shown on the plans and in accordance with:

- Item 132, “Embankment”
- Item 204, “Sprinkling”
- Item 247, “Flexible Base”
- Item 260, “Lime Treatment (Road Mixed)”
- Item 263, “Lime Treatment (Plant Mixed)”
- Item 275, “Cement Treatment (Road Mixed)”
- Item 276, “Cement Treatment (Plant Mixed)”
- Item 292, “Asphalt Treatment (Plant Mix)”
- Item 310, “Prime Coat”
- Item 316, “Surface Treatments”
- Item 330, “Limestone Rock Asphalt Pavement”
- Item 334, “Hot-Mix Cold-laid Asphalt Concrete Pavement”
- Item 340, “Hot Mix Asphalt.”

For asphalt concrete materials, Contractor testing and bonus and penalty provisions will be waived unless otherwise shown on the plans.

351.3. Equipment. Furnish equipment in accordance with pertinent Items. Use of a motor grader will be permitted for asphalt concrete pavement unless otherwise shown on the plans.

351.4. Work Methods. Repair using one or more of the following operations as shown on the plans. For Contracts with callout work, begin physical repair within 24 hr. of notification, unless otherwise shown on the plans. Cut neat vertical faces around the perimeter of the work area when removing pavement structure layers. Removed materials are the property of the Contractor unless otherwise shown on the plans. Dispose of removed material in accordance with federal, state, and local regulations. Provide a smooth line and grade conforming to the adjacent pavement.

A. Removing Pavement Structure. If necessary, remove adjacent soil and vegetation to prevent contamination of the repair area, and place it in a windrow. Do not damage adjacent pavement structure during repair

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operations. If subgrade work is required, remove flexible pavement structure layers from work area.

- B. Preparing Subgrade.** Fill holes, ruts, and depressions with approved material. If required, thoroughly wet, reshape, and compact the subgrade as directed.

Where subgrade has failed, remove unstable subgrade material to the depth directed and replace with an approved material.

- C. Mixing and Placing Base Material.** Place, spread, and compact material in accordance with the applicable Item to the required or directed depth. When bituminous material is to remain in pavement structure, pulverize to a maximum dimension of 2-1/2 in. and uniformly mix with existing base to the depth shown on the plans.
- 1. Flexible Base.** Use existing base and add new flexible base as required in accordance with Item 247, "Flexible Base," and details shown on the plans to achieve required section.
 - 2. Lime-Stabilized Base.** Use existing base, add new flexible base, and stabilize with a minimum lime content of 3% by weight of the total mixture. Construct in accordance with Item 260, "Lime Treatment (Road Mixed)," and Item 263, "Lime Treatment (Plant Mixed)," and details shown on the plans to achieve required section.
 - 3. Cement-Stabilized Base.** Use existing base, add flexible base, and stabilize with a minimum cement content of 4% by weight of the total mixture. Construct in accordance with details shown on the plans and Item 275, "Cement Treatment (Road Mixed)," or Item 276, "Cement Treatment (Plant Mixed)," to achieve required section.
 - 4. Asphalt-Stabilized Base.** Place asphalt-stabilized base in accordance with details shown on the plans and Item 292, "Asphalt Treatment (Plant Mix)," or Item 340, "Hot Mix Asphalt," to achieve required section.
 - 5. Limestone Rock Asphalt.** Place in accordance with Item 330, "Limestone Rock Asphalt Pavement," and details shown on the plans to achieve required section.
- D. Curing Base.** Cure in accordance with the appropriate Item unless otherwise directed or approved. Maintain completed base sections until surfacing.

- E. Surfacing.** Apply surfacing with materials as shown on the plans to the completed base section.
- 1. Prime Coat.** Protect the compacted, finished, and cured flexible, lime-stabilized, or cement-stabilized base mixtures with a prime coat of the type and grade shown on the plans. Apply the prime coat at the rate shown on the plans.
 - 2. Surface Treatments.** Apply surface treatment with the type and grade of asphalt and aggregate as shown on the plans in accordance with Item 316, "Surface Treatments."
 - 3. Asphalt Concrete Pavement.** Apply tack coat of the type and grade and at the rate shown on the plans unless otherwise directed. Construct in accordance with Item 330, "Limestone Rock Asphalt Pavement," Item 334, "Hot-Mix Cold-laid Asphalt Concrete Pavement," or Item 340, "Hot Mix Asphalt," to achieve required section.
- F. Finishing.** Regrade and compact disturbed topsoil. Clean roadway surface after repair operations.

351.5. Measurement. This Item will be measured by the square yard. In areas where material is excavated, as directed, to depths greater than those specified on the plans, measurement will be made by dividing the actual depth of such area by the plan depth and then multiplying this figure by the area in square yards of work performed. Calculations for each repaired area will be rounded up to the nearest 1/10 sq. yd. At each repair location, the minimum area for payment purposes will be 1 sq. yd.

For Contracts with callout work, the minimum quantity per callout is 5 sq. yd., unless otherwise shown on the plans.

351.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Flexible Pavement Structure Repair" of the specified depth. This price is full compensation for scarifying, removing, hauling, spreading, disposing of, and stockpiling existing pavement structure; removing objectionable or unstable material; furnishing and placing materials; maintaining completed section before surfacing; applying tack or prime coat; hauling, sprinkling, spreading, and compacting; and equipment, labor, tools, and incidentals.

with no allowance for overlapping at transverse and longitudinal joints.

- B. Pavement Joint Underseal.** Pavement joint underseal will be measured by the foot.

356.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” are paid for at the unit prices bid for “Asphalt Binder” of the type and grade specified and for “Fabric” for full-width underseals and “Pavement Joint Underseal” of the product width specified for pavement joint underseals. These prices are full compensation for cleaning and preparing the existing pavement, including removal of raised pavement markers; furnishing, preparing, hauling, and placing materials, including blotter; manipulation, including rolling and brooming; and equipment, labor, tools, and incidentals.

ITEM 358

ASPHALT CONCRETE SURFACE REHABILITATION

358.1. Description. Heat; scarify; if required, add asphalt, recycling agent, and fresh hot mix asphalt; mix; place; level; and compact recycled asphalt concrete.

358.2. Materials.

- A. Hot-Mix Asphalt.** If required, furnish fresh hot-mix asphalt of the gradation determined in Section 358.4.A, “Mixture Design.” Use materials meeting the requirements of Article 340.2, “Materials,” to produce the fresh hot-mix asphalt.
- B. Asphalt and Recycling Agent.** If required, furnish asphalt, recycling agent, or both according to the requirements of Section 358.4.A, “Mixture Design,” and meeting requirements of Item 300, “Asphalt, Oils, and Emulsions.”

358.3. Equipment.

- A. Processing Equipment.** Provide equipment for heating, scarifying, mixing, placing, and finishing that meets the following requirements.
- 1. Heating Mechanism.** Supply a heating mechanism, under a closed or shielded hood, capable of heating asphalt concrete pavement to a temperature that allows scarification to the desired depth without producing undesirable pollutants.

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2. **Scarifier.** Provide scarifier sections capable of uniformly loosening the asphalt concrete pavement. When shown on the plans, furnish a scarifier with height adjustments to clear manholes or other obstructions.
 3. **Gathering, Adding Materials, Mixing, Distributing, Spreading, and Finishing.** Provide equipment capable of:
 - gathering heated, scarified hot-mix asphalt concrete;
 - adding asphalt or recycling agent at the required rate;
 - adding fresh hot-mix asphalt at the required rate;
 - uniformly mixing all ingredients;
 - distributing the blended mixture over the width being processed; and
 - spreading and finishing to produce a smooth surface meeting the requirements of the typical cross section.
 4. **Onboard Pug Mill.** If required on the plans, provide an onboard pug mill.
- B. Rollers.** Provide rollers meeting requirements of Article 210.2, “Equipment.”
- C. Mobile Testing Laboratory.** If shown on the plans, furnish a mobile testing laboratory meeting the requirements of Tex-237-F and a Level 1A certified laboratory technician who is qualified under the Department’s approved program. Perform tests necessary to control plant production. The Department will perform all acceptance testing.

358.4. Construction. Rehabilitate existing asphalt concrete pavement to meet the typical sections shown on the plans and the lines and grades established by the Engineer.

- A. Mixture Design.** Obtain a representative sample, to the depth specified, of the in-place asphalt concrete for rehabilitation. Using materials described in Article 358.2, “Materials,” provide a mixture design by weight in accordance with Tex-204-F, Part I, to restore the in-place asphalt concrete pavement to the mixture type and binder properties shown on the plans or as approved.
- B. Heating, Scarifying, and Placement.** Protect from heat damage all trees, shrubs, and other landscaping that is adjacent to the pavement. Before beginning heating and scarifying, remove all dirt and other debris from the pavement surface by blading, brooming, or other approved methods.

Heat, scarify, and rework pavement surface to the widths and depths shown on the plans. Control heating to ensure uniform heat penetration and to prevent differential softening of the pavement. Do not char the asphalt or break aggregate particles. Keep the temperature of material immediately behind the scarifier between 225°F and 325°F. Gather the scarified material and uniformly add asphalt, recycling agent, and fresh hot-mix asphalt to the scarified material in accordance with the mixture design developed in Section 358.4.A, "Mixture Design." Mix all ingredients uniformly. Distribute the homogenous mixture over the width being processed. Spread and finish to produce a smooth surface according to the typical cross section.

When making a pass adjacent to a previously placed mat, locate the longitudinal joint at least 2 in. horizontally into the previously placed mat.

- C. Compaction.** Begin compaction before material temperature falls below 190°F, and complete all rolling before material temperature drops below 175°F. The Engineer may modify the temperature requirements if necessary for proper compaction.

Use at least 1 tandem roller, 1 pneumatic-tire roller, and 1 finish roller. Use other compaction equipment producing equivalent compaction as approved. Continue rolling until no further compaction can be obtained and all roller marks are eliminated. Use tamps to compact areas not accessible to rollers or in areas where rollers will not provide thorough compaction.

- D. Ride Quality.** Use Surface Test Type A to evaluate ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

358.5. Measurement. Asphalt concrete surface rehabilitation will be measured by the square yard.

358.6. Payment. Asphalt concrete surface rehabilitation will be paid for at the unit price bid for "Asphalt Concrete Surface Rehabilitation" of the depth specified. This price is full compensation for cleaning existing pavement; materials (including additional aggregate, new hot-mix asphalt, asphalt, and rejuvenating agent); heating, scarifying, mixing, relaying, rolling, and finishing; and equipment, labor, tools, and incidentals.

Pay adjustment for ride quality, when required, will be determined in accordance with Item 585, "Ride Quality for Pavement Surfaces."

carefully, and store it on protective cribbing. Do not drop or drag the coated reinforcement.

2. **Construction Methods.** Do not flame-cut coated reinforcement. Saw or shear-cut only when approved. Coat cut ends as specified in Section 440.3.F.3, "Repair of Coating."

Do not weld or mechanically couple coated reinforcing steel except where specifically shown on the plans. Remove the epoxy coating at least 6 in. beyond the weld limits before welding and 2 in. beyond the limits of the coupler before assembly. After welding or coupling, clean the steel of oil, grease, moisture, dirt, welding contamination (slag or acid residue), and rust to a near-white finish. Check the existing epoxy for damage. Remove any damaged or loose epoxy back to sound epoxy coating.

After cleaning, coat the splice area with epoxy repair material to a thickness of 7 to 17 mils after curing. Apply a second application of repair material to the bar and coupler interface to ensure complete sealing of the joint.

3. **Repair of Coating.** For repair of the coating, use material that complies with the requirements of this Item and ASTM D 3963. Make repairs in accordance with procedures recommended by the manufacturer of the epoxy coating powder. For areas to be patched, apply at least the same coating thickness as required for the original coating. Repair all visible damage to the coating.

Repair sawed and sheared ends, cuts, breaks, and other damage promptly before additional oxidation occurs. Clean areas to be repaired to ensure that they are free from surface contaminants. Make repairs in the shop or in the field as required.

440.4. Measurement and Payment. The work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be considered subsidiary to pertinent Items.

ITEM 441 STEEL STRUCTURES

441.1. Description. Fabricate and erect structural steel and other metals used for steel structures or for steel portions of structures.

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441.2. Materials.

- A. **Base Metal.** Use metal that meets Item 442, “Metal for Structures.”
- B. **Approved Electrodes and Flux-Electrode Combinations.** Use only electrodes and flux–electrode combinations found on the list of approved electrodes and flux–electrode combinations maintained by the Construction Division. To request that a product be added to this list or to renew an expired approval, submit certified reports of all tests required by the applicable AWS A5 specification according to the applicable welding code (for most construction, AASHTO/AWS D1.5, *Bridge Welding Code*, or AWS D1.1, *Structural Welding Code—Steel*) to the Construction Division, Materials and Pavements Section.
- C. **High-Strength Bolts.** Use fasteners that meet Item 447, “Structural Bolting.”
- D. **Coatings.** Provide coating materials, as required, in accordance with Item 445, “Galvanizing,” and Item 446, “Cleaning and Painting Steel.”

441.3. Construction.

A. General Requirements.

1. **Applicable Codes.** Perform all fabrication in accordance with AASHTO/NSBA Steel Bridge Collaboration S2.1, including fabrication of non-bridge members. Follow all applicable provisions of the appropriate AWS code (D1.5 or D1.1) except as otherwise noted in the plans or in this Item. Weld sheet steel (thinner than 1/8 in.) in accordance with ANSI/AWS D1.3, *Structural Welding Code—Sheet Steel*. Unless otherwise stated, requirements of this Item are in addition to the requirements of S2.1. Perform all bolting in accordance with Item 447, “Structural Bolting.”
2. **Primary Members.** Primary members include:
 - webs and flanges of plate, tub, and box girders;
 - rolled beams and cover plates;
 - floor beam webs and flanges;
 - arch ribs and arch tie beams or girders;
 - truss members;
 - diaphragm members for curved plate girders or beams;
 - pier diaphragm members for tub girders;
 - splice plates for primary members; and
 - any other member designated as “primary” or “main” on the plans.

3. **Responsibility.** The Contractor is responsible for the correctness and completeness of shop drawings and for the fit of shop and field connections.
4. **Railroad Structures.** Fabricate railroad underpass structures in accordance with the latest AREMA *Manual for Railway Engineering* and this Item. In the case of a conflict between this Item and the AREMA manual, the more stringent requirements apply.
5. **Qualification of Plant, Laboratories, and Personnel.**
 - a. **Fabrication.** The Department will evaluate fabrication plants for competence of the plant, equipment, organization, experience, knowledge, and personnel to produce acceptable work. Plants must be qualified in accordance with S2.1 (or equal acceptable qualification). When AISC certification is required, provide a copy of the certificate and a copy of the complete audit report, including the exit meeting report.
 - b. **Nondestructive Examination (NDE).** Personnel performing NDE must be qualified in accordance with the applicable AWS code. Testing agencies and individual third-party contractors must also successfully complete periodic audits for compliance, performed by the Department. In addition, ultrasound technicians must pass a hands-on test administered by the Construction Division. A technician who fails the hands-on test must wait 6 months before taking the test again. Qualification to perform ultrasonic testing for the Department will be revoked when the technician's employment is terminated, and recertification based on a new hands-on test will be required.
 - c. **Welding Procedure Qualification.** Laboratories performing testing for welding procedure qualification must successfully complete periodic audits in accordance with DMS-7360, "Qualification Procedure for Laboratories Performing Welding Procedure Qualification Testing."
6. **Drawings.**
 - a. **Erection Drawings.** Submit 2 copies of erection drawings in accordance with Item 5, "Control of the Work," before erection of railroad underpasses, trusses, field-spliced (welded or bolted) girders, arches, or other members for which erection drawings are required on the plans. Submit an additional copy

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of the drawings for railroad underpasses. Erection drawings are not required for rolled I-beam units unless otherwise noted on the plans.

Clearly indicate at least:

- procedures;
- sequence of work;
- equipment to be used;
- location of falsework, erection cranes, and holding cranes;
- falsework design details;
- girder lifting points;
- adjacent structures loaded; and
- requirements for releasing cranes during erection that differ from the requirements of this Item or those shown on the plans.

If site conditions differ from those assumed for these drawings, revise the drawings to reflect the actual conditions before continuing the erection work.

- b. Shop Drawings.** Before fabrication, prepare and submit shop drawings for each detail of the general plans requiring the use of structural steel, forgings, wrought iron, or castings.

- (1) Bridge Structures.** Unless otherwise approved, prepare drawings in accordance with AASHTO/NSBA Steel Bridge Collaboration G1.3, “Shop Detail Drawing Presentation.” Print a bill of material on each sheet, including the Charpy V-Notch (CVN) and fracture-critical requirements, if any, for each piece. Indicate joint details on shop drawings for all welds. Indicate fracture-critical areas of members.

Show a title block in the lower right corner including:

- project identification data including federal and state project numbers,
- sheet numbering for the shop drawings,
- name of the structure or stream,
- name of the fabricator or supplier, and
- name of the Contractor.

Submit 7 copies of shop drawings to the Engineer. Submit an additional copy if the owner is a non-Department entity such as a railroad or a municipal or turnpike authority, and another copy if the designer is a private consultant. The Engineer may require additional sets.

(2) **Non-Bridge Structures.** Prepare clear and legible shop drawings for the complete assembly on sheets 11 × 17 in. Full-size drawings may be reduced to half-scale size if they are clear and legible. At the left end, provide a 1-1/2-in. margin, with the other margins 1/2 in. wide. Indicate joint details on shop drawings for all welds. Provide a title block on each sheet in the lower right corner with the following information:

- sheet index data shown on the lower right corner of the project plans,
- sheet numbering for the shop drawings,
- name of the fabricator, and
- name of the Contractor.

Furnish 7 copies of completed shop drawings to the Engineer.

7. **Welding and Fabrication Procedures.**

- a. **Welding Procedures.** Before fabrication begins, submit welding procedures in accordance with the applicable AWS code to the Construction Division, Materials and Pavements Section, and notify the Engineer which procedures will be used for each joint or joint type.

Post the approved welding procedure specification for the welding being performed on each welding machine, or use another approved method of ensuring that the welder has access to the procedure information at all times.

- b. **Fabrication Procedures.** When primary bridge members are fabricated by welding or bolting, submit a fabrication procedure before fabrication begins. The fabrication procedure must include details required by S2.1 as well as:

- special processes such as planing or facing,
- details of heat treating and heat straightening procedures, and
- any other information required by the Engineer.

Have a fabrication procedure approved for each type of structure (rolled beams with welded or bolted splices, plate girders with welded or bolted splices, tub girders with welded or bolted splices, box girders, plate girder bents, railroad thru-girders and plate girders, truss bridges, orthotropic deck segments, or other major bridge structure types) before starting fabrication.

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8. **Submerged-Arc Welding (SAW).** Provide equipment with automatic guidance capable of maintaining the position of the arc and controlling the speed of travel so that, when once set by the operator, little manipulation is needed. Small adjustments to compensate for acceptable plate waviness, acceptable tilt of flange, etc. will be permitted. Do not use hand-held semiautomatic SAW for welding bridge members unless altered to provide automatic guidance or otherwise approved.
9. **Inspection.** Provide approved facilities, materials, and equipment required for inspection in accordance with Article 6.5, "Plant Inspection and Testing," and Item 504, "Field Office and Laboratory." Unless otherwise approved, provide an office meeting the requirements of Section 504.2.B.3, "Type C Structure (Field Office)," except that only 200 sq. ft. are required if fewer than 3 inspectors will be assigned to the facility. Provide desks, a layout table, a plan rack, and Internet service in accordance with DMS-10101, "Computer Equipment." Maintain the office and equipment so that it will continue to function properly for the intended use.

Provide the Inspector with the helpers and equipment needed to move material to allow inspection. QC is solely the responsibility of the Contractor. The Contractor must have a QC staff qualified in accordance with the applicable AWS code. The QC staff must provide inspection of all materials and workmanship prior to inspection by the Department.

When structural steel is fabricated outside of the contiguous 48 states, the additional cost of inspection will be in accordance with Article 6.4, "Sampling, Testing, and Inspection."

10. **Documentation.** Before beginning fabrication, provide a completed Material Statement (Form D-9-USA-1) with supporting documentation (such as mill test reports), issued by the producing mill and verified by qualified personnel. The Department will supply blank forms without charge. Ensure that the documentation legibly reflects all information required by the applicable ASTM specifications.

As material is shipped or placed in approved storage, provide a copy of the shipping or storage invoice that reflects:

- member piece mark identification and calculated weight per piece from the contract drawings,
- number of pieces shipped or in storage,

- total calculated weight for each invoice per bid item, and
- the unique identification number of the shipping or storage invoice.

The acceptance of material or finished members by the Inspector will not prohibit subsequent rejection if the material or members are found to be damaged or defective. Replace rejected material promptly.

- 11. Material Identification.** Assembly-mark individual pieces and issue cutting instructions to the shop using a system that will maintain identity of the original piece.

Identify structural steel by standard and grade of steel. Also differentiate between material toughness requirements (CVN, fracture-critical) as well as any other special physical requirements. In addition, identify structural steel for primary members by mill identification numbers (heat numbers). Use an approved identification system. Use either paint or low-stress stencils to make identification markings on the metal. Mark the material as soon as it enters the shop and carry the markings on all pieces through final fabrication. Transfer the markings before cutting steel for primary members of bridge structures into smaller pieces. Loss of identification marking on any piece, with no other positive identification, or loss of heat number identification on any primary member piece will render the piece unacceptable for use. Unidentifiable material may be approved for use after testing to establish acceptability to the satisfaction of the Engineer. Have testing performed by an approved testing facility, and have results signed and sealed by a licensed professional engineer.

B. Welding.

1. Details.

- a. Rolled Edges.** Trim plates with rolled edges used for webs by thermal cutting.
- b. Weld Tabs.** Use weld tabs at least 2 in. long for manual and semi-automatic processes and at least 3 in. long for automatic processes, and in all cases at least as long as the thickness of the material being welded. Use longer weld tabs as required for satisfactory work.
- c. Weld Termination.** Terminate fillet welds approximately 1/4 in. from the end of the attachment except for galvanized structures and flange-to-web welds, for which the fillet weld

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must run the full length of the attachment unless otherwise noted on the plans.

- d. **No-Paint Areas at Field-Welded Connections.** Keep surfaces within 4 in. of groove welds or within 2 in. of fillet welds free from shop paint.
 - e. **Galvanized Assemblies.** Completely seal all edges of tightly contacting surfaces by welding before galvanizing.
2. **Shop Splices.**
- a. **Shop Splice Locations.** Keep at least 6 in. between shop splices and stiffeners or crossframes and at least 6 in. between web and flange shop splices. Do not add optional splices to plates shown on the plans as 40 ft. long or shorter unless necessary to obtain the required geometry or otherwise approved. Obtain approval for shop splices added after shop drawings are approved.
 - (1) **Continuous Multiple-Span Structures.** Unless otherwise shown on the plans or approved, do not locate tension flange splices within 0.05S of an interior bearing, within 0.10S of the centerline of an interior span, or between 0.30S and 0.50S from an end bearing, where S is the span length between centers of bearings.
 - (2) **Single-Span Structures.** Unless otherwise shown on the plans or approved, do not locate tension flange splices within 0.10S of the centerline of the span.
 - b. **Grinding Splice Welds.** Grind shop groove welds in flange plates smooth and flush with the base metal on all surfaces whether the joined parts are of equal thickness or of unequal thickness. Grind so that the finished grinding marks run in the direction of stress, and keep the metal below the blue brittle range (below 350°F). Groove welds in web plates, except at locations of intersecting welds, need not be ground unless shown on the plans except as required to meet AWS welding code requirements.
3. **Joint Restraint.** Never restrain a joint on both sides when welding.
4. **Stiffener Installation.**
- a. **Flange Tilt.** Members must meet combined tilt and warpage tolerances before the installation of stiffeners. Cut stiffeners to

fit acceptable flange tilt and cupping. Minor jacking or hammering that does not permanently deform the material will be permitted.

- b. Stiffeners Near Field Splices.** Tack-weld intermediate stiffeners within 12 in. of a welded field splice point in the shop. Weld the stiffeners in the field in accordance with Item 448, “Structural Field Welding,” after the splice is made.
- 5. Nondestructive Examination (NDE).** Perform magnetic particle testing (MT), radiographic testing (RT), and ultrasonic testing (UT) at the Contractor’s expense as specified in D1.5 for bridge structures and D1.1 for all other welding. The Engineer will periodically witness, examine, verify, and interpret NDE. Additional welds may be designated for NDE on the plans. Retest repaired groove welds per the applicable AWS code after repairs are made and have cooled to ambient temperature. Complete NDE and repairs before assembly of parts into a member but after any heat-correction of weld distortion.
 - a. Radiographic Testing.** Radiographs must have a density of at least 2.5 and at most 3.5, as confirmed by a radiographer. The density in any single radiograph showing a continuous area of constant thickness must not vary in this area by more than 0.5. Use only ASTM System Class I radiographic film as described in ASTM E 1815. Use low-stress stencils or other acceptable means to make radiograph and location identification marks on the steel. The Engineer will examine and interpret all results of RT.
 - b. Ultrasonic Testing.** Have UT equipment calibrated yearly by an authorized representative of the equipment manufacturer or by an approved testing laboratory.
 - c. Magnetic Particle Testing.** Orient the prod or pole position normal or parallel to the weld unless otherwise approved. When using the yoke method, use half-wave rectified DC unless otherwise approved.
 - d. Extra-high Strength Steel.** For shop welds on steel that has a nominal yield strength over 70,000 psi, perform RT on all flange and web splices in addition to any requirements of the applicable AWS code. Wait at least 48 hours after completing these welds before inspecting them.

- 6. Testing of Galvanized Weldments.** If problems develop during galvanizing of welded material, the Engineer may require a test of the compatibility of the combined galvanizing and welding procedures in accordance with this Section and may require modification of one or both of the galvanizing and welding procedures.

If testing is required, prepare a test specimen with a minimum length of 12 in. using the same base material, having the same joint configuration, and using the welding procedure proposed for production work. Clean and galvanize this test specimen using the same conditions and procedure that will be applied to the production galvanizing.

After galvanizing, examine the test specimen. There must be no evidence of excessive buildup of zinc coating over the weld area. Excessive zinc coating buildup will require modification of the galvanizing procedure.

Remove the zinc from the weld area of the test specimen in accordance with ASTM A 90, and visually examine the weld area. There must be no evidence of loss of weld metal or any deterioration of the base metal due to the galvanizing or welding procedure. If there is evidence of deterioration or loss of weld metal, modify the galvanizing or welding procedure as required and run a satisfactory retest on the modified procedures before production work. Report procedures and results on the galvanized weldment worksheet provided by the Department.

- C. Bolt Holes.** Detail holes on shop drawings 1/16 in. larger in diameter than the nominal bolt size shown on the plans unless another hole size is shown on the plans.

Thoroughly clean the contact surfaces of connection parts in accordance with Section 447.4.B, "General," before assembling them for hole fabrication. Make holes in primary members full-size (by reaming from a subsize hole, drilling full-size, or punching full-size where permissible) only in assembly unless otherwise approved.

Ream and drill with twist drills guided by mechanical means unless otherwise approved. If subpunching holes, punch them at least 3/16 in. smaller than the nominal bolt size. When numerically controlled (N/C) equipment is used, submit for approval the proposed procedures to accomplish the work from initial drilling or punching through check assembly. Use thermal cutting for holes only with permission of the Engineer. Permission for thermal cutting is not required for making

slotted holes, when slotted holes are shown on the plans, by drilling or punching two holes and then thermally cutting the straight portion between them. Perform all thermal cutting in accordance with Section 441.3.E.1, "Thermal Cutting."

Slightly conical holes that naturally result from punching operations are acceptable provided they do not exceed the tolerances of S2.1. The tolerance for anchor bolt hole diameter for bridge bearing assemblies is +1/8 in., -0.

D. Dimensional Tolerances. Meet tolerances of the applicable AWS specifications and S2.1 except as modified in this Section.

- 1. Rolled Sections.** Use ASTM A 6 mill tolerances for rolled sections, except that D1.5 camber tolerances apply to rolled sections with a specified camber.
- 2. Flange Straightness.** Ensure that flanges of completed girders are free of kinks, short bends, and waviness that depart from straightness or the specified camber by more than 1/8 in. in any 10 ft. along the flange. Rolled material must meet this straightness requirement before being laid off or worked. Plates must meet this requirement before assembly into a member. After straightening a bend or buckle, inspect the surface of the metal for evidence of fracture. The Engineer may require nondestructive testing.
- 3. Alignment of Deep Webs in Welded Field Connections.** For girders 48 in. deep or deeper, the webs may be slightly restrained while checking compliance with tolerances of S2.1. In the unrestrained condition, webs 48 in. deep or deeper must meet the tolerances of Table 1. Girders under 48 in. deep must meet the alignment tolerances of S2.1.

Table 1
Web Alignment Tolerances for Deep Girders

Web Depth (in.)	Maximum Web Misalignment (in.)
48	1/16
60	1/8
72	1/4
84	5/16
96	5/16
108	3/8
120	7/16
132	7/16
144	1/2

4. **Bearings.** Correct bearing areas of shoes, beams, and girders using heat, external pressure, or both. Grind or mill only if the actual thickness of the member is not reduced by more than 1/16 in. below the required thickness.
- a. **I-Beams, Plate Girders, and Tub Girders.** The plane of the bearing area of beams and girders must be perpendicular to the vertical axis of the member within 1/16 in. in any 24 in.
 - b. **Closed Box Girders.** Meet these tolerances:
 - The plane of the bearing areas of the box girder is perpendicular to the vertical axis of the girder within 1/16 in. across any horizontal dimension of the bearing.
 - The planes of the beam supports on the box girder are true to the vertical axis of the supported beams or girders to 1/16 in. in any 24 in.

In the shop, verify the plane of all bearing areas with the box placed on its bearings to field grade, using an approved process for verification.
 - c. **Shoes.** Meet these tolerances:
 - The top bolster has the center 75% of the long dimension (transverse to the girder) true to 1/32 in., with the remainder true to 1/16 in., and is true to 1/32 in. across its entire width in the short dimension (longitudinal to the girder).
 - The bottom bolster is true to 1/16 in. across its diagonals.
5. **End Connection Angles.** For floor beams and girders with end connection angles, the tolerance for the length back to back of

connection angles is $\pm 1/32$ in. If end connections are faced, do not reduce the finished thickness of the angles below that shown on the shop drawings.

E. Other Fabrication Processes.

1. **Thermal Cutting.** Use a mechanical guide to obtain a true profile. Hand-cut only where approved. Hand-cutting of radii for beam copes, weld access holes, and width transitions is permitted if acceptable profile and finish are produced by grinding. Provide a surface finish on thermal-cut surfaces, including holes, in accordance with D1.5 requirements for base metal preparation. Obtain approval before using other cutting processes.
 2. **Oxygen-Gouging.** Do not oxygen-gouge ASTM A 588 or A 709 Gr. 50W steel or material with nominal yield strength over 70 ksi.
 3. **Annealing and Normalizing.** Complete all annealing or normalizing (as defined in ASTM A 941) before finished machining, boring, and straightening. Maintain the temperature uniformly throughout the furnace during heating and cooling so that the range of temperatures at all points on the member is no greater than 100°F.
 4. **Machining.** Machine the surfaces of expansion bearings so that the travel direction of the tool is in the direction of expansion.
 5. **Camber.** Complete cambering in accordance with S2.1 before any heat-curving.
 6. **Heat Curving.** Heat-curve in accordance with S2.1. The methods in the AASHTO bridge construction specifications are recommended. Attach cover plates to rolled beams before heat-curving only if the total thickness of one flange and cover plate is less than 2-1/2 in. and the radius of curvature is greater than 1,000 ft. For other rolled beams, attach cover plates only after heat-curving is completed. Locate and attach connection plates, diaphragm stiffeners, and bearing stiffeners after curving, unless girder shrinkage is accounted for.
 7. **Bending of Quenched and Tempered Steels.** The cold-bending radius limitations for HPS 70W in S2.1 apply to all quenched and tempered steels.
- F. Nonconformance Reports (NCRs).** When the requirements of this Item are not met, submit an NCR to the Engineer for approval. Include on the NCR:

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- date of submittal, nonconformance report number, and IFM number (when applicable);
- project information (county; control, section, and job numbers; project number; shop order number; structure name, etc.);
- member identification (member number, or piece or erection mark);
- description of problem including references to sections of specifications not met;
- explanation of why the problem occurred and plan for preventing future occurrences (if applicable);
- detailed description (including drawings) of proposed solution including a repair proposal; and
- diagrams detailing all pertinent dimensions and locations on relevant sections of shop drawings, including title blocks.

Do not begin repairs before approval is received. Perform all repair work in strict compliance with the approved repair procedure.

G. Shop Assembly.

1. **General Shop Assembly.** Shop-assemble field connections of primary members of trusses, arches, continuous beam spans, bents, towers (each face), plate girders, field connections of floor beams and stringers (including for railroad structures), field-bolted diaphragms for curved plate girders and railroad underpasses, and rigid frames. Complete fabrication, welding (except for shear studs), and field splice preparation before members are removed from shop assembly. Obtain approval for any deviation from this procedure. The Contractor is responsible for accurate geometry.

Use a method and details of preassembly consistent with the erection procedure shown on the erection plans and camber diagrams. The sequence of assembly may start from any location in the structure and proceed in one or both directions. An approved method of sequential geometry control is required unless the full length of the structure is assembled.

Verify by shop assembly the fit of all bolted and welded field connections between bent cap girders and plate girders or between plate girders and floor beams.

Do not measure horizontal curvature and vertical camber for final acceptance until all welding and heating operations are completed and the steel has cooled to a uniform temperature. Check horizontal curvature and vertical camber in a no-load condition.

2. **Bolted Field Connections.** Each shop assembly, including camber, alignment, accuracy of holes, and fit of milled joints, must be approved before the assembly is dismantled.

Assemble with milled ends of compression members in full bearing. Assemble non-bearing connections to the specified gap. Ream all subsize holes to the specified size while the connections are assembled, or drill full size while the connections are assembled. Notify the Engineer before shipping if fill plates or shims are added. Adding or increasing the thickness of shims or fill plates in bearing connections requires approval. Use drift pins and snug-tight bolts during the drilling process to ensure that all planes of the connection (webs and flanges) can be assembled simultaneously. Do not use tack welds to secure plates while drilling.

If parts are not completely bolted in the shop, secure them by temporary bolts to prevent damage in shipment and handling. Never use tack welds in place of temporary bolts.

Match-mark connecting parts in field connections using low-stress stencils in accordance with the diagram in the erection drawings.

3. **Welded Field Connections.** Mill or grind bevels for groove welds. Do not cut into the web when cutting the flange bevel adjacent to the web. End preparation, backing, and tolerances for single-V groove welds for framing beams or girders must conform to the applicable AWS code unless otherwise shown on the plans.

In the shop, prepare ends of beams or girders to be field-welded taking into account their relative positions in the finished structure due to grade, camber, and curvature. Completely shop-assemble and check each splice. While the splice is assembled, match-mark it with low-stress stencils in accordance with the diagram in the erection drawings.

H. Finish and Painting.

1. **Shop Painting.** On new steel items to be painted (except for the coatings on box and tub girder interiors), grind corners that are sharp or that form essentially 90° angles to an approximately 1/16-in. flat surface before blast cleaning. (A corner is the intersection of two plane faces.) This requirement does not apply to punched or drilled holes. Apply shop paint in accordance with Item 446, "Cleaning and Painting Steel." Do not omit shop paint to preserve original markings.

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2. **Bearing and Faying Surfaces.** Clean and prepare all bearing and faying surfaces of bolted connections, including those in railroad structures, in accordance with Item 447, “Structural Bolting,” before shipment.
3. **Girder Interiors.** Paint the inside of all box and tub girders in accordance with applicable provisions of Item 446, “Cleaning and Painting Steel.”
4. **Weathering Steel.** Provide an SSPC-SP 6 blast in the shop to all fascia surfaces of unpainted weathering steel beams. Fascia surfaces include:
 - exterior sides of outermost webs and undersides of bottom flanges of plate girders and rolled beams,
 - all outer surfaces of tub girders and box girders,
 - all surfaces of truss members,
 - webs and undersides of bottom flanges of plate diaphragms,
 - bottom surfaces of floor beams, and
 - any other surfaces designated as “fascia” on the plans.

Do not mark fascia surfaces. Use one of the following methods as soon as possible to remove any markings or any other foreign material that adheres to the steel during fabrication and that could inhibit the formation of oxide film:

- SSPC-SP 1, “Solvent Cleaning”
- SSPC-SP 2, “Hand Tool Cleaning”
- SSPC-SP 3, “Power Tool Cleaning”
- SSPC-SP 7, “Brush-off Blast Cleaning.”

Do not use acids to remove stains or scales. Feather out touched-up areas over several feet.

5. **Machined Surfaces.** Clean and coat machine-finished surfaces that are in sliding contact, particularly pins and pinholes, with a non-drying, water-repellent grease-type material containing rust-inhibitive compounds. Ensure that the coating material contains no ingredients that might damage the steel. Protect machined surfaces from abrasive blasting.
- I. **Handling and Storage of Materials.** Prevent damage when storing or handling girders or other materials. If damage to material is caused by handling devices or improper storage, remove or repair the material by acceptable means in accordance with ASTM A 6 and the applicable AWS code.

Place stored materials on skids or acceptable dunnage above the ground. Keep materials clean. Shore girders and beams to keep them upright and free of standing water. Place support skids close enough to prevent excessive deflection in long members such as columns. Do not stack completed girders or beams at the jobsite.

Protect structural steel from salt water or other corrosive environments during storage and transit.

- J. Marking and Shipping.** Mark all structural members in accordance with the erection drawings. If a surface is painted, make the marks over the paint. Do not use impact-applied stencils to mark painted surfaces.

Mark the weight directly on all members weighing more than 3 tons.

Keep material clean and free from injury during loading, transportation, unloading, and storage. Pack bolts of each length and diameter, and loose nuts or washers of each size, separately and ship them in boxes, crates, kegs, or barrels. Plainly mark a list and description of the contents on the outside of each package.

K. Field Erection.

- 1. Methods and Equipment.** Do not tack-weld parts instead of using erection bolts. Do not tack-weld parts to hold them in place for bolting. Provide falsework, tools, machinery, and appliances, including drift pins and erection bolts. Provide enough drift pins, 1/32 in. larger than the connection bolts, to fill at least 1/4 of the bolt holes for primary connections. Use erection bolts of the same diameter as the connection bolts.

Securely tie, brace, or shore steel beams or girders immediately after erection as shown on the plans and the erection drawings. Maintain this bracing or shoring until the diaphragms are in place. Protect railroad or roadway traffic that may be beneath erected girders or beams from falling objects during erection of the members and diaphragms, placement of the deck concrete, and erection and removal of forms. Use nets or flooring with openings no larger than 1 in. for this protection.

- 2. Falsework.** Design and construct falsework for the anticipated loads, including wind, and properly maintain this falsework.
- 3. Handling and Assembly.** Accurately assemble all parts as shown on the plans and the approved shop drawings. Verify match-marks. Handle parts carefully to prevent bending or other damage. Do not hammer if doing so damages or distorts members. Do not weld any

441.3 to 441.3

member for transportation or erection unless noted on the plans or approved by the Engineer.

- a. **Welded Connections.** Before releasing the erection cranes, weld flange splices to 50% of their thickness and meet the minimum erection bracing and support requirements shown on the plans and on the submitted erection plans. Field-weld in accordance with Item 448, “Structural Field Welding.”
- b. **Bolted Connections.** Before releasing the erection cranes:
 - install 50% of the bolts in the top and bottom flanges and the web with all nuts finger-tight,
 - meet the minimum erection bracing and support requirements shown on the plans and on the submitted erection plans, and
 - for tub girders, install top lateral bracing across the connection and fully tension the bolts connecting the bracing to the top flanges.

Install high-strength bolts, including erection bolts, in accordance with Item 447, “Structural Bolting.” Clean bearing and faying surfaces for bolted connections in accordance with Item 447. Clean the areas of the outside ply under washers, nuts, and bolt heads before bolt installation. Ensure that the required faying surface condition is present at the time of bolting.

4. **Misfits.** Correct minor misfits. Ream no more than 10% of the holes in a plate connection (flange or web), and ensure that no single hole is more than 1/8 in. larger than the nominal bolt diameter. Submit proposed correction methods for members with defects that exceed these limits or that prevent the proper assembly of parts. Straighten structural members in accordance with S2.1. Make all corrections in the presence of the Engineer at no expense to the Department. Do not remove and reweld gusset plates without approval.
5. **Bearing and Anchorage Devices.** Place all bearing devices such as elastomeric pads, castings, bearing plates, or shoes on properly finished bearing areas with full and even bearing on the concrete. Place metallic bearing devices on 1/4-in.-thick preformed fabric pads manufactured in accordance with Item 434, “Elastomeric Bridge Bearings,” to the dimensions shown on the plans. Provide holes in the pad that are no more than 1/4 in. larger than the bolt diameter.

When the concrete bearing area has been placed below grade, build it up to the correct elevation using mortar that meets Item 420, "Concrete Structures," and provide adequate curing. For buildups between 1/8 in. and 3/8 in. thick, use only mortar. If the bearing area must be raised more than 3/8 in., use galvanized steel shims or other approved shim materials in conjunction with mortar.

Provide at least 75% contact of flange to shoe with no separation greater than 1/32 in. for beams and girders. Make corrections using heat or pressure in accordance with S2.1, or with galvanized shims. Correct small irregularities by grinding.

Provide at least 85% contact between the rocker plate and the base plate. Adjust the location of slotted holes in expansion bearings for the prevailing temperature. Adjust the nuts on the anchor bolts at the expansion ends of spans to permit free movement of the span. Provide lock nuts or burr the threads.

Remove all foreign matter from sliding or machine-finished surfaces before placing them in the structure.

Restore distorted bearing pads or expansion bearings to an equivalent 70°F position after completion of all welded or bolted splices, using an approved method of relieving the load on the bearing devices.

6. **Erecting Forms.** Do not erect forms until all welding or bolting is complete and the unit is positioned and properly set on the bearing unless otherwise noted on the plans.
7. **Field Finish.** Paint in accordance with Item 446, "Cleaning and Painting Steel." For weathering steel that will remain unpainted, after all welding and slab concrete placement has been completed, restore the steel to a uniform appearance by solvent cleaning, hand cleaning, power brush, or blast cleaning. As soon as possible, remove from all unpainted weathering steel fascia surfaces (as defined in Section 441.3.H.4, "Weathering Steel") any foreign material, including markings, that adheres to the steel and could inhibit formation of oxide film. Feather out touched-up areas over several feet. Do not use acids to remove stains or scales.

441.4. Measurement and Payment. The work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be subsidiary to pertinent Items.

Table 6
Pay Weight for High-Strength Fasteners, Pounds per Hundred Units

Diameter	Item		
	Bolt heads	Nuts	Washers
3/4"	15	19	4.8
7/8"	23	30	7.0
1"	32	43	9.4
1-1/8"	45	59	11
1-1/4"	64	79	14

Table 7
Pay Weight for Metals

Material	Weight (lb./cu. in)
Steel	0.2836
Cast iron	0.2604
Wrought iron	0.2777

442.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Structural Steel” of the type (Rolled Beam, Plate Girder, Tub Girder, Box Girder, Miscellaneous) specified. This price is full compensation for materials, fabrication, transportation, erection, paint, painting, galvanizing, equipment, tools, labor, and incidentals.

ITEM 445
GALVANIZING

445.1. Description. Galvanize or repair galvanizing on metal items.

445.2. Materials. Provide galvanized metal items that meet the standards in Table 1.

Table 1
Galvanizing Standards

Item	Standard
Fabricated items, rolled, pressed or forged steel shapes, plates, pipes, tubular items, and bars	ASTM A 123
Steel or iron castings	ASTM A 153, Class A
Bolts, nuts, screws, washers, and other miscellaneous hardware	ASTM A 153, Class C or D or ASTM B 695, Class 50
Miscellaneous fasteners	ASTM B 633, Class Fe/Zn 8
Rail elements for metal beam guard fence or bridge railing	AASHTO M 180
Permanent metal deck forms, supporting angles and incidental items	ASTM A 653, Coating Designation G165

445.3. Construction.

- A. General.** If fabricated members or assemblies are required to be hot-dip galvanized, provide for proper filling, venting, and draining during cleaning and galvanizing. Provide drain holes or slots as required, except where prohibited by the plans. If assembling tapered members using slip-joint splices, drain to the small end of the section. Ensure that cleaning and galvanizing do not produce hydrogen embrittlement.

Before galvanizing material 1/4 in. or greater in thickness:

- remove all sharp burrs and
- chamfer to approximately 1/16 in. all edges exposed to electrical conductors or to human activity.

If painting is specified on galvanized materials, paint in accordance with Item 446, "Cleaning and Painting Steel." Do not water-quench or chromate-quench galvanized surfaces to be painted.

- B. Galvanizing Weldments.** If problems develop during galvanizing of welded material, the Engineer may require a test of the compatibility of the combined galvanizing and welding procedures in accordance with Section 441.3.B.6, "Testing of Galvanized Weldments," and may require modification of one or both of the galvanizing and welding procedures.
- C. Workmanship.**
- 1. Coverage.** Bare spots at most 1/8 in. across are acceptable unless numerous. Repair larger bare spots in accordance with Section 445.3.D, "Repairs." Runs or drips of zinc coating are

445.3 to 445.3

acceptable unless they interfere with the intended use of the product. Carefully hand-file excessive zinc accumulations.

2. **Adhesion.** To test coating adhesion, tap the coated area with a small hammer. The coating is acceptable if it is not brittle and does not scale or flake.
 3. **Appearance.**
 - a. **White Rust.** A white powdery residue indicates moisture. Remove heavy layers of white rust that have caused the coating to pit. Light coatings may remain unless the Engineer requires chemical removal. Remove white rust from articles that will be in direct contact with soil.
 - b. **Red Rust.** Red rust on galvanized items indicates uncoated areas. See Section 445.3.C.1, "Coverage," for acceptance criteria.
 - c. **Alligator Cracking or Spider Webbing.** The composition of the base metal may cause dark lines resembling alligator skin. See Section 445.3.C.2, "Adhesion," to determine whether the coating is acceptable.
 - d. **Dull Gray Coating.** The composition of the base metal can cause a dull gray color. See Section 445.3.C.2, "Adhesion," to determine whether the coating is acceptable.
 4. **Coating Thickness.** Galvanize to the thickness specified. Use Tex-728-I to determine coating thickness.
- D. Repairs.** Use zinc-based solders, sprayed zinc, or zinc-rich paints for repairs, in accordance with this Section.
1. **Materials.**
 - a. **Zinc-Based Solders.** Solders used in rod form or as powders:
 - zinc-tin-lead alloys with liquidus temperatures in the range of 446°F to 500°F or
 - zinc-cadmium alloys with liquidus temperatures in the range of 518°F to 527°F.
 - b. **Sprayed Zinc (Metallizing).** Zinc coating applied by spraying with droplets of molten metal using wire, ribbon, or powder processes.
 - c. **Organic Zinc-Rich Paints.** Zinc-rich paints based on organic binders that:
 - are premixed and formulated specifically for use on steel surfaces and

- will provide a dried film containing a minimum of 94% zinc dust, by weight.

2. Repair Processes.

- a. Zinc-Based Solders.** Remove moisture, oil, grease, dirt, corrosion products, and welding slag or flux from surfaces to be repaired. Clean surface to white metal by wire brushing, light grinding, or mild blasting extending into the surrounding undamaged galvanized coating. Preheat cleaned areas to at least 600°F but not more than 750°F. Wire-brush while heating and evenly distribute a layer of zinc solder. When repair is completed, flush the repaired area with water or wipe with a damp cloth to remove flux residue.
 - b. Sprayed Zinc (Metallizing).** Remove oil, grease, corrosion products, and any welding slag or flux from surfaces to be repaired, and ensure that the surfaces are dry. Clean surface to white metal by wire brushing, light grinding, or mild blasting extending into the surrounding undamaged galvanized coating. Apply coating by metal-spraying pistols fed with either zinc wire or zinc powder. Provide a coating that is uniform and free of lumps, coarse areas, or loose particles.
 - c. Organic Zinc-Rich Paints.** Do not use paint to repair galvanizing damage caused by welding. Remove oil, grease, corrosion products, and welding slag or flux from surfaces to be repaired, and ensure that the surfaces are clean and dry. Clean surface to near-white metal by wire brushing, light grinding, or mild blasting extending into the surrounding undamaged coating to provide a smooth repair. Spray or brush-apply the paint to the prepared area in accordance with the paint manufacturer's instructions to attain the required dry-film thickness. Provide multiple passes when using spray application.
- 3. Repair Coating Thickness.** After completing repair and cooling or curing, measure thickness in the repaired area using Tex-728-I. The minimum thickness required is the same as that required for the specified galvanizing. However, if the repair uses zinc-rich paints, the minimum coating thickness is 50% higher than the specified galvanizing thickness, but not greater than 4.0 mils.

445.4 to 446.2

445.4. Measurement and Payment. The work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be considered subsidiary to pertinent Items.

ITEM 446 CLEANING AND PAINTING STEEL

446.1. Description. Prepare steel surfaces for painting and apply paint.

446.2. Materials. Provide the paint system (surface preparation, primer, intermediate, and appearance coats as required) shown on the plans. Provide System II with #742 Gray Appearance Coat if no system is specified. Provide a concrete gray appearance coat (Federal Standard 595B color 35630) if appearance coat is required unless otherwise shown on the plans.

If faying surfaces will be painted, provide a prime coat that is documented to have the required slip and creep characteristics (as determined by “Testing Method to Determine the Slip Coefficient for Coatings Used in Bolted Joints” in the Research Council on Structural Connections’ Specification for Structural Joints Using ASTM A325 or A490 Bolts) to meet the required mean slip coefficient shown on the plans. Perform all required testing at no expense to the Department.

- A. Paint Systems.** Standard paint systems for painting new and existing steel include the following.
- 1. System I (Overcoating).** Provide paint in accordance with DMS-8101, “Structural Steel Paints-Performance.” Provide a penetrating sealer, intermediate prime coat on bare steel areas, and an appearance coat in accordance with manufacturer’s specifications. This system is used for repainting existing steel and used only when specified on the plans.
 - 2. System II.** Provide #810 Prime Coat meeting DMS-8100, “Structural Steel Paints-Formula.” For appearance coat, provide either #742 Gray Appearance Coat meeting DMS-8100 or acrylic latex meeting DMS-8101, “Structural Steel Paints-Performance,” as specified. This system is used for painting new steel and repainting existing steel.
 - 3. System III.** Provide paint in accordance with DMS-8101, “Structural Steel Paints-Performance.” Provide inorganic zinc (IOZ) prime coat, epoxy intermediate coat, and urethane

483.4 to 490.3

Use chipping tools to remove concrete in small areas not accessible to the mechanical scarifier.

Immediately clean the surface of the deck to remove all cuttings and debris. Dispose of all cuttings and debris in locations outside the right of way.

483.4. Measurement. This Item will be measured by the square yard of scarified area of existing concrete surfaces.

Uniform cuts and tapered cuts of varying depth made in accordance with the plans will be measured by the square yard for the nominal depth of scarifying specified.

483.5. Payment. The work performed and equipment furnished in accordance with the Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Scarifying Concrete Bridge Slab.” This price is full compensation for removing all material to the depths shown; texturing the surface; loading, hauling, unloading, and disposing of the cuttings; and equipment, labor, tools, and incidentals.

ITEM 490

TIMBER STRUCTURES

490.1. Description. Construct timber structures and timber portions of structures.

490.2. Materials. Supply materials in accordance with details shown on the plans.

- A. Timber.** Supply timber in accordance with Item 491, “Timber for Structures.”
- B. Hardware.** Galvanize all hardware including nails, except cast and malleable iron washers, in accordance with Item 445, “Galvanizing.” Hardware may be cast or malleable iron or cut from steel plate as specified. Use bolts, pins, washers, and spikes of the size and type specified.

490.3. Construction. Construct structures in accordance with the plans. Complete all cutting and boring of timber before treatment if practical. Ensure that all framing is true and exact. Drive nails and spikes to set the heads flush with the surface of the wood without making deep hammer marks in wood surfaces. Accurately cut all lumber and timber, and frame it so that the joints have even bearing over the entire contact surface. Use

washers under bolt heads and nuts. Countersink hardware when smooth or flush surfaces are required. Remove all bolt stock projecting beyond 1/4 in. from the top of the nut.

- A. Storage and Handling of Timber.** Store timber in piles at the worksite. Stack timber at least 12 in. above the ground surface. Arrange timber to shed water and allow air circulation to prevent warping. Protect it from weather. Clear the ground of weeds and rubbish underneath and near material piles. Handle timber without dropping, breaking outer fibers, or bruising. Use slings or other approved equipment. Provide corner protectors when using metal bands to bundle members.
- B. Stringers.** Size stringers to uniform depth at bearings, and place in position so knots near edges will be in the top portions of the stringers. Lay stringers with the crown up if practical. Stringers may have butt joints or lapped joints. Stagger the joints when stringers are 2 panels in length. Fasten all stringers securely by bolts or nails as shown on plans.
- C. Bridging.** Frame cross-bridging or diaphragms between stringers neatly and accurately, and securely toe-nail with at least 2 nails in each end.
- D. Flooring.** Use glued laminated deck panels or single planks as shown on the plans. Place planks for single-plank floors with the heart side down. Provide 1/4-in. openings between planks for seasoned materials and tight joints for unseasoned or treated material. Spike each plank to each stringer or nailing strip firmly with spikes at least 3 in. longer than the thickness of the plank. Cut off the ends of the plank on a line parallel with the centerline of the roadway. Select the planks according to thickness, and lay them so that no 2 adjacent planks vary in thickness by more than 1/8 in.
- E. Wheel Guards.** Lay wheel guards in sections at least 12 ft. long except where shorter sections are necessary to match end joints.
- F. Railings.** Stagger butt joints so adjacent rail joints do not occur on the same post. Bolt connections wherever possible.
- G. Holes for Bolts, Dowels, Rods, and Lag Screws.** Bore holes for round drift bolts and dowels with a bit 1/16 in. less in diameter than the bolt or dowel. Bore holes for square drift bolts or dowels equal to the least dimension of the bolt or dowel. Bore holes for machine bolts the same diameter as the bolt. Bore holes for rods 1/16 in. greater than the diameter of the rod. Bore holes for lag screws with a bit no larger than the root of the thread and 1/2 in. deeper than the penetration of the lag

490.4 to 491.2

screws and equal to the diameter of the shank for the length of the shank.

- H. Field Treatment.** After cutting and drilling, treat cuts and drilled holes in treated piling or timbers and all abrasions as specified in Item 492, “Timber Preservative and Treatment.”
- I. Painting.** Paint in accordance with details shown on the plans.

490.4. Measurement and Payment. The work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be subsidiary to bid items of the Contract.

ITEM 491

TIMBER FOR STRUCTURES

491.1. Description. Furnish and place lumber and timber.

491.2. Materials. Furnish materials in accordance with details shown on the plans. Treat all lumber and timber in accordance with Item 492, “Timber Preservative and Treatment,” unless otherwise shown on the plans. All material must bear the grade mark of an approved American Lumber Standards Committee agency or the identification mark of a state-approved inspection agency. A grade mark or identification mark must be on the timber before treating.

- A. Finish.** Provide material for railings, flooring, and wheel guards that is surfaced on 4 sides. Dress other timber as indicated on the plans.
- B. Timber and Lumber.** Use No. 1 Southern Pine or other materials required by the plans. Use the stress grade indicated on the plans. Timber grade designations refer to standard designations of the Southern Pine Inspection Bureau Standard Grading Rules. Use grading methods and general requirements that conform to the “General Requirements for Stress Grades” in ASTM D 245.
- C. Structural Glued Laminated Timber.** Meet the grade, species, and other requirements outlined in ANSI/AITC A-190.1, “Specification for Glued Laminated Timber.” Bond all members with wet-use adhesive conforming to ASTM D 2559. Treat individual laminations with preservative before gluing.
- D. Sign Posts.** Use No. 1 Southern Pine, dried before treatment to 19% maximum moisture content. Do not use compression wood on any face. Compression wood is allowed if wholly enclosed in the piece, at least 6

annual rings from the surface, and not more than 1/4 in. wide in its maximum dimension.

491.3. Equipment. Use slings or other approved equipment for handling. Do not use equipment that may damage the surface of the wood.

491.4. Construction. Construct timber structures in accordance with requirements of Item 490, “Timber Structures.”

491.5. Measurement. Timber will be measured by the 1,000 board feet, computed on nominal sizes and the shortest commercial lengths practical for use.

491.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Treated Timber” or “Untreated Timber.” This price is full compensation for materials, hardware, equipment, tools, labor, painting, preservative treatment, and incidentals. Timber used for erection purposes that is not part of the permanent structure will not be paid for directly but will be subsidiary to this Item. Timber piling will be paid for under Item 406, “Timber Piling.”

ITEM 492

TIMBER PRESERVATIVE AND TREATMENT

492.1. Description. Pressure treat piles, posts, timbers, and lumber with preservative.

492.2. Materials. Treating plants furnishing treated-timber products must meet the requirements of AWPA Standard M3, Part A. All treaters except treaters of structural glued laminated timber must be Department-approved and enter into a stocking agreement with the Department. The Construction Division maintains a list of approved treating plants. Fabricators of structural glued laminated timber must be certified by AITC. A list of certified fabricators of structural glued laminated timber is maintained by the AITC. AWPA standards govern materials and methods of treatments including seasoning, preservatives, and inspection for treatment. Provide the level of preservative indicated in Table 1.

A. Inspection. Provide access for the Inspector to all parts of facilities used in the conditioning and treating of timber products in accordance with Article 6.5, “Plant Inspection and Testing.” The supplier must

492.2 to 492.2

provide necessary assistance for the proper inspection of the materials being furnished.

B. Identification. An AITC quality inspected mark must be placed on each fabricated piece of structural glued laminated timber. Each piece or bundle of other treated-timber products must have a legible brand mark or tag indicating the name of the treater, date of treatment or lot number, and the AWPAs treatment specification symbol. Furnish a completed Department “Certification of Compliance” form with every shipment of treated timber products.

**Table 1
Minimum Retention of Preservative**

Product	Creosote (lb./cu. ft.)	Creosote- Coal Tar Solution (lb./cu. ft.)	Penta- chlorophenol (lb./cu. ft.)	ACA¹ or CCA² (lb./cu. ft.)	AWPA Standard for Treatment
AWPA Preservative Standard	P1/P13	P2	(P8/P9)	P5	
Timber piling for land or freshwater use, including foundation piles ³	12		0.6		C3
Timber piling for use in coastal waters ³	20	20			C18
Round guard fence posts ⁴	10		0.5	0.5	C14
Rectangular guard fence posts ⁴	12		0.6	0.5	C14
Guard fence blocks ⁴	10		0.5	0.5	C14
Wire fence posts (round) ⁴	8		0.4	0.4	C5
Sign posts ⁴	10		0.5	0.4	C14
Timber and lumber ⁵	12		0.6	0.6	C14
Structural glued laminated timber ^{6,7}	10		0.6	0.4	C28

1. Ammoniacal copper arsenate.
2. Chromated copper arsenate.
3. Retention determined by assay (0 to 3.0-in. zone except 0 to 2.0-in. zone for foundation piles in land and freshwater use).
4. Retention determined by assay (0 to 1.0-in. zone).
5. Retention determined by assay (0 to 0.6-in. zone for up to 2-in.-thick material, and 0 to 1.0-in. zone for over 2-in.-thick material).
6. Retention determined by assay (0.5 to 1.0-in. zone).
7. Treat individual laminations before gluing.

- C. Field Treatment.** When it is necessary to bore holes or to cut pressure-treated materials after treatment or when any treated surface is badly scarred, treat the hole, cut, or scarred surface with multiple applications of liquid preservative as specified in AWWA Standard M4. When required, furnish liquid preservative for field treatment.

492.3. Measurement and Payment. The work performed, materials furnished, equipment, labor, tools, equipment, and incidentals will not be measured or paid for directly but will be subsidiary to pertinent Items.

ITEM 495

RAISING EXISTING STRUCTURES

495.1. Description. Raise existing structures as shown on the plans.

495.2. Materials. Furnish materials in accordance with the following:

- Item 420, “Concrete Structures”
- Item 421, “Hydraulic Cement Concrete”
- Item 442, “Metal for Structures”
- Item 434, “Elastomeric Bridge Bearings.”

495.3. Construction. Submit detailed plans to raise structure. Approval of plans is required before beginning raising work. A licensed professional engineer must sign and seal the plans. Clearly indicate the methods, materials, cribbing, falsework or other supports, and equipment proposed. Repair or replace by an approved method any portions of the structure damaged by the raising operation. Approval of these plans does not relieve the Contractor from responsibility for the completion of the work nor from liability for repair or replacement of damaged portions of the structure due to the methods approved and employed.

A. Preparation of Plans.

1. Apply loads so that the load capacities in bearing, shear, and flexure are not exceeded for any material or member carrying the load. Indicate jack positions and capacities and temporary hardware attachments on the plan. Avoid jacking against the bottom of the slab. Use a jack with a minimum capacity of 2 times the dead load. Prohibit traffic on the structure until the structure is supported by cribbing, falsework, or the final supports.
2. Provide suitable cribbing, falsework, or other supports until the span or unit is resting on its final supports to prevent the various

500 ITEMS — MISCELLANEOUS CONSTRUCTION**ITEM 500
MOBILIZATION**

500.1. Description. Establish and remove offices, plants, and facilities. Move personnel, equipment, and supplies to and from the project or the vicinity of the project site to begin work or complete work on Contract Items.

500.2. Measurement. This Item will be measured by the lump sum as the work progresses.

500.3. Payment. Partial payments of the lump sum bid for mobilization will be as follows. The adjusted Contract amount for construction Items as used below is defined as the total Contract amount less the lump sum for mobilization.

- A.** Payment will be made upon presentation of a paid invoice for the payment bond, performance bond, and required insurance. The combined payment for bonds and insurance will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
- B.** Payment will be made upon verification of documented expenditures for plant and facility setup. The combined amount for all these facilities will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
- C.** When 1% of the adjusted Contract amount for construction Items is earned, 50% of the mobilization lump sum bid or 5% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- D.** When 5% of the adjusted Contract amount for construction Items is earned, 75% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under the Item will be deducted from this amount.
- E.** When 10% of the adjusted Contract amount for construction Items is earned, 90% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.

502.1 to 502.2

- F. Payment for the remainder of the lump sum bid for “Mobilization” will be made on the next estimate cycle after the initial retainage estimate or at final acceptance for projects without retainage.

ITEM 502

BARRICADES, SIGNS, AND TRAFFIC HANDLING

502.1. Description. Provide, install, move, replace, maintain, clean, and remove upon completion of work all barricades, signs, cones, lights, and other traffic control devices used for traffic handling as indicated on the plans and as directed.

502.2. Construction. Provide traffic control devices that conform to details shown on the plans, the TMUTCD, and the Compliant Work Zone Traffic Control Device List (CWZTCDL) maintained by the Traffic Operations Division.

- A. **Implementation.** Before beginning work, designate in writing a Contractor’s Responsible Person (CRP) to be the representative of the Contractor who is responsible for taking or directing corrective measures of installation and maintenance deficiencies as soon as possible. The CRP must be accessible by phone and able to respond to emergencies 24 hours per day.

Follow the traffic control plan (TCP) and install traffic control devices as shown on the plans and as directed. Install traffic control devices straight and plumb. Do not make changes to the location of any device or implement any other changes to the TCP without the approval of the Engineer. Minor adjustments to meet field constructability and visibility are allowed.

Submit Contractor-proposed TCP changes, signed and sealed by a licensed professional engineer, to the Engineer for approval. The Engineer may develop, sign, and seal Contractor-proposed changes. Changes must conform to guidelines established in the TMUTCD using approved products from the CWZTCDL.

Maintain traffic control devices by taking corrective action as soon as possible. Corrective action includes but is not limited to cleaning, replacing, straightening, covering, or removing devices. Maintain the devices such that they are properly positioned, spaced, and legible, and that retroreflective characteristics meet requirements during darkness and rain.

545.5 to 550.2

545.5. Payment. The work performed and the materials furnished in accordance with this Item and measured as provided for under “Measurement” will be paid for at the unit price bid for “Crash Cushion Attenuator (Install),” “Crash Cushion Attenuator (Move and Reset),” and “Crash Cushion Attenuator (Remove)” of the model and type specified (where required by the standard). This price is full compensation for foundations; materials, stockpiling, moving and removing, hauling, installing and resetting, disposal of unsalvageable materials, equipment, labor, tools, and incidentals.

ITEM 550 CHAIN LINK FENCE

550.1. Description. Furnish, install, remove, repair, or replace chain link fence and gates.

550.2. Materials. Before installation of the chain link fence, furnish certification from the fence materials manufacturer stating that all fencing materials comply with the requirements of this Item. Use only new materials.

- A. General.** Furnish materials in accordance with the following:
- Item 421, “Hydraulic Cement Concrete,” Class B
 - Item 445, “Galvanizing.”
- B. Wire Fabric.** Provide wire fabric with:
- 9 gauge (0.148 in. diameter) steel wire with a minimum breaking strength of 1,290 lb. meeting ASTM A 392 Class I or ASTM A 491;
 - mesh size of 2 in. \pm 1/8 in. between parallel wires with at least 7 meshes in a vertical dimension of 23 in. along the diagonals of the openings; and
 - knuckled selvages at the top and bottom edge of the fabric, unless otherwise shown on the plans.
- C. Posts.** Provide posts of the size and weight shown on the plans. Do not provide rerolled or open-seam posts. Use material meeting ASTM F 1083 for all posts. When specified, furnish thin-wall, high-strength pipe posts manufactured by cold rolling using steel strip conforming to ASTM A 1011, CS (Commercial Steel).
- D. Post Caps.** Provide malleable iron post caps designed to exclude all moisture. If barbed wire is shown on the plans, furnish barbed wire support arms integral with the post caps. If top rail is shown on the

plans, furnish post caps with an opening for the top rail. Post caps must have a 2-in. skirt.

- E. Gates.** Provide gates fabricated from round sections of pipe of the size and weight shown on the plans. Use material meeting ASTM F 1083 for all gate pipes. For each gate, include:
- corner and tee fittings of malleable iron or pressed steel with means for attaching diagonal bracing members;
 - hinges of malleable iron allowing a full 180° swing, easily operated by one person;
 - ball-and-socket-type bottom hinges that do not twist or turn from the action of the gate and prevent the closed gate from being lifted off the hinges;
 - a positive stop that prevents any portion of the gate from swinging over an adjacent traffic lane;
 - malleable iron pulley systems for roll type gate (only when required);
 - diagonal braces consisting of 3/8-in.-diameter cable with turnbuckles, 2 to each gate frame, and, for vehicle gates, a vertical pipe brace of the size and weight shown on the plans at the center of each gate leaf;
 - latches of malleable iron or steel for single gates with a single-fork latch and padlock eye that will keep the gate closed;
 - two fork latches mounted on a center plunger rod with a padlock eye for double-leaf gates;
 - holdbacks for each leaf of vehicular gates, with a semi-automatic holdback catch anchored at least 12 in. into a 12 in.-diameter by 24 in.-deep concrete footing; and
 - a malleable iron center rest, designed to receive the plunger rod anchored as shown on the plans for all double-leaf gates.
- F. Top Rail.** When shown on the plans, provide top rail manufactured from 1.660 in. OD standard weight (Schedule 40) steel pipe weighing 2.27 lb. per foot or high-strength pipe weighing 1.82 lb. per foot. Use material meeting ASTM F 1083 for all top rail pipes. Provide pipe in sections at least 18 ft. long joined with outside steel sleeve couplings at least 6 in. long with a minimum wall thickness of 0.70 in. Use couplings designed to allow for expansion of the top rail.
- G. Tension Wire.** Use 7 gauge (0.177-in.) carbon steel wire with a minimum breaking strength of 1,950 lb. for the bottom edge of all fence fabric, and for the top edge of fence fabric when a top rail is not specified.

550.2 to 550.2

- H. Truss Bracing.** Provide truss bracing as shown on the plans.
- I. Cables.** Provide 7-wire strand cables manufactured of galvanized annealed steel at least 3/8 in. in diameter.
- J. Barbed Wire.** When specified on the plans, provide 3 strands of twisted 12.5 gauge barbed wire with 2-point, 14 gauge barbs spaced approximately 5 in. apart conforming to ASTM A 121 or ASTM A 585.
- K. Barbed Wire Support Arms.** When barbed wire is specified on the plans, provide support arms at an angle of 45° from vertical, with clips for attaching 3 strands of barbed wire to each support arm and sufficient strength to support a 200-lb. weight applied at the outer strand.
- L. Stretcher Bars.** Provide stretcher bars made of flat steel at least 3/16 in. by 3/4 in. and not more than 2 in. shorter than the fabric height. Provide 1 stretcher bar for each gate and end post and 2 stretcher bars for each corner and pull post.
- M. Grounds.** Provide copper-clad steel rods 8 ft. long with a minimum diameter of 5/8 in., or other UL-listed ground rods.
- N. Miscellaneous Fittings and Fasteners.** Furnish in sufficient quantities to erect all fencing materials in a proper manner. Furnish fittings for posts from pressed or rolled steel, forged steel, malleable iron or wrought iron of good commercial quality spaced as shown on the plans.
- O. Coatings.** Unless specified on the plans, hot-dip galvanize all materials. Fabric, tension wire, and barbed wire may be aluminum-coated or alloy-coated if approved. When shown on the plans, additionally coat all material except bolts, nuts, and washers with thermally fused polyvinyl chloride (PVC) in accordance with ASTM F 668, Class 2B, meeting the specified color.
 - 1. Fabric.**
 - a. Galvanizing.** Hot-dip galvanize in accordance with ASTM A 392, Class I.
 - b. Aluminum Coating.** Aluminum-coat in accordance with ASTM A 491.
 - c. Alloy Coating.** Coat with zinc-5% aluminum-mischmetal alloy (Zn-5A1-MM) in accordance with ASTM F 1345, Class I.

2. **Posts.**
 - a. **Inside and Outside Galvanizing.** Hot-dip galvanize inside and outside in conformance with ASTM F 1083.
 - b. **Alloy Coating.** Coat inside and outside with Zn-5A1-MM in accordance with ASTM F 1043, Class C.
3. **Braces and Gates.**
 - a. **Galvanizing.** Hot-dip galvanize braces and gates inside and out in conformance with ASTM F 1083.
 - b. **Alloy Coating.** Coat inside and out with (Zn-5A1-MM) in accordance with ASTM F 1043, Class C.
4. **Fittings, Bolts, and Other Miscellaneous Hardware.** Galvanize all fittings, bolts and miscellaneous hardware in conformance with Item 445, "Galvanizing."
5. **Tension Wire.** Zinc-coat tension wire with a minimum coating of 0.80 oz./sq. ft. or aluminum-coat with a minimum coating of 0.30 oz./sq. ft.
6. **Barbed Wire.** Zinc-coat barbed wire in accordance with ASTM A 121 (0.80 oz./sq. ft.) or aluminum-coat in accordance with ASTM A 585 (0.30 oz./sq. ft.).
7. **Pull Cable.** Zinc-coat pull cable with a minimum coating of 0.80 oz./sq. ft. of individual-wire surface when tested in conformance with ASTM A 116.

550.3. Construction. Erect the chain link fence to the lines and grades established on the plans. Overall height of the fence when erected is the height above the grade shown.

Repair or replace damaged fence or gates. If posts cannot be repaired by straightening, remove and replace the post and foundation. When a fence installation is to be removed in its entirety and not replaced, return all salvageable material to the location shown on the plans. Backfill all postholes with suitable material. Return the salvaged fence fabric in secured rolls not more than 50 ft. long. Dispose of unsalvageable material.

- A. **Clearing and Grading.** Clear all brush, rocks, and debris necessary for the installation of this fencing.

Unless otherwise shown on the plans, stake the locations for corner posts and terminal posts. Follow the finished ground elevations for fencing panels between corner and terminal posts. Level off minor irregularities in the path of the fencing.

B. Erection of Posts. Install posts as shown on the plans. Plumb and permanently position posts with anchorages firmly set before fabric is placed. Brace corner and pull posts as shown on the plans.

1. **Post Spacing.** Space posts as shown in Table 1.

**Table 1
Post Spacing and Placement**

Post Type	Required Spacing or Placement
Line posts	at most 10 ft. apart
Pull posts	at most 500 ft. apart and at each change in direction exceeding 20° vertically
Corner posts	at each horizontal angle point

Install cables on all terminal posts and extend to adjacent posts. Install cables on each side of corner and pull posts with a 3/8-in. drop-forged eye-and-eye or eye-and-clevis turnbuckle, unless otherwise shown on the plans.

2. **Postholes.** Drill holes for concrete footings for all posts to provide footings of the dimensions shown on the plans.

Where solid rock is encountered before reaching plan depth, penetrate the solid rock by at least 12 in. (18 in. for end, corner, gate, and pull posts) or to plan depth. Drill holes in the solid rock with a diameter at least 1 in. greater than the outside diameter of the post.

After the posts are set and plumbed, fill the hole in the solid rock with grout consisting of 1 part hydraulic cement and 3 parts clean, well-graded sand. Other grouting materials may be used if approved. Thoroughly work the grout into the hole, leaving no voids. Construct concrete footings from the solid rock to the top of the ground.

3. **Gate Posts.** Align the tops of all gate frames with the fencing top tension wire or top rail. If curbs are shown on the plans, provide vehicular gates that are greater in overall height than the adjacent fencing by the height necessary to extend to within 2 in. of the pavement between the curbs.

4. **Concrete Footings.** Center posts in their footings. Place concrete and compact by tamping or other approved methods. Machine mix all batches of concrete over 1/2 cu. yd. Hand mixing concrete is allowed on batches under 1/2 cu. yd.

Use forms for footings where the ground cannot be satisfactorily excavated to neat lines. Crown the concrete or grout (for solid rock) to carry water from the post. Keep the forms in place for at least 24 hr. Backfill the footing with moistened material as soon as each form is removed, and thoroughly tamp. Cover concrete with at least 4 in. of loose moist material, free of clods and gravel, immediately after placing concrete. No other curing is required.

Spread all excess excavated and loose material used for curing neatly and uniformly. Remove excess concrete and other construction debris from the site.

- C. Erection of Fabric.** After all posts have been permanently positioned and anchorages firmly set, place the fabric with the cables drawn taut with the turnbuckles. Secure one end and apply enough tension to the other end to remove all slack before making attachments. Unless otherwise shown on the plans, cut the fabric and independently attach each span at all corner posts and pull posts.

Follow the finished contour of the site with the bottom edge of fabric located approximately 2 in. above the grade. Grade uneven areas so the maximum distance between the bottom of fabric and ground is 6 in. or less.

Fasten fabric at 12 in. intervals to the top and bottom tension wires between posts. When top rail is shown on the plans, fasten the fabric in the same manner. On gate frames, fasten the fabric to the top and bottom of the gate frame at 12 in. intervals. Use steel wire fabric ties of 9 gauge steel or larger. Fasten fabric to terminal posts by steel stretcher bars and stretcher bar bands fitted with carriage bolts and nuts of the size and spacing shown on the plans. Use stretcher bars to fasten endposts, pull posts, corner posts, and gateposts with stretcher bar bands at intervals of at most 15 in. Attach stretcher bars to terminal posts with 1 in. \times 1/8 in. flat steel bands with 3/8-in. carriage bolts at intervals up to 15 in.

- D. Electrical Grounds.** Provide at least 1 electrical ground for each 1,000 ft. of fence, located near the center of the run. Provide additional grounds directly under the point where power lines pass over the fence.

Vertically drive or drill in the grounding rod until the top of the rod is approximately 6 in. below the top of the ground. Connect a No. 6 solid copper conductor to the rod and to the fence by a UL-listed method so that each element of the fence is grounded.

550.4 to 550.5

- E. Repair of Coatings.** Repair damaged zinc coating in accordance with Section 445.3.D, “Repairs.”

550.4. Measurement. Chain link fence will be measured by the foot of fence installed, repaired, replaced, or removed, measured at the bottom of the fabric along the centerline of the fence from center to center of posts, excluding gates.

Gates will be measured as each gate installed, repaired, replaced, or removed.

550.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Chain Link Fence (Install)” or “Chain Link Fence (Repair)” of the height specified or “Chain Link Fence (Remove)” and “Gate (Install)” or “Gate (Repair)” of the type, height, and width of opening specified or “Gate (Remove).” Clearing and grading for fencing and gates will not be paid for directly but is subsidiary to this Item.

- A. Chain Link Fence (Install).** This price is full compensation for furnishing and installing fencing, except gates; cleaning, grading, and backfilling; removing and disposing of surplus material; and equipment, labor, tools, and incidentals.
- B. Chain Link Fence (Repair).** This price is full compensation for furnishing materials; repairing or replacing fencing, except gates; cleaning, grading, and backfilling; removing and disposing of surplus or damaged material; and equipment, labor, tools, and incidentals.
- C. Chain Link Fence (Remove).** This price is full compensation for removing all fencing, except gates; cleaning, grading, and backfilling; removing and disposing of surplus material; and equipment, labor, tools, and incidentals.
- D. Gate (Install).** This price is full compensation for installing gate and for providing materials, center anchorages, equipment, labor, tools, and incidentals.
- E. Gate (Repair).** This price is full compensation for repairing or replacing gate and for furnishing materials; removing and disposing of damaged materials; and equipment, labor, tools, and incidentals.
- F. Gate (Remove).** This price is full compensation for removing gate and for materials, equipment, labor, tools, and incidentals.

ITEM 662

WORK ZONE PAVEMENT MARKINGS

662.1. Description. Furnish, place, and maintain work zone pavement markings.

662.2. Materials. Provide thermoplastic, paint and beads, raised pavement markers, prefabricated pavement markings, temporary flexible reflective roadway marker tabs, or other approved materials for work zone pavement markings. Purchase all pavement marking materials on the open market.

Supply materials meeting:

- DMS-4200, “Pavement Markers (Reflectorized),”
 - DMS-4300, “Traffic Buttons,”
 - DMS-8240, “Permanent Prefabricated Pavement Markings,”
 - DMS-8241, “Removable Prefabricated Pavement Markings,”
 - DMS-8242, “Temporary Flexible-Reflective Road Marker Tabs,”
 - DMS-8200, “Traffic Paint,”
 - DMS-8220, “Hot Applied Thermoplastic,” and
 - DMS-8290, “Glass Traffic Beads.”
- A. Nonremovable Markings.** Use hot-applied thermoplastic or permanent prefabricated pavement markings for nonremovable markings. Paint and beads or other materials are not allowed for nonremovable markings unless shown on the plans.
- B. Removable and Short-Term Markings.** Use raised pavement markers, removable prefabricated pavement markings, temporary flexible reflective roadway marker tabs, or other approved materials for removable and short-term markings. Do not use hot-applied thermoplastic or traffic paint for removable markings. Use removable prefabricated pavement markings on the final pavement surface when the plans specify removable markings.

662.3. Construction. Apply pavement markings in accordance with the following Items:

- Item 666, “Reflectorized Pavement Markings”
 - Item 668, “Prefabricated Pavement Markings”
 - Item 672, “Raised Pavement Markers.”
- A. Placement.** Install longitudinal markings on pavement surfaces before opening to traffic. Maintain lane alignment traffic control devices and operations until markings are installed. Install markings in proper alignment in accordance with the TMUTCD and as shown on the plans.

662.3 to 662.3

Short-term markings will be allowed when standard markings (removable or nonremovable) cannot be placed before opening to traffic, if shown on the plans or directed.

When short-term markings are allowed for opening to traffic, place longitudinal standard markings no later than 14 calendar days after the placement of the surface. When inclement weather prohibits placement of markings, the 14-day period may be extended until weather permits proper application.

Place standard longitudinal markings no sooner than 3 calendar days after the placement of a surface treatment, unless otherwise shown on the plans.

Apply thermoplastic markings to a minimum thickness of 0.060 in. (60 mils). When paint and beads are allowed, apply to a minimum dry thickness of 0.012 in. (12 mils).

Place short-term markings in proper alignment with the location of the final pavement markings. Remove and replace short-term markings not in alignment at the Contractor's expense.

For removable placements, use of raised pavement markers to simulate longitudinal markings is at the Contractor's option. Use side-by-side raised pavement markers to simulate longitudinal lines wider than 4 in. Do not use raised pavement markers for words, symbols, shapes, or diagonal or transverse lines.

- B. Marking Removal.** Remove markings that conflict with succeeding markings in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers." Remove short-term markings that interfere or conflict with final marking placement immediately before placing final pavement markings, unless otherwise directed. Remove the remainder of the short-term markings before final acceptance.

Leave as little evidence as possible of the marking when removing marking materials.

- C. Performance Requirements.** All markings must be visible from a distance of at least 300 ft. in daylight conditions and from a distance of at least 160 ft. in nighttime conditions, illuminated by automobile low-beam headlight. Determine visibility distances using an automobile traveling on the roadway under dry conditions.

Maintain the markings for 30 calendar days after installation. The end of the 30-day maintenance period does not relieve the contractor from the performance deficiencies requiring corrective action identified during the 30-day period. If markings fail to meet the requirements of

this Item during the 30-day period, remove and replace them at the Contractor's expense. The 30-calendar day performance requirement will begin again after replacement of the markings.

The daytime and nighttime reflected color of the markings must be distinctly white or yellow. The markings must exhibit uniform retroreflective characteristics.

662.4. Measurement. This Item will be measured by the foot or by each word, shape, symbol, or temporary flexible reflective roadway marker tab. Each stripe will be measured separately. Raised pavement markers used to simulate a marking will be measured by the foot of marking or by each raised pavement marker.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

662.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Work Zone Pavement Markings" of the type and color specified and the shape, width, and size specified as applicable. This price is full compensation for furnishing, placing, maintaining, and removing work zone pavement markings and for materials, equipment, labor, tools, and incidentals.

Elimination of nonremovable markings will be paid for under Item 677, "Eliminating Existing Pavement Markings and Markers." Removal of short-term and removable markings will not be paid for directly, but will be subsidiary to this Item.

Type II work zone pavement markings (paint and beads) used as a sealer for Type I pavement markings (thermoplastic) will be paid for under this Item.

ITEM 666

REFLECTORIZED PAVEMENT MARKINGS

666.1. Description. Furnish and place reflectORIZED pavement markings.

666.2. Materials.

A. Type I Marking Materials. Furnish in accordance with DMS-8220, "Hot Applied Thermoplastic."

2. **Full-Width Mowing.** Mow vegetation in the entire right of way, except for non-mow areas.
3. **Spot Mowing.** Work requests are made on a callout basis. Begin mowing designated areas within 48 hr. of notification, unless otherwise shown on the plans.

730.4. Measurement. This Item will be measured by the acre.

- A. **Strip and Full-Width Mowing.** “Strip Mowing” and “Full-Width Mowing” are plans quantity measurement items. The quantity to be paid is the quantity shown on plans, unless modified by Article 9.8, “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantities are required.
- B. **Spot Mowing.** “Spot Mowing” will be measured by the acre mowed. The minimum quantity per callout is 3 acres, unless otherwise shown on the plans.

730.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Strip Mowing,” “Full-Width Mowing,” or “Spot Mowing.” This price is full compensation for furnishing and operating equipment and for materials, tools, and incidentals.

ITEM 734

LITTER REMOVAL

734.1. Description. Remove and dispose of litter. Litter includes matter not part of the highway facility, such as trash, garbage, scrap metals, paper, wood, plastic, glass products, animal remains, rubber products, tires, auto parts, furniture, mattresses, household appliances, and large bulky items.

734.2. Materials. Furnish bags and containers.

734.3. Equipment. Provide equipment and tools. Provide highly visible omni-directional amber flashing warning lights on work vehicles. Provide equipment that prevents the accumulated debris from being strewn along the roadway during transport.

734.4. Work Methods. Remove bagged litter on the same day it is collected. Do not remove dead animals larger than 150 lb. or hazardous materials; instead notify the Department for removal. Dispose of litter off

734.4 to 735.3

the right of way in accordance with federal, state, and local regulations. Perform litter removal and disposal according to the following types.

- A. **Litter.** Remove and dispose of litter from the right of way, including shoulders but excluding the traveled lanes and shoulders next to barriers, to the limits shown on the plans.
- B. **Spot Litter.** Work requests are made on a callout basis. Begin removing litter within 3 hr. of notification, unless otherwise shown on the plans.

734.5. Measurement. This Item will be measured as follows.

- A. **Litter.** By the cycle or acre.
- B. **Spot Litter.** By the acre. The minimum quantity per callout is 3 acres, unless otherwise shown on the plans.

734.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit prices bid for “Litter Removal” or “Litter Removal (Spot).” This price is full compensation for collecting, hauling, and disposing of litter and for equipment, labor, materials, tools, and incidentals.

ITEM 735 DEBRIS REMOVAL

735.1. Description. Remove and dispose of debris discarded or deposited on or adjacent to the pavement. Debris includes objects not part of the highway facility, such as dead animals, tires, tire fragments, wood, furniture, mattresses, household appliances, and scrap metal.

735.2. Equipment. Provide highly visible omnidirectional flashing warning lights on work vehicles. Provide equipment that prevents the accumulated debris from being strewn along the roadway during transport.

735.3. Work Methods. Remove debris at locations shown on the plans. Dispose of debris off the right of way in accordance with applicable federal, state, and local regulations.

- A. **Center Medians and Mainlanes.** Remove and dispose of debris from the main travel lanes, paved medians, paved shoulders, and an additional 5 ft. adjacent to the pavement, unless otherwise shown on the plans.

- B. Frontage Roads.** Remove and dispose of debris from frontage roads, shoulders, U-turn lanes, and intersecting streets to the right-of-way line, including turn lanes, underpasses and overpasses, and an additional 5 ft. adjacent to the pavement, unless otherwise shown on the plans.
- C. Entrance and Exit Ramps.** Remove and dispose of debris from ramps, shoulders, and an additional 5 ft. adjacent to the pavement, unless otherwise shown on the plans.
- D. Spot Debris Removal.** Work requests are made on a callout basis. Remove and dispose of debris as directed. Begin removing debris within 3 hr. of notification, unless otherwise shown on the plans.

735.4. Measurement. This Item will be measured as follows:

- A. Center Medians and Mainlanes, Frontage Roads, and Entrance and Exit Ramps.** By the cycle or right-of-way centerline mile. A right-of-way centerline mile is defined as the distance from beginning reference marker location to ending reference marker location, regardless of the number of roadbeds.
- B. Spot Debris Removal.** By the roadbed mile. The minimum quantity per callout is 1 roadbed mile, unless otherwise shown on the plans.

735.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit prices bid for “Debris Removal” of the specified types. This price is full compensation for collecting, hauling and disposing of debris and for equipment labor, materials, tools, and incidentals. Traffic control will not be paid for directly but will be subsidiary to this Item, unless otherwise shown on the plans.

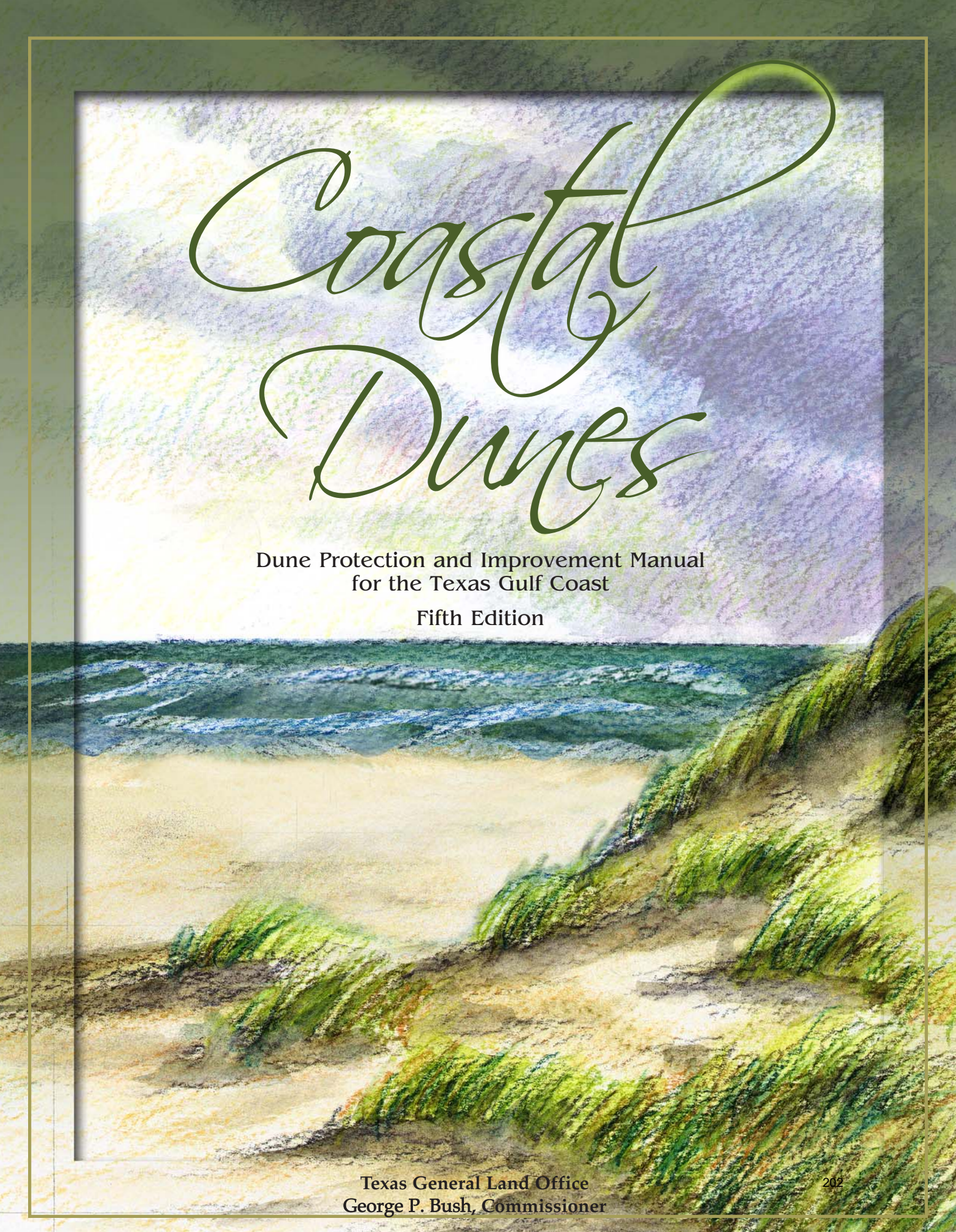
Debris removal required for work orders issued under Item 734, “Litter Pickup,” or Item 738, “Cleaning and Sweeping Highways,” will be subsidiary to that Item unless otherwise shown on the plans.

ITEM 738

CLEANING AND SWEEPING HIGHWAYS

738.1. Description. Clean and sweep highway facilities.

738.2. Equipment. Furnish equipment and tools capable of dislodging crusted debris from road surfaces and removing and collecting materials from roadway. Provide highly visible omni-directional flashing warning lights on work vehicles. Equipment must have a water tank with adequate



Coastal Dunes

Dune Protection and Improvement Manual
for the Texas Gulf Coast

Fifth Edition

VERNON'S TEXAS STATUTES AND CODES ANNOTATED

NATURAL RESOURCES CODE

TITLE 2. PUBLIC DOMAIN

SUBTITLE E. BEACHES AND DUNES

CHAPTER 63. DUNES

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 63.001. Findings of Fact

The legislature finds and declares:

(1) that the mainland gulf shoreline, barrier islands, and peninsulas of this state contain a significant portion of the state's human, natural, and recreational resources;

(2) that these areas are and historically have been wholly or in part protected from the action of the water of the Gulf of Mexico and storms on the Gulf by a system of vegetated and unvegetated sand dunes that provide a protective barrier for adjacent land and inland water and land against the action of sand, wind, and water;

(3) that certain persons have from time to time modified or destroyed the effectiveness of the protective barriers and caused environmental damage in the process of developing the shoreline for various purposes;

(4) that the operation of recreational vehicles and other activities over these dunes have destroyed the natural vegetation on them;

(5) that these practices constitute serious threats to the safety of adjacent properties, to public highways, to the taxable basis of adjacent property and constitute a real danger to natural resources and to the health, safety, and welfare of persons living, visiting, or sojourning in the area;

(6) that it is necessary to protect these dunes as provided in this chapter because stabilized, vegetated dunes offer the best natural defense against storms and are areas of significant biological diversity;

(7) that vegetated stabilized dunes help preserve state-owned beaches and shores by protecting

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FOREWORD

By Commissioner George P. Bush

The Texas Coast is an environmental and economic treasure composed of interlocking, interdependent ecological systems. Coastal sand dunes are a crucial part of that system. Dunes serve not only as a vital habitat for numerous native plants and animals, but an irreplaceable recreational resource upon which humans must tread lightly.

But the coast is changing. With every passing hurricane or tropical storm our coastline is physically altered through accretion and erosion. New mapping systems and new environmental science help us predict and mitigate the effect of these changes. As we consider these changes, we must also take into account the effect of human development along the coast. That is why this booklet is so important.

Through helpful definitions, concise standards and photographic examples, this book aims to raise awareness of the fragile beach/dune system and provide concise guidelines for dune protection and improvement along the Texas Gulf Coast. Now in its fourth edition, this publication continues to be updated to reflect the needs of the ever-changing Texas Coast.

The Texas Coast belongs to you. Consider this your Owner's Manual. Use it well.



INTRODUCTION

As a resilient natural barrier to the destructive forces of wind and waves, sand dunes are the least expensive and most efficient defense against storm-surge flooding and beach erosion. Dunes absorb the impact of storm surge and high waves, preventing or delaying intrusion of waters into inland areas. Dunes hold sand that replaces eroded beaches after storms and buffer windblown sand and salt spray. This natural defense can be strengthened by increasing the height and stability of existing dunes and by building new dunes.

Beach and dune protection is important along the Texas Gulf Coast, particularly in areas experiencing shoreline erosion and concentrated urban development.

The growth of mainland coastal population centers and the increasing development and recreational use of the barrier islands can impact the stability of the dune environment. Construction and heavy recreational use of the beaches can contribute to fragmentation of the beach/ dune system and deterioration of dunes. The vegetation that secures sand is destroyed, sand is lost, and the dune line is breached by roads, trails, and storm runoff. Dune damage that results from human activities accelerates the damage caused by wind and wave erosion.

Inland areas become more vulnerable to hurricanes and tropical storms when the dune line is weakened. Protecting dunes helps prevent loss of life and property during storms and safeguards the sand supply that slows shoreline erosion. Protecting dunes also preserves and enhances the beauty of the coast and coastal ecosystems.

To succeed, dune improvement and protection efforts must be undertaken by federal, state, and local governmental entities. But even more valuable are efforts by those who live on the coast.

The Texas Coast will continue to attract Texans and other visitors in ever-greater numbers for years to come. This manual describes measures that landowners, city and county planners, developers, and industry can use to preserve sand dunes and promote dune restoration on the coast so that future generations can enjoy the natural beauty of the Texas Coast.

Beaches and Dunes

Terminology

The **beach** extends from the mean low tide line to the line of natural vegetation along the shoreline (**fig. 1**).

The **foreshore (wet beach)** is the area affected by normal daily tides.

The **backshore (dry beach)** is inundated only by storm tides and the higher spring tides. The backshore also supplies sand to the dunes.

Coppice mounds, the initial stages of dune growth, are formed as sand accumulates on the downwind side of plants and other obstructions on or immediately adjacent to the beach. The mounds are a source of sand that is exchanged via water with offshore bars. Coppice mounds may become vegetated and eventually increase in height, becoming foredunes.

Foredunes (also called fore-island dunes or primary frontal dunes) are the first clearly distinguishable, vegetated dune formations landward of the water. They are also the first to dissipate storm-generated wave and current energy. Although foredunes may be large and continuous, they typically are separate rounded knolls.

The **foredune ridge** is high, continuous, and well stabilized by vegetation. This ridge normally rises sharply landward from the foredune area but may rise directly from a flat, wave-cut beach immediately after a hurricane. The foredune ridge helps block storm surge and prevents it from washing inland.

Critical dunes are all dunes (coppice mounds, foredunes, foredune ridge, and some backdunes) that store sand to replenish eroding public beaches.

A **dune protection line** is established by a local government to preserve critical dunes and may be set no farther than 1,000 feet landward of mean high tide of the Gulf of Mexico. Special criteria apply to construction activities seaward of this line.

The **beach/dune system** includes all of the land from the line of mean low tide to the landward limit of dune formation.

A **public beach** is any beach, whether publicly or privately owned, extending inland from the line of mean low tide to the natural line of vegetation bordering on the Gulf of Mexico to which the public has acquired the right of use. This definition does not include a beach that is not accessible by a public road or public ferry.

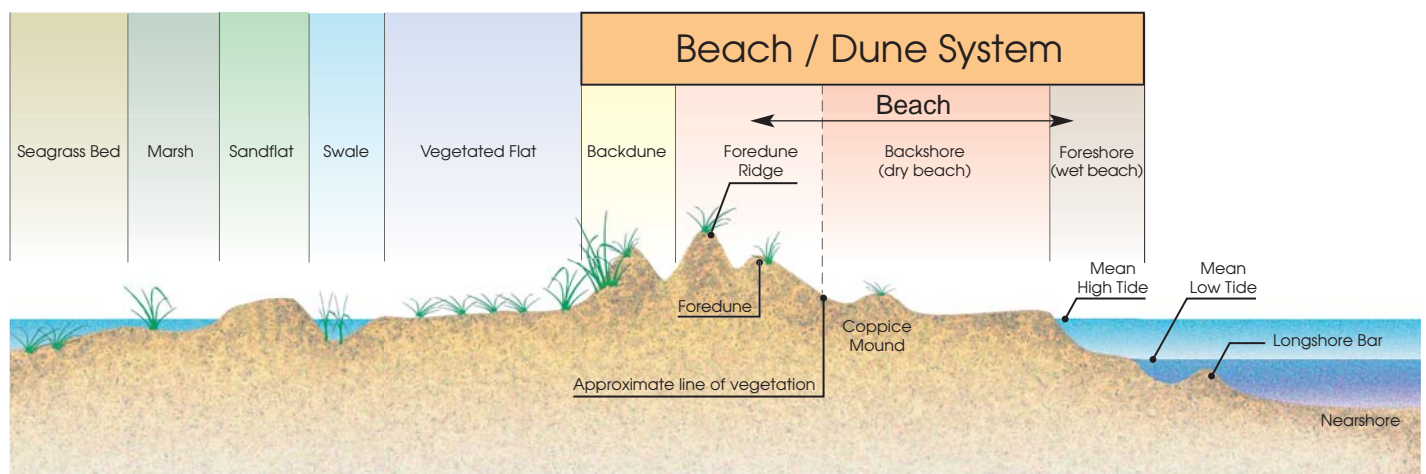


Figure 1. Typical cross section of a Texas barrier island. Actual conditions may vary.

The Sand Cycle

Beaches and dunes are integral parts of a dynamic environment in which sand is constantly exchanged.

During the calm conditions that prevail throughout most of the year on the Texas coast, waves average two to four feet in height and are less frequent than during storms. These calmer waves transport sand from offshore bars and the surf zone to the beach, causing the beach to gradually build up, or accrete. In time, sand is blown onto the foredune, where it is trapped by vegetation and stored until displaced by storms.

During a storm, high-energy waves flatten the beach. Waves washing against the base of the foredunes erode sand, undermining and collapsing the seaward dune face. In severe storms, the dune face commonly recedes several yards — in extreme cases as much as 100 yards — leaving a steep cliff (fig. 2). Sometimes dunes are completely destroyed. Retreating waves carry the eroded sand offshore and deposit it just seaward of the surf zone in large bars. This process of dune erosion and sand movement dissipates much of the energy of storm waves. Sandbars also dissipate storm wave energy by causing waves to break further offshore.

If the supply of sand remains constant, the natural exchange between the beach, dunes, and offshore areas will repair and rebuild dunes to a height and width determined by local conditions. However, the loss of vegetation that traps and holds sand makes the beach and dunes more susceptible to wind and water erosion, thus inhibiting their recovery from storms. Bays, channels, marshes, and grass flats behind the weakened foredune are exposed to storm-surge flooding and to accumulation of windblown sand.

Dune Damage

When the height of approaching storm waves exceeds the height of depressions along the dune ridge, water overflows the low points and washes down the landward side of the dunes, eroding sand and carrying it inland (figs. 3 and 4). These washover (or overwash) areas deepen and widen under continual wave attack, allowing larger volumes of water to spill across the dune line and flow farther inland. Eroded sand may be deposited behind the dunes or carried into the bay, channel, marsh, or grass flat. In very severe storms, washover waters may even cut into interior land areas.

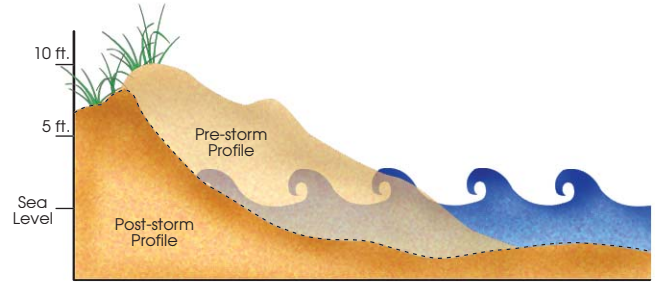


Figure 2. Result of storm waves on beaches and foredunes.

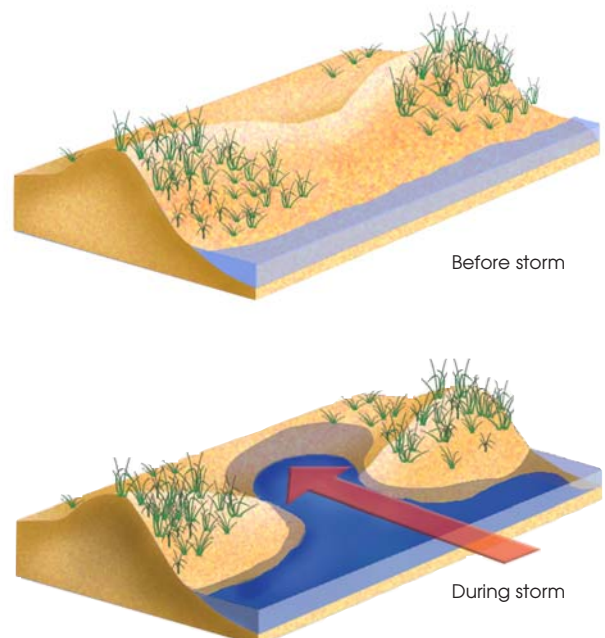


Figure 3. Washover from storm surge.



Figure 4. Oblique aerial photo of washover channels on Padre Island following Hurricane Brett in August 1999. Photo courtesy of David M. Stephens.

Areas of frequent major washovers may regenerate dunes slowly because of the volume of sand removed through erosion and because vegetation has been scoured away. Dune development may be impeded if the sand in a washover is too wet to be blown by the wind. Evidence of hurricane washovers is apparent on many Texas barrier islands.

Storms may also produce washouts in dune areas. These are similar to washovers, differing primarily in the direction of eroding waters. Generally, storm runoff from barrier islands and peninsulas is directed toward the bays. If there are breaches or depressions in the dunes, however, rainwater that collects in the swales (valleys between the dunes) may be channeled through these low points and overflow onto the beach, carrying sand with it.

Washouts may also be formed by retreating bay waters. Hurricanes, particularly slow-moving ones, may pile water into bay systems. If natural channels to the Gulf are too narrow to accommodate water retreating from the bays, washouts may cut across the low areas of least resistance in the barrier islands.

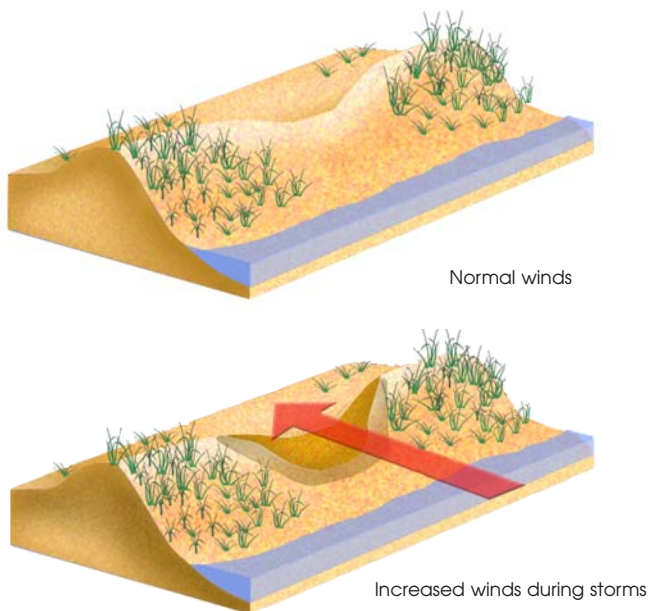


Figure 5. Formation of a blowout by wind in areas of a dune with little vegetative cover.

Blowouts are breaches in the dunes caused by wind erosion. They are aligned with prevailing southeasterly winds and are often cut down to the water table (**fig. 5**). During storms, blowouts may become channels for storm-surge waters from the Gulf.

Eventually, following a storm, the natural beach/dune system can recover its pre-storm shape if enough sediment is available in the littoral system. In Texas, this process can take up to five years, first by beach accretion, then by dune formation, expansion, and vegetation colonization. Sometimes this process is interrupted by structures, such as buildings, that prevent winds from blowing sand that is necessary for dunes to form.

Human activities also take a toll on dunes. Construction, recreation, and grazing animals may accelerate or aggravate natural damage to the dunes by destroying vegetative cover

and promoting development of breaches.

Seawalls, bulkheads, and groins may protect property landward of them against erosion. However, if waves persist, these structures can enhance shoreline erosion of adjacent properties and of the beach seaward of the structures. By withholding sand that would

otherwise be transported alongshore, erosion-control structures such as groins inhibit dune development in areas downdrift of them. In general, rigid structures are less efficient than the naturally resilient dunes as defense for the beach against storm surge. The beach directly in front of a vertical seawall may be eroded by waves rebounding off the structure during storms. The seawall itself may eventually be undermined.

Disturbance of the foredunes by vehicles, pedestrians, construction work, or grazing animals can promote wind erosion. If unchecked, this erosion can lead to almost complete removal of dunes, depleting the supply of sand available for exchange during storms. Sometimes entire dunes are bulldozed to level a construction site or to lay pipelines. In these cases, damage is not limited to the immediate site. Dunes adjacent to the site are exposed to wind erosion.

Devegetation of dunes can ultimately be as damaging as direct removal or withholding of sand. Vegetation is often removed from a large area when a construction site is cleared. Plants are trampled and uprooted by pedestrian traffic, motor vehicles, horses, and grazing cattle (**fig. 6**). As trails are established along frequently used routes through the dunes, the vegetation is destroyed and the wind begins to carry sand from the exposed area.

The continual loss of sand deepens the trail. Sloughing away of sand from the trail's sides widens it. As a greater area is exposed to wind erosion, a blowout, washout, or washover may develop.

Beach access roads through the dunes are subject to the same erosive processes and may become channels for storm surge.



Figure 6. Human influences on dune stability; access through critical dune areas on Mustang Island.

TEXAS COASTAL DUNES

The Texas coastline is composed of barrier islands, ancient deltaic headlands and peninsulas, bays and estuaries, and natural and man-made passes (fig. 7). These are mobile environments, constantly reshaped by the processes of erosion and accretion.

Dune development varies with sediment supply to the beach. The supply is determined by the quantity of inner-shelf sand carried onshore by waves and wind, the amount and kind of sediment discharged by rivers, and the degree of human interference with natural sand transport (for example, the interruption of longshore currents by jetties and groins). Rainfall patterns also affect dune development.



Figure 7. The Texas Coast.

On the upper coast, in Jefferson and Chambers counties, beach and dune development is limited. The Sabine River carries silt rather than sand to the coast. The shoreline is characterized by low-lying marshes and tidal flats with intermittent thin, linear sand ridges (chenier plain). Dunes are also scarce along the Brazos-Colorado river headland—the southern portion of the Brazoria County shoreline. Here, too, little dune-building sand is available to the longshore current.

Few naturally occurring dunes can be found on Galveston Island and portions of Follets Island because many of the foredunes were wiped out during Hurricane Alicia in 1983 and subsequent storms like Tropical Storm Francis in 1999 and Hurricane Claudette in 2003. Shoreline development and high erosion rates have inhibited dune recovery (**fig. 8**).

Vegetated and relatively stable dunes occur on Mustang Island and North Padre Island. On Matagorda and San Jose islands, where there is limited shorefront development, there is a continuous, well-defined foredune ridge averaging 15 to 20 feet above sea level. The most highly developed dune formations are found in Nueces and northern Kleberg counties, where there is a foredune ridge consisting of several rows of dunes that average 20 to 25 feet in height. Some dunes reach an elevation of 40 feet. Sandflats and areas of low coppice mounds are also characteristic of this region (**fig 9**).

As rainfall decreases southward along the Texas Coast, dunes have less of the vegetative cover necessary for stabilization. Migrating dunes—bare of vegetation and highly susceptible to wind erosion—are common in the arid environment of the lower coast (**fig. 10**). Dunes of this type occur on Padre Island. In Kenedy, Willacy, and Cameron counties, the foredune ridge is poorly developed and breached by numerous washovers and blowouts.

DUNE CONSTRUCTION, IMPROVEMENT, AND REPAIR

Several methods may be used to increase the height and stability of existing dunes, repair damaged dunes, encourage sand accumulation closer to the beach, or establish dunes where a low sand supply has inhibited dune formation or where dunes have been destroyed.

Where fresh sand deposits around obstructions such as grass clumps show conditions conducive to natural dune formation, plantings of native vegetation or structural barriers can be used to start and accelerate sand accumulation. Plantings of native vegetation should be the primary method for dune construction, improvement, and repair. Plant vegetation on grade in the backshore and close to the line of vegetation. Structures such as slatted wood or plastic sand fencing can help trap sand and stabilize dunes, but they should be used as a last resort and removed when vegetation is established.

In areas where the local sand supply is insufficient for these two sand-trapping methods to be effective, dunes can be artificially constructed with imported sand. All dune improvement project sites must be vegetated to maintain stability.



Figure 8. Oblique aerial photo of natural dune formations adjacent to shorefront development on Follets Island. Natural dunes exist where there is ample sediment and where the shoreline is allowed to migrate.



Figure 9. Natural dune formations on Padre Island in Kleberg County.



Figure 10. Migrating dune at Padre Island National Seashore.

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“Where to Get Help”
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Before any of the following procedures for dune construction or shoreline stabilization are employed, check with the local building official or the Texas General Land Office to avoid violation of state laws (see “Beach Access and Dune Protection Laws”). Agents from the U.S. Department of Agriculture Natural Resources Conservation Service can provide technical assistance for dune restoration projects (see “Where to Get Help”).

Use of Vegetation

Three species of grass are appropriate for dune vegetation projects on the Texas coast: bitter panicum (*Panicum amarum*), sea oats (*Uniola paniculata*), and marshhay cordgrass (*Spartina patens*). Dune plants are not always available commercially in Texas. They usually are transplanted from natural stands.

Transplants from the vicinity of the project are more likely to survive than imported ones. If suitable stands cannot be found on the property where the vegetation project will be undertaken, it may be possible to obtain plants from neighboring property by agreement with property owners. A permit from the county commissioners court or from a city may be required if the harvesting or planting site is seaward of a dune protection line (see “Beach Access and Dune Protection Laws”).

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The best time of year to transplant vegetation south of Corpus Christi is January or February. The optimum time for transplanting north of Corpus Christi is February, March, or April.

Take plants only from dense stands in areas that are not subject to erosion. Plants should not be taken from coppice mounds or from foredunes that are sparsely vegetated. Be careful not to trample plants. Remove individual plants in a scattered pattern at intervals of no less than two feet. Dig them out with a “sharpshooter” shovel. Pulling plants damages

the small hair roots needed for re-establishment. Obtain a good root structure to ensure plant survival.

Small areas and steep slopes at the project site are best vegetated by hand. Set single plants into individual holes made with a shovel or dibble and pack each planting firmly. Large, flat areas can be more economically planted with tractor-drawn transplanters such as one- or two-row tobacco transplanters with their shoes extended to make holes eight to 10 inches deep. One thousand plants should stabilize a 50- by 100-foot strip within a year (fig. 11).

Immediate watering of transplants is not imperative, but success is increased if transplanting is done after a rain or if the dune is watered before transplanting. Apply mulch either before or after planting to minimize wind erosion, moderate soil temperature, and help retain moisture. Hay, burlap, and commercial screen or mesh made of natural



Figure 11. Recently planted dune vegetation.

fiber may be used for this purpose. Hay is the most economical mulch. Use at least 3,000 pounds of hay per acre. Pack the hay into the soil to prevent it from blowing away. In areas where high winds are common, burlap or screen anchored with stakes is recommended instead of hay. All of these materials are biodegradable and will eventually break down over time.

Transplanted vegetation needs little maintenance. While watering new plants is helpful, continued watering is necessary only in drought conditions.

Fertilization may be used during the first year after transplanting but is usually unnecessary thereafter. An approved soils testing laboratory can provide fertilizer recommendations for a particular location. In general, three or four applications of 12-6-6 fertilizer, 90 to 100 pounds per acre, are recommended beginning in April or May. Mowing dune grasses destroys their ability to trap sand and may kill the plants. Planted areas should be protected from vehicles, pedestrians, and grazing animals with temporary fencing. Signs can be placed at the site to explain the purpose and importance of the project (fig. 12).



Figure 12. Sign for dune restoration project.

A transplant survival rate of 50 to 80 percent can be expected. If the survival rate is less than 10 percent, the area should be replanted. The vegetation should be fairly dense within one or two years. Any bare areas that remain after that time can be replanted with vegetation from the well-established sites.

Bitter Panicum

Bitter panicum has proved to be the best species for dune stabilization on the Texas coast. This native beach plant has a higher salt tolerance than many other coastal species and is a hardy grower. Its leaves are smooth, bluish-green, 1/4 to 1/2 inch wide, and four to 12 inches long (fig. 13). New plants are generated from tillers, shoots that grow from nodes on the roots. The seeds of bitter panicum are sterile and will not propagate new plants.

Bitter panicum plants taken for vegetation projects should be two to three feet tall. Cut off the tops of harvested plants about one foot from the roots to reduce water loss (fig. 14). The plants can be stored for up to four weeks if the roots are wrapped in wet cloth or paper towels or immersed in fresh water.

The best period for planting bitter panicum is early winter to early summer, but survival is dependent mainly on



Figure 13. Bitter panicum (*Panicum amarum*).

adequate moisture. The plants can be placed in the ground either upright or horizontally. In areas of rapidly shifting sand, upright planting will prevent the plants from being buried. Generally, the plants should be planted six inches deep on two-foot centers, but closer placement is recommended on the tops of dunes and on steep slopes. The transplant site must be protected from grazing animals, as bitter panicum is palatable to them.

Sea Oats

Sea oats, also native to the Texas coast, may be interspersed among plantings of bitter panicum. This grass has pale green, hardy leaves that die back each winter and stiff, seed-topped stems that grow to three feet or more in length (**fig. 15**). Sea oats are less tolerant of salt spray than bitter panicum but grow rapidly enough to avoid being smothered in rapidly shifting sand. Interplanting sea oats and bitter panicum will reduce the risk of disease or pest infestation.

Harvest only healthy, vigorous plants for transplanting. The younger sea oats have a greater success rate than the older, longer-rooted plants. Do not take a plant that has a seed head. Transplant the plants as soon as possible after they have been harvested. The plants will generally remain alive for up to four days if the roots are wrapped in wet cloth or paper towels or immersed in fresh water. As with bitter panicum, the tops of the plants should be cut to within one foot of the roots to reduce water loss.

The best time for planting sea oats is from October through April. Place plants at least eight to 10 inches deep on 18-inch centers in the main area of the dune, with graduated plantings extending to four feet apart at the edges.

It is best to mix a sea oat planting with bitter panicum at a ratio of one to one. Sea oats usually take two growing seasons to fully stabilize a dune, while bitter panicum, which grows more rapidly, can become established in one year.

Marshhay Cordgrass

Marshhay cordgrass is a small, wiry perennial which spreads by rhizomes (**fig. 16**). This grass does well on the landward side of dunes. If planted on the beach side, the grass is easily buried and destroyed by shifting sands. The most appropriate use for marshhay cordgrass is to repair the more stable portions of existing and new dunes.

June through November is the best time to plant marshhay cordgrass. Place the plants six

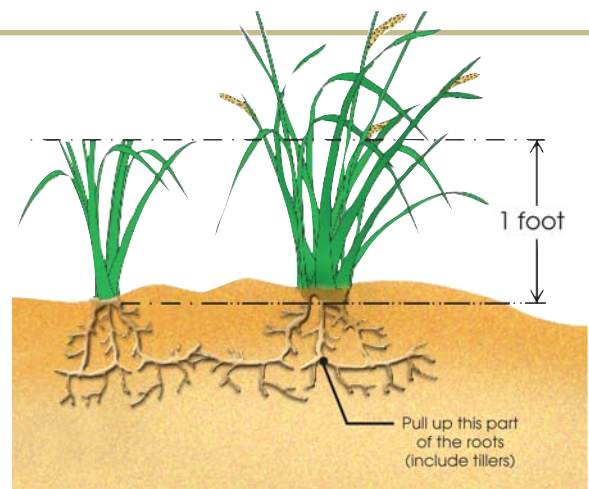


Figure 14. Harvesting and cutting bitter panicum.



Figure 15. Sea oats (*Uniola paniculata*).



Figure 16. Marshhay cordgrass (*Spartina patens*).
Photo courtesy of Frederique Perret.

to 10 inches deep and 12 to 36 inches apart to keep the base of each plant moist. Mixing marshhay cordgrass with plantings of bitter panicum produces best results.

Other Plants

Sea oats and bitter panicum, which commonly grow on the seaward face of foredunes, are highly erosion-resistant and easily established. However, other species of herbaceous plants also capture windblown sand and stabilize dunes.

Beach morning glory and seagrape vines can form a dense cover on the seaward side of dunes within a few growing seasons. Low-growing plants and shrubs found on the back side of the dunes include seacoast bluestem, cucumber leaf sunflower, rose ring gallardia, partridge pea, prickly pear, and lantana. Many of these are flowering

plants, an attractive alternative to dune grasses though less effective as dune stabilizers.

Some of these species are available commercially in Texas. Contact the Texas General Land Office, the Kika de la Garza Texas Plant Materials Center, or the Lady Bird Johnson National Wildflower Center for a list of nurseries or if you have questions regarding the use of a specific plant species for a dune restoration project (see “Where to Get Help”).

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Use of Sand Fences

The planting of native vegetation to trap sand is always preferable to the use of man-made structures. For reasons of aesthetics, safety, and possible interruption of public access, dune-building structures other than trees or brush must be removed as soon as they have served their purpose.



Figure 17. Sand fencing used to trap sand.

Standard slatted wood sand fencing is ideal for dune-building structures because it is inexpensive, readily available, easy to handle, and can be erected quickly.

Plastic fencing has the advantage of being strong, nondegradable, and reusable. Because plastic is non-flammable, it will not be taken for campfire fuel. Plastic fencing, however, is about three times as expensive as wooden sand fencing (fig. 17). Successful experiments in stabilizing dunes and dune vegetation using porous jute netting as sand fencing and as protective ground cover have been conducted at the Padre Island National Seashore.

Trees (particularly discarded Christmas trees), brush, and seaweed can be also effective for trapping sand. Make sure that the piles are not too dense and that air can flow within

them. Inorganic debris such as automobile bodies, concrete, wire, or tires must not be used for dune building. These materials are not biodegradable and are safety hazards.

A height of four feet, measured from the ground surface after installation, is recommended for dune-building structures. In areas where sand conditions are poor for dune building, a height of two feet is appropriate.

The fencing can be supported with wooden posts or metal poles at 10-foot intervals. Wooden posts should be black locust, red cedar, white cedar, or other wood of equal life and strength. Treated pine may be used as well.

The minimum practical length for posts is 6.5 feet; a length of 7 to 8 feet is optimum. Wooden posts should be no larger than three inches in diameter (**fig. 18**).

Secure the fencing material by fastening it to each post with four ties of galvanized wire (no smaller than 12 gauge), and weave the material between the posts so that every other post has fencing on the seaward side.

Trees, brush, and seaweed can be held in place with smooth wire strung between support posts. Another method is to anchor the vegetation to stakes driven into the ground.

If the base of a sand fence is placed at ground level, dunes will build over the structure. If the base is elevated four to six inches above the ground, dunes will build on the downwind side of the structure, and the fencing can be retrieved for reuse as the dunes are formed. In this case, place the structures five to 10 feet gulfward of the damaged area.

Sand fencing should be placed in non-continuous, diagonal segments—at least 35 degrees to the shoreline—so as not to adversely affect nesting sea turtles.

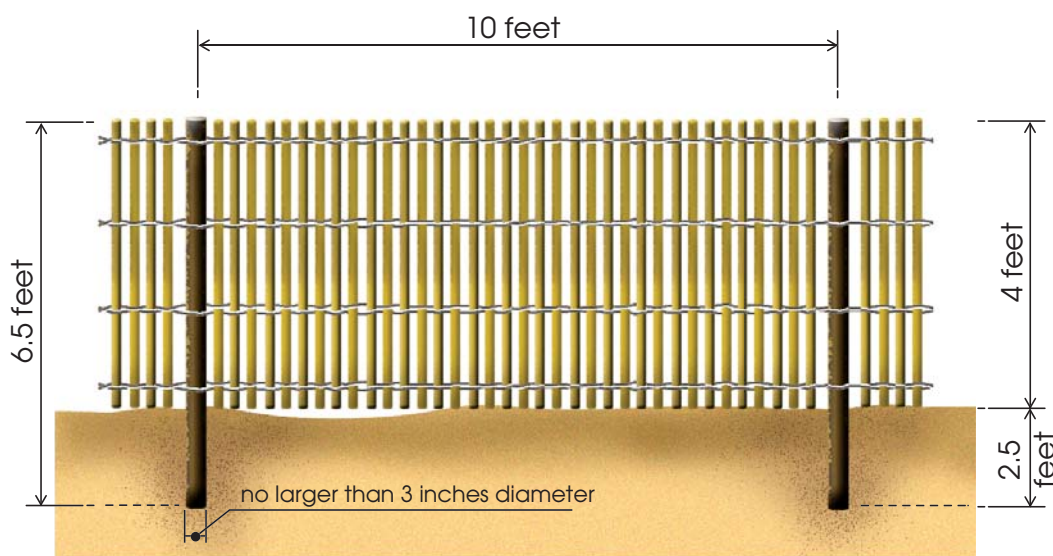


Figure 18. Sand fencing specifications for dune construction.

Breaches or Blowouts

In a breach or blowout, multiple tiers of dune-building structures can be used to increase sand entrapment and raise the ground elevation. Place the first structure at the landward end of the dune-building site. When sand has built up along this structure, erect a second structure about 20 feet seaward of it (fig. 19). After sand accumulates here, place a third structure between the first two. Offset the breaks in the tiers to facilitate sand entrapment.

The dune-building structure should not extend gulfward of the dune line on either side of a breach or blowout. The area should be vegetated for natural stabilization.

Repairing Foredues

To rebuild foredunes, place sand fencing or other appropriate structures perpendicular to the prevailing onshore wind. Leave a 35-foot gap between structures that are 100 feet long or more to prevent entrapment of storm surge water or rainwater in the trough between existing dunes and new dunes (fig. 20).

Place the first tier of dune-building structures no more than 20 feet gulfward of the base of the existing dune (the point at which the gulfward slope of the dune increases sharply). Later, place a second tier of structures on the back slope of the dune created by the first tier. This will increase dune height and fill any trough between the existing dune and the newly formed dune. Repeat this process to build the dune line gulfward.

Washover and Washout Areas

Dune-building structures should not be erected in washover or washout areas that extend all the way across a barrier island. These areas provide an avenue for the release of excess storm water from the bays, and they channel storm surge from the Gulf that might otherwise destroy dunes. In addition, washovers and washouts sometimes serve as migration routes for finfish and shellfish during storms. They also allow for the transportation of organic matter, an important component of the food chain, to the Gulf during high tides and storms.

A washover or washout that extends only partway across a barrier island can be filled with sand using the procedure described previously under “Breaches or Blowouts.” If the sand gulfward of a washout or washover is water-saturated, or if there is standing water in depressions within the eroded area, sand may have to be imported to rebuild the dune.

The procedure described under “Repairing Foredues” can be used to strengthen and stabilize dunes on either side of washovers and washouts

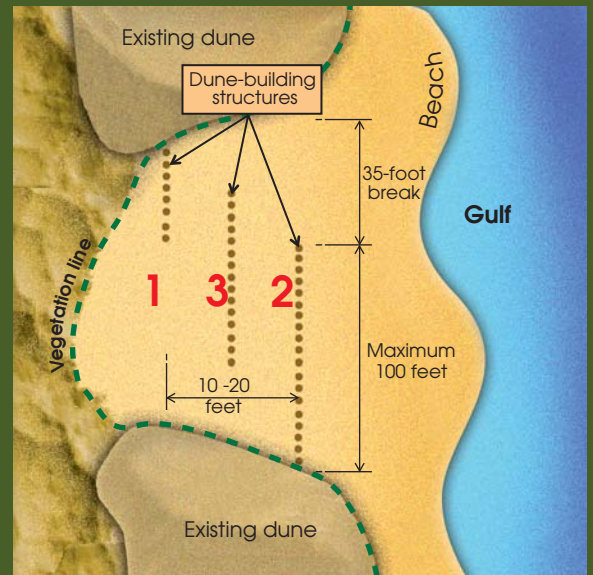


Figure 19. Placement of dune-building structures in breaches or blowouts.

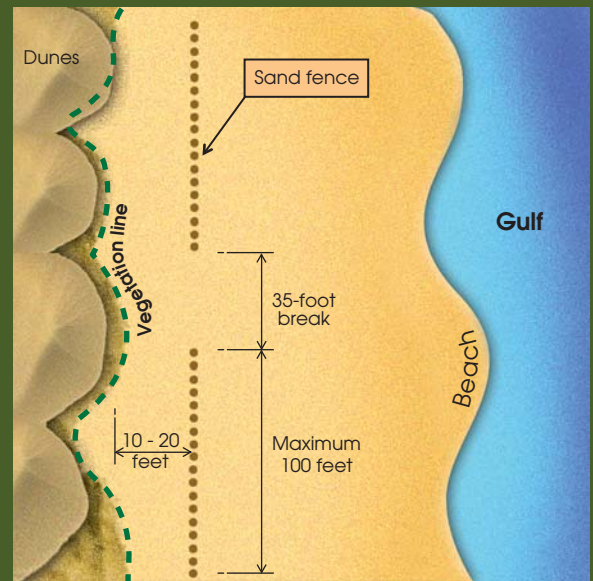


Figure 20. Placement of dune-building structures for repairing damaged foredunes.

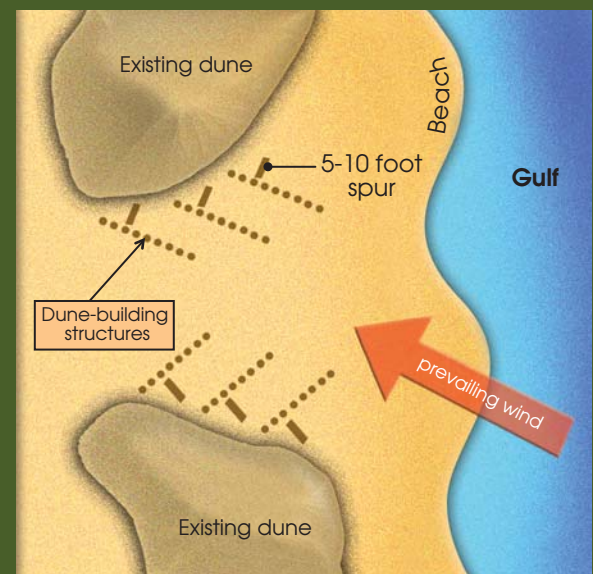


Figure 21. Placement of dune-building structures in washovers or washouts that do not extend across the barrier island.

that extend all the way or partway across barrier islands. Install dune-building structures at the base of the bordering dunes at a 30-45 degree angle to the sides of the washout or washover, facing the prevailing winds (**fig. 21**).

Construction with Imported Sand

Some Texas beaches, particularly along the upper coast, are sand-starved. Natural sand accumulation occurs very slowly, and it may take as long as 20 years for a six-foot-high dune to form. Even with dune-building structures, the process is slow. In areas of limited sand supply, where the sand is saturated, or where it is restrained from blowing, dunes may be constructed of imported sand.

Sand for dune construction must not be taken from the beach. Doing so robs donor areas of the material necessary for maintenance of the beach and dunes, and may increase erosion. Removal of sand and other materials from barrier islands and peninsulas is strictly regulated by state laws (see “Beach Access and Dune Protection Laws”). Sand for dune construction can be obtained from construction-material suppliers or cement companies.

The salt content of sand used to construct dunes should not exceed four parts per thousand (ppt). Higher salt concentrations will inhibit plant growth. For this reason, freshly dredged spoil material is usually not a good source of sand for dune construction projects. If dredged material is to be used, its salinity can be lowered by allowing it to sit until rain has leached the salt. Depending on the material, this may take from six months to three years. A local soils testing laboratory can conduct salinity tests at a particular location.

Imported sand should be similar in color, grain size, and mineral content to the sand at the dune-building site. If native sand is topped with imported finer sediment, the finer sediment will quickly erode.

Man-made dunes should be of the same general height, slope, width, and shape as the natural dunes in the vicinity. Generally, they should be no less than four feet high with a slope of no more than 45 degrees (a rise of one foot for every one horizontal foot). A slope of about 18.5 degrees (a rise of one foot for every three horizontal feet) is preferred. The initial width of the dune base should be at least 20 feet. A dune with a smaller base will not build to a height sufficient to provide storm protection (**fig. 22**).

Where there is an ample supply of sand, construct dunes slightly landward of the location where

foredunes would naturally occur to allow for natural seaward expansion. Dunes built too close to the Gulf can be destroyed by wave action during even minor storms and may interfere with public access along the beach.

Shoreline protection structures have been placed along portions of the coastline. While these structures protect property landward of them, they are not considered dunes and should not be used as a method of, or core for, dune restoration. These structures do not provide the same habitat for flora and fauna that dunes do or store and supply sand to the beach system.

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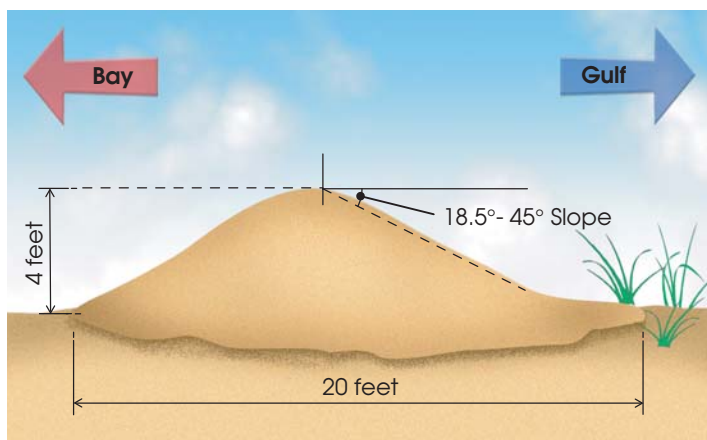


Figure 22. Minimum height, width, and slope of a dune constructed of imported sand.

DUNE WALKOVERS

Damage to dunes from pedestrian traffic can be avoided by the use of elevated walkovers for access to the beach. If walkovers are conveniently placed near access roads, parking areas, beachfront subdivisions, and public facilities, pedestrians will be less likely to cut footpaths through the dunes. Also, providing walkovers may increase public awareness of the importance of dunes and promote an appreciation of the sensitivity of the dune environment (fig. 23).

A walkover should begin landward of the foredune and extend no farther seaward than the most landward point of the public beach where it will not interfere with public use of the beach at normal high tide. The structure should be oriented at an angle to the prevailing wind direction. Otherwise, wind blowing directly up the path of the walkover may impede the growth of vegetation beneath it, erode sand from the seaward end, and increase the possibility of washout or blowout occurrences.

Construction Standards

Wood is the preferred construction material for walkovers because it is less expensive than metal, does not collect and retain heat as metal does, and is readily adapted to a number of designs. Although there are a few walkovers made from polyvinyl plastic, treated lumber and galvanized nuts and bolts may be used. Basic structural guidelines for walkovers are detailed in figure 24.

The width of a walkover should be based on the expected volume of pedestrian traffic. If a walkover will be infrequently used, a width of two feet should be sufficient. Walkovers intended for two-way passage should be wider, perhaps three or four feet. A width of six feet may be appropriate for a walkover subject to heavy use.



Figure 23. Dune walkover.

The structure's height should be at least one to one and a half times its width (three feet minimum) to allow sunlight to reach vegetation underneath. In any case, the deck of the walkover must be of sufficient elevation to accommodate the expected increase in dune height.

Space the slats forming the deck of the walkover 1/2 inch apart so that sunlight and rainfall can penetrate to plants below and so that sand will not accumulate on the deck.

Place the supporting piers as far apart as possible along the length of the structure. A distance of at least six feet between pairs of piers is recommended. Implant the piers at least three feet in the ground to ensure stability. A depth of five feet or more is advisable to allow for erosion around the piers during storms. Install the piers with a hand auger or posthole digger rather than with a tractor. Walkover piers should not be set with cement. Repair damage to the dune area as soon as possible.

Providing handrails on both sides of the walkover is recommended as a safety measure and to discourage people from jumping off into the dunes. Railings are particularly advisable on public walkovers and those that are high above the ground. Railings should be at least three feet high.

To enable wheelchair use on a walkover, inclined ramps with a 20 percent slope (a one-foot rise for every five feet in length) may be built at each end of the structure. Ramps are recommended for any large public walkover.

Walkovers should be inspected on a regular basis and promptly repaired as needed. To avoid damage, workers should enter the dune area on foot rather than by vehicle.

Common walkover structures are preferred for subdivisions to minimize damage to dunes by the proliferation of walkovers.

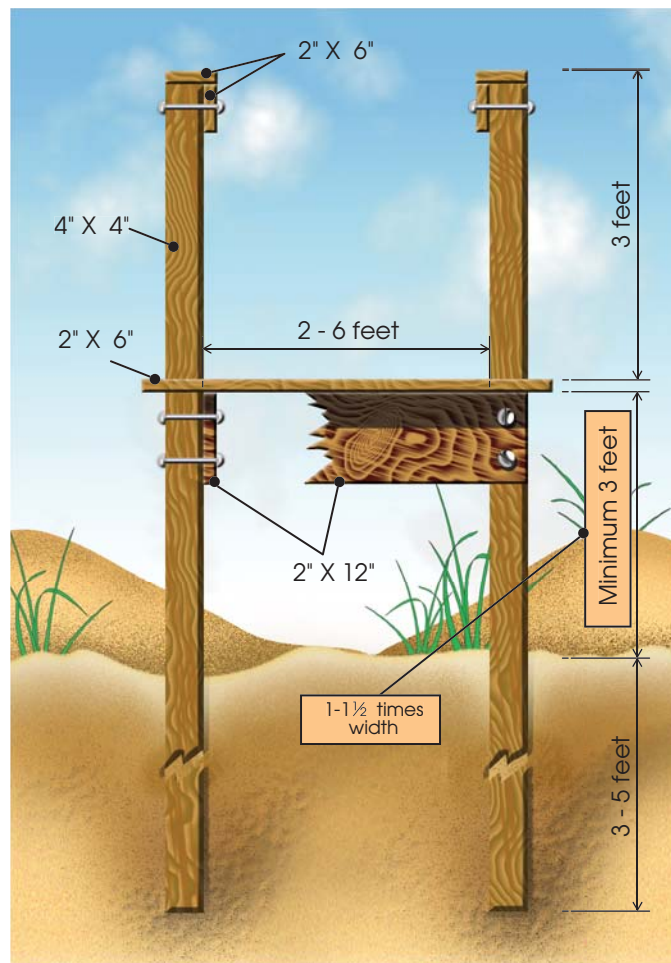
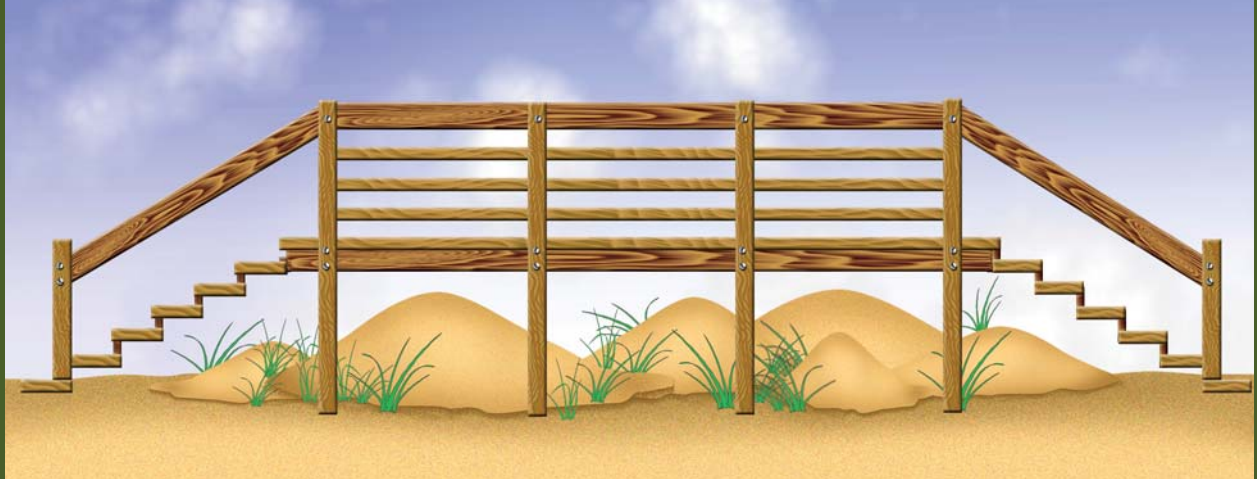


Figure 24. Construction details for a dune walkover.

Walkover Designs

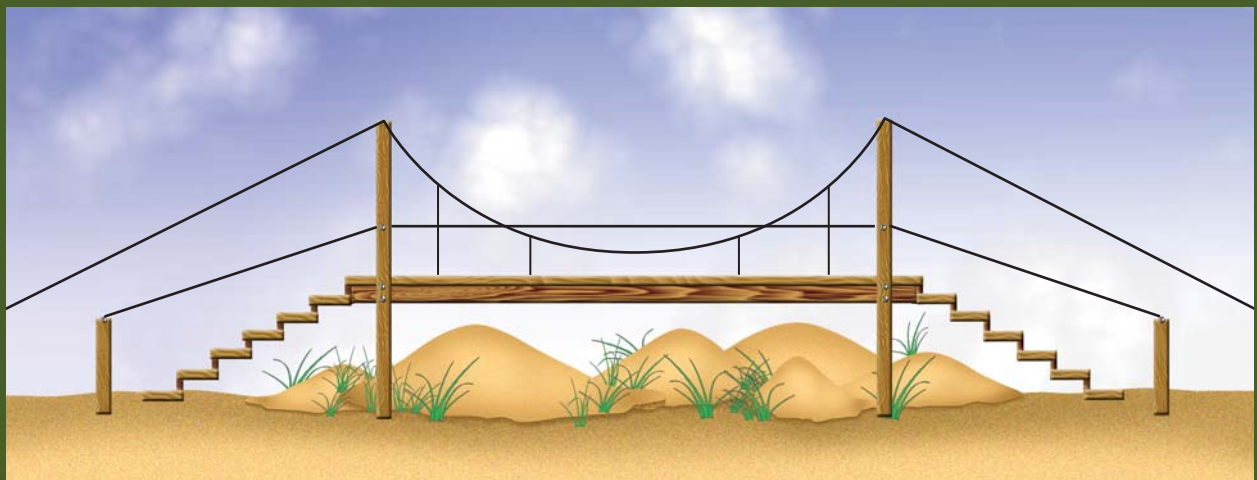
Figure 25 A and B show two of the most common designs for dune walkovers in Texas and are variations of the common pier-supported structure employing telephone pole or fence post piers. Design A has a flat deck with steps at each end. Design B has ramps instead of steps, and the deck is arched where dune formations are highest. **Figure 25 C** may be adapted for access over areas that cannot be disturbed. The conventional pier-supported walkover is relatively easy to build, but the services of a qualified contractor or architect may be required for more accommodating designs. Prior to construction, check with the local building inspector for preferred specifications for dune walkovers.



(A) Pier-supported with steps



(B) Pier-supported with ramps



(C) Suspended

Figure 25. Dune walkover designs.

Beach access and DRAINAGE

Access Roads

The need for public roads to provide access to beaches often conflicts with the need to protect dunes; however, damage to dune areas by access roads can be minimized if the roads are properly designed.

Roads constructed parallel to the shoreline should be located as far landward of the dunes as possible. Beach access roads built perpendicular to the beach should be located in washover or blowout areas whenever possible, following natural land contours.

Beach access roads should be oriented at an angle to the prevailing wind direction. This will reduce the chance that water and wind will be channeled along them and erode the dunes at the sides of the road cuts (fig. 26). Access roads near beaches should be elevated (similar to a speed bump) to reduce channelization of water during high tides (fig. 27).

To minimize dune destruction, access roads should be as narrow as practicable. Any dune area damaged during road construction should be revegetated. Sand fencing can be used to retard erosion along the sides of the roads.

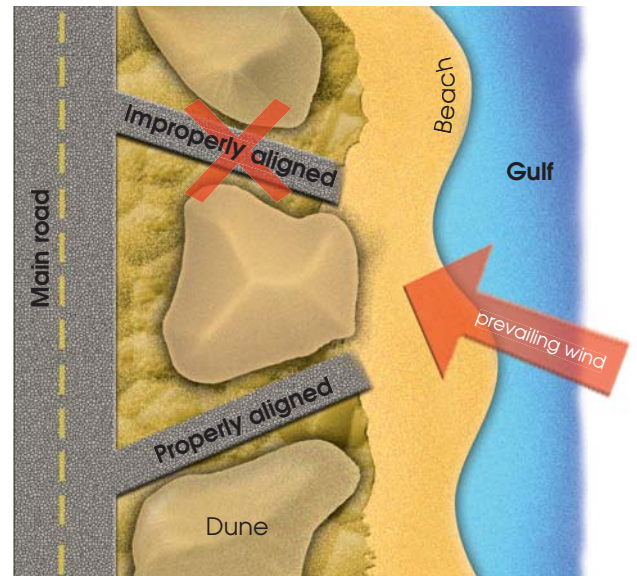


Figure 26. Alignment of beach access roads.

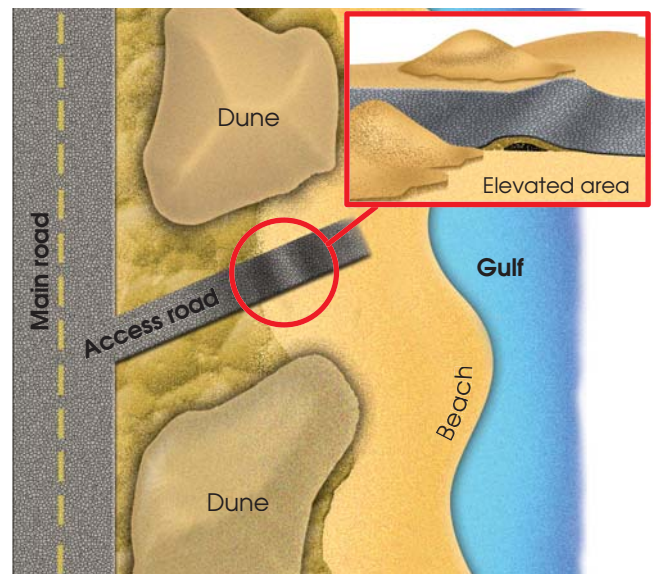


Figure 27. Elevating beach access roads at beach juncture.

Drainage

On an undeveloped barrier island, rainwater generally seeps into the ground or drains toward open water. As an island is developed and land is covered with buildings and pavement, the amount of permeable land surface exposed to absorb rainfall is reduced, and runoff increases. On barrier islands with dense urban development or areas where the contour of the land has been altered, storm runoff does not follow the natural course to the Gulf and can create a washout, resulting in flooding of shorefront property. In addition, the washout exposes land and buildings behind the dunes to further flooding by storm surge.

Drainage patterns resulting from construction must not erode dunes, the public beach, or adjacent properties. General Land Office rules require that new channels be directed inland instead of through critical dunes toward the gulf. Damage to dunes and to property behind them can be prevented or halted by the installation of a retention pond to collect

and contain rainwater until it can seep into the ground. Either man-made or natural swales will serve this purpose. The pond should be large enough to contain the anticipated volume of runoff and located where it will receive the maximum amount of drainage (**fig. 28**). A qualified professional should design the system and oversee its construction.

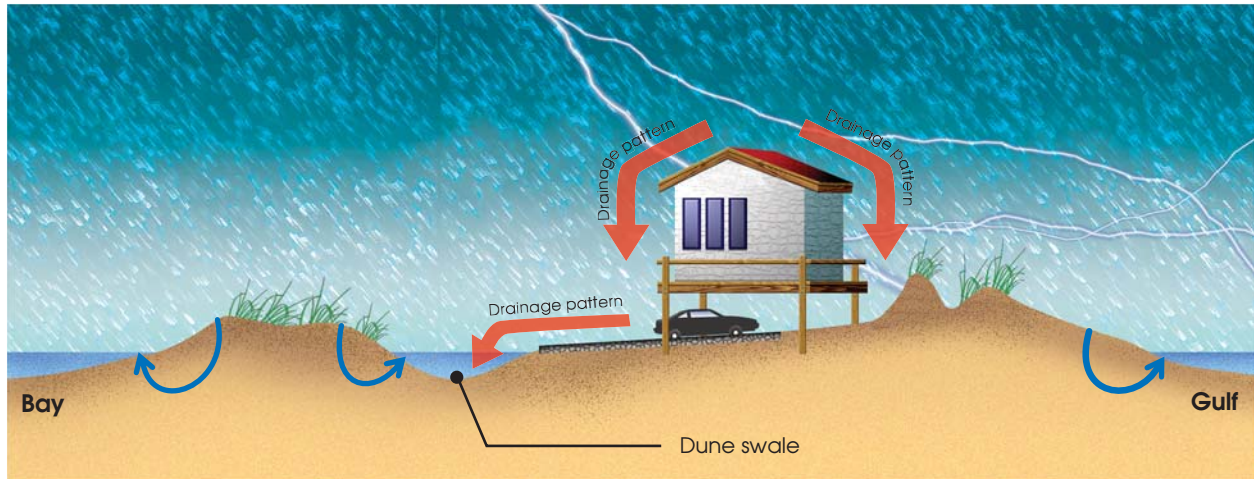


Figure 28. Utilizing a retention pond for drainage.

Beach access and Dune PROTECTION LAWS

Any group or individual planning to undertake a dune protection or improvement project on the Texas coast must be aware of federal, state, and local laws and regulations that apply to the proposed action.

Federal Guidelines

In 1987, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, and the U.S. Department of Agriculture Natural Resources Conservation Service (then the Soil Conservation Service) drafted the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. Federal permits must be obtained from the Corps of Engineers for activities in these areas. Jurisdictional wetlands are identified on the basis of plant type, soils, and local hydrology.

In many cases, activities in coastal sand dunes will not affect jurisdictional wetlands and no federal permit will be required; however, seasonally wet swales between dunes may be considered wetlands. Questions regarding jurisdictional wetlands in Texas and procedures for obtaining proper permits can be directed to the local county commissioners court or to the U.S. Army Corps of Engineers, Galveston District (see “Where to Get Help”).

The Federal Emergency Management Agency (FEMA) classifies all foredunes as “coastal high-hazard areas,” or “high-velocity zones” (V-zones). A “V-zone” is defined as “a special flood hazard area extending from offshore to the inland limit of a foredune along the open coast, and any other area subject to high velocity wave action from storms or seismic sources.”

Foredunes are included in V-zones because they absorb the brunt of storm attack. FEMA requires more rigorous construction standards within V-zones and also prohibits “any human-caused alterations of sand dunes which could increase potential flood damage.” For more information concerning V-zones, and to obtain flood maps, contact a FEMA representative or your local floodplain coordinator. The Texas Natural Resource Conservation Commission is the FEMA state liaison for the National Flood Insurance Program (see “Where to Get Help”).

State Laws

The Open Beaches Act (Chapter 61 of the Texas Natural Resources Code), passed by the Texas Legislature in 1959, codified the public's common law right of free and unrestricted access to the “public beach,” which extends from the line of mean low tide to the line of vegetation on the shoreline bordering the Gulf of Mexico. The act makes it unlawful to prevent or impede access to or use of the public beach by erecting barriers or by posting signs declaring a beach closed to the public.

The Texas General Land Office (Land Office) can help determine whether a dune vegetation project, a dune-building structure, a dune walkover, or signs or fencing erected to protect a dune vegetation project site violates the provisions of this act (see “Where to Get Help”).

The Dune Protection Act (Sections 63.001-63.181 of the Texas Natural Resources Code), enacted in 1973 and amended by the Texas Legislature in 1991, requires the commissioners court of any county with public beaches bordering on the Gulf of Mexico to establish a dune protection line on the Gulf shoreline. This requirement applies to mainland shoreline fronting the open Gulf as well as to the Gulf shoreline of islands and peninsulas. The county may allow the governing body of a municipality to assume this responsibility within its corporate limits and extraterritorial jurisdiction.

The dune protection line can be established up to 1,000 feet landward of the mean high tide line. A permit from the county commissioners court or city is required for most activities seaward of the line.

Questions about dune regulations should be directed to the county commissioners court, city, the Land Office, or the Attorney General's Office (see “Where to Get Help”).

“Where to Get Help” Refer to page 25

Texas Coastal Management Program

The Texas Coastal Management Program (CMP) contains a series of goals and policies aimed at protecting the Texas coastal environment. Texas receives funding from the federal government for coastal projects and the Land Office administers the grants program for these projects. The CMP directive is to review federal actions, any activity or project, and applications for federal assistance under other federal programs for consistency with the goals and policies of the CMP. CMP guidelines allow the Texas Coastal Coordination Council (CCC) to review coastal projects for consistency. The CCC may review applications for federal assistance, beachfront construction certificates and dune protection permits issued by local governments, funds for dune restoration and walkovers, and local government dune protection and beach access plan certifications.

Coastal Erosion Planning and Response Act

In 1999, the Texas Legislature passed the Coastal Erosion Planning and Response Act (CEPRA) to provide funding to coastal communities for projects that slow the effects of coastal and shoreline erosion. Dune restoration and beach nourishment projects may be funded through this program. Communities may submit proposals to the Land Office for such projects.

Removal of Sediments

Sections 61.211 through 61.227 of the Texas Natural Resources Code regulate the removal of sand, marl, gravel, and shell from islands, peninsulas, and land within 1,500 feet of mainland public beaches outside corporate limits. A permit must be obtained from the relevant county commissioners court for the excavation of any of these materials unless the material is to be moved by a landowner, or with a landowner's consent, from one location to another on the same piece of property. No permit is required if the removal is officially undertaken by a federal, state, or local governmental entity. An incorporated city, town, or village may not authorize the removal of sand, marl, gravel, or shell from a public beach within its boundaries for any purpose other than the construction of a public-sponsored recreational facility or a shoreline protection structure.

The Texas Parks and Wildlife Department, under Chapter 86 of the Parks and Wildlife Code, regulates the disturbance and removal of marl, sand, gravel, shell, or mudshell located within tidewater areas for any purpose other than that necessary or incidental to navigation or dredging under state or federal authority. Questions may be directed to this department (see “Where to Get Help”).

“Where to Get Help” Refer to page 25



WHERE TO GET HELP

FEDERAL

For construction standards in floodplains and coastal high-velocity zones:

★**Federal Emergency Management Agency, Region VI**
Federal Center
800 N. Loop 288
Denton, Texas 76201-3698
(800) 424-8802
www.fema.gov

For information on permitting in jurisdictional wetlands:

★**U.S. Army Corps of Engineers Galveston District**
P.O. Box 1229
Galveston, Texas 77553-1229
(409) 766-3004
www.swg.usace.army.mil

Corps of Engineers - Corpus Christi
5151 Flynn Parkway, Suite 306
Corpus Christi, Texas 78411
(361) 814-5847

For technical assistance in designing a dune restoration project:

★**U.S. Department of Agriculture Natural Resources Conservation Service**
101 S. Main Street
Temple, Texas 76501-7682
(817) 774-1261
www.tx.nrcs.usda.gov

★**Kika de la Garza Plant Materials Center**
3409 N. FM 1355
Kingsville, Texas 78363
(361) 595-1313
john.reilly@tx.usda.gov

STATE

For information on permitting coastal construction:

★**Texas General Land Office**
Coastal Resources
P.O. Box 12873
Austin, Texas 78711-2873
(800) 998-4GLO
www.glo.state.tx.us

Texas GLO - Upper Coast
11811 North D Street
La Porte, Texas 77571
(281) 470-1191
(281) 470-8071 fax

Texas GLO - Middle/Lower Coast
6300 Ocean Drive, Ste. 2400
Corpus Christi, Texas 78412
(361) 825-3030
(361) 825-3040

★**Coastal Coordination Council**
Permit Service Center
Texas A&M University-
Corpus Christi
Natural Resources Building
Suite 2800
6300 Ocean Drive
Corpus Christi, Texas 78412-5599
(866) 894-3578

For information on sand, marl and gravel removal from tidal waters:

★**Texas Parks and Wildlife Department**
Resource Protection Division
4200 Smith School Road
Austin, Texas 78744-3292
(512) 389-4864
www.tpwd.state.tx.us

For information on the state's floodplain maps:

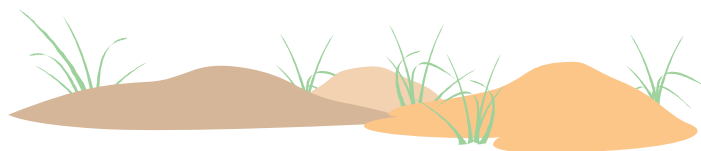
★**Texas Commission on Environmental Quality**
Floods and Floodplains
P.O. Box 13087
Austin, Texas 78711-3087
(512) 239-4771
www.tceq.state.tx.us

COASTAL COUNTIES

Coastal counties that administer dune protection and beachfront construction programs:

★**JEFFERSON COUNTY**
County Engineer
Jefferson County Courthouse
1149 Pearl Street, 5th floor
Beaumont, Texas 77701-3619
(409) 835-8584

★**CHAMBERS COUNTY**
Floodplain Administrator
P.O. Drawer H
Anahuac, Texas 77514-1708
(409) 267-8379



★**GALVESTON COUNTY**

Asst. Floodplain Administrator
123 Rosenberg, Suite 4157
Galveston, Texas 77550-1403
(409) 770-5552

★**BRAZORIA COUNTY**

County Floodplain Administrator
200 E. Locust, Room 8
Angleton, Texas 77515-4684
(979) 849-5711

★**MATAGORDA COUNTY**

Floodplain Management
2200 7th Street
Bay City, Texas 77414-0571
(979) 244-2717

★**NUECES COUNTY**

County Engineer
901 Leopard St., Suite 103
Corpus Christi, Texas 78401-3697
(361) 888-0490

★**CAMERON COUNTY**

Director
Cameron County Park Systems
P.O. Box 2106
South Padre Island, Texas 78597-2106
(956) 761-5493

★**VILLAGE OF JAMAICA BEACH**

City Administrator
P.O. Box 5264
Jamaica Beach, Texas 77554-5264
(409) 737-1142

★**VILLAGE OF SURFSIDE BEACH**

Mayor
1304 Monument Drive
Surfside Beach, Texas 77541-9999
(979) 233-1531, ext. 4

★**TOWN OF QUINTANA**

Mayor
814 N. Lamar
Quintana, Texas 77541
(979) 233-0848

★**CITY OF PORT ARANSAS**

City Manager
P.O. Box 1090
Port Aransas, Texas 78373-1090
(361) 749-4111

★**CITY OF CORPUS CHRISTI**

Director of Planning and
Development
Planning Department
P.O. Box 9277
Corpus Christi, Texas 78469-9277
(361) 880-3560

★**TOWN OF SOUTH PADRE ISLAND**

Department of Public Works
P.O. Box 3410
South Padre Island, Texas 78597-3410
(956) 761-1025

**OTHER SOURCES OF
VEGETATION
INFORMATION**

For native plant information:

★ **Lady Bird Johnson**

National Wildflower Center
4801 La Crosse Avenue
Austin, TX 78739-1702
(512) 292-4200
www.wildflower.org

For native dune plant availability:

★ **Texas A&M University-Galveston**

Marine Biology Department
Galveston, Texas 77553-1675
(409) 740-4528
www.tamug.tamu.edu/mars/

★ **Apache Ecological Service**

27426 Dobbin Hufsmith Road
Magnolia, Texas 77354
(281) 356-3135
www.apacheco.com

COASTAL MUNICIPALITIES

**Coastal municipalities that administer
dune protection and beachfront
construction programs:**

★**CITY OF PORT ARTHUR**

Director of Planning
P.O. Box 1089
Port Arthur, Texas 77641-1089
(409) 983-8138

★**CITY OF GALVESTON**

Director of Planning and
Community Development
823 Rosenberg, Room 401
Galveston, Texas 77550-2198
(409) 797-3660



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Contributors

The original contributors to this manual were Michael H. McKann, Jerry McAtee, John Campbell, Eddie Seidensticker, Ray Quay, Craig Stafford, and John Taylor. Revisions by Kimberly K. McKenna.

Acknowledgements

Critical reviews by James C. Gibeaut, Bureau of Economic Geology, University of Texas at Austin, and by Land Office Coastal Resources and Legal Services staff improved the content of the manual.

Dune Restoration Implementation Time Line

Day 0 - Receive approved Dune Restoration Plan from the City of Galveston.

Day 0 - Take pictures of Dune Restoration Area prior to commencement of operations. Schedule equipment to move “Beach Grade Sand” to Dune Restoration Area.

Day 1 to Day 3 - Construct dunes in Dune Restoration Area. Remove plants and their ball root of sand material from the dunes to be removed (Area “A”) and from dunes to be disturbed in the Dune Restoration Area (Area “B”) and set aside for re-planting. Insure that plant material remains viable with artificial shade and moisture. 1) Load “Beach Quality” sand at approved sand source and haul to Dune Restoration Area. Shape “Beach Quality” sand in Dune Restoration Area per Restoration Plan. Ten cubic yards of “Beach Quality” sand will be needed. 2) Place the sand within the defined Dune Restoration Area with minimal impact to existing dune. Avoid impact to area South of Dune Restoration Site. 3) Supplement the imported sand with the approximate 43 cubic yards recovered from Area A. The recovered material should be placed and shaped immediately to avoid moisture loss. Insure the proximate 3:1 slope for the constructed dune. The General Land Office (GLO) will require a final, revegetated dune height of four foot. Dimensions of the constructed dune should match the design plan in the approved permit. 4) Take pictures of constructed dune once imported sand has been installed according to the Restoration Plan.

Day 4 to Day 5 – Establish vegetation. Distribute, and plant the recovered plant material at a spacing not greater than one viable plant per square yard. A greater density of plant material will help to stabilize the new dune, decrease plant mortality, and decrease the length of time required for complete vegetative stabilization of the dune. The General Land Office publication, Coastal Dunes Dune Protection and Improvement Manual from the Texas Gulf Coast, Fifth Edition states, “One thousand plants should stabilize a 50- by 100-foot strip within a year.”

The soil of the newly constructed dune must be moist prior to planting. To compensate for hot dry sand, hand dig the intended plant site and water prior to placing the plant in the soil. Cover the roots with beach quality sand then firmly pack to remove air pockets and water the new plant again. Repeat this operation

until all recovered plant material has been utilized. Should additional plant material be needed, proper recovery techniques as outlined in the above referenced document must be utilized. Generally, this means to collect no more than one plant per square yard and do so only from established dunes where you have received permission to collect plants. Dormant seeds in the newly constructed dune should begin to germinate with the addition of artificial watering or rainfall to assist the planted material in the dune stabilization. **Water the transplanted vegetation as needed.** Allow the plant material to approach, but not exceed, the wilt stage before thorough watering. Do not water without watering completely.

NOTE: The proper harvest of dune material from existing dunes must not remove more than one plant per square yard. Do not harvest material from dunes without permission, and where removal would leave less than one viable plant per square yard.

Day 6 - NOTIFY TEXAS GENERAL LAND OFFICE AND CITY OF GALVESTON ONCE THE INITIAL DUNE RESTORATION EFFORT IS COMPLETE, OR WITHIN TEN DAYS OF INITIATION, WHICHEVER COMES FIRST. WRITTEN NOTIFICATION SHOULD INCLUDE PICTURES.

Day 90 – First Quarterly Report to the General Land Office and the City of Galveston. Report should include narrative and pictures which document the progression of the vegetative cover of the Restoration Dune to match the percent cover of the restoration area prior to enhancement. **Note: The Applicant will act in their own best interest to apply water to the newly created Restoration Dune in the absence of natural rainfall until the threshold of GLO approval is obtained.**

From Day 90 to 3 year anniversary of project initiation, the applicant must submit quarterly reports (see above) until the General Land Office and City of Galveston are satisfied with the dune restoration effort.

Implementation of the action items in this time line will ensure that the Restoration Dune will be constructed, and re-vegetation started, prior to any lot grading or home construction.



City of Galveston

September 18, 2019

Galveston County
722 Moody Ave
Galveston, TX 77550
c/o Amani Engineering, Brian Ross

via E-mail: Nancy.Baher@co.galveston.tx.us
bross@amaniengineering.com

RE: **19P-034 (11743 San Luis Pass Road)** Request for a Beachfront Construction Certificate/Dune Protection Permit in order to reconstruct an off-beach parking area and dune walkover. Property is legally described as Reserve C, Escapes to the Gulf at Galveston (2005), a Subdivision in the City and County of Galveston, Texas.
Applicant: Amani Engineering / Brian Ross, P.E.
Property Owner: Galveston County

Mr. Ross:

The Planning Commission, at their meeting on September 17,, 2019, voted to approve the above referenced request for a Beachfront Construction Certificate/ Dune Protection Permit with the following conditions:

Specific Conditions to Case 19P-034:

1. If compensation is not completed prior to the commencement of construction, the applicant is required to provide the City with proof of financial responsibility in an amount equal to that necessary to complete the mitigation. The applicant has three years from the time compensation efforts begin to achieve compensation at a 1:1 ratio;
2. The applicant shall adhere to all comments from the Texas General Land Office (GLO) included in Attachment "F":
 - a. The applicant proposes to install fibercrete pavers at both the seaward and landward terminus of the proposed dune walkover, which is prohibited. The City is prohibited from authorizing any construction other than dune walkovers and man-made vegetated mounds on the public beach. The City may also not authorize paving the ground in the area landward of 25 feet from the north toe of the dune or paving outside the footprint of a habitable structure in the area more than 25 feet landward from the north toe of the dune;



City of Galveston

- b. The applicant should terminate the dune walkover no farther seaward than the line of vegetation. Dune walkovers may not impede or restrict public access to the beach at normal high tide;
- c. The City shall require the applicant to relocate the walkover to follow any landward migration of the public beach or seaward migration of dunes;
- d. With the exception of the paired posts constructed on each side of the proposed dune walkover, the support posts must be placed at intervals no closer than six feet and in such a manner that new posts are not needed if the walkway requires relocation or elevation in the future;
- e. The proposed dune walkover must be constructed to maintain ½-inch spacing between the slats to allow rain and sand to pass through the decking;
- f. Concrete may not be used to stabilize the base of the pilings of the dune walkover;
- g. The dune walkover shall be constructed at a height above the highest dune of not less than the width of the dune walkovers and maintain this height over the entire dune area;
- h. Construction of the proposed dune walkover should conform to the GLO's guidelines provided in the Dune Protection and Improvement Manual for the Texas Gulf Coast, which is located at <http://www.glo.texas.gov/coast/coastal-management/forms/files/dune-protection-manual-gpb.pdf>;
- i. The City must require the applicant to begin compensation for any adverse effects to dunes and dune vegetation prior to or concurrent with the commencement of construction. If compensation is not completed prior to commencement of construction, the City shall require that the applicant provide the City with proof of financial responsibility in an amount equal to that necessary to complete mitigation. This can be done in the form of an irrevocable letter of credit, performance bond, or any other instrument acceptable to the local government;
- j. The constructed dune must be continuous with any surrounding naturally formed dunes and must approximate the natural position, contour, volume, elevation and vegetative cover of any naturally formed dunes in the restoration area;
- k. The applicant must restore or repair dunes using indigenous vegetation that will achieve the same protective capability as the surrounding natural dunes;
- l. The City must require the applicant to conduct compensation efforts continuously until the repaired, rehabilitated, and restored dunes and dune vegetation are equal or superior to the pre-existing dunes



and dune vegetation. These efforts shall include preservation and maintenance pending completion of compensation;

- m. The City shall provide written notification to the GLO after determining that the compensation is complete. The GLO may conduct a field inspection to verify compliance;
- n. The City must ensure the proposed construction is consistent with at least the minimum FEMA requirements or with the FEMA approved local ordinance;
- o. The proposed construction activities must not result in the potential for increased flood damage to the proposed construction site or adjacent property, result in runoff or drainage patterns that aggravate erosion, cause significant changes to dune hydrology, adversely affect dune complexes or dune vegetation, or significantly increase the potential for washovers or blowouts to occur;
- p. The City shall not issue a certificate or permit authorizing construction unless the construction activities will minimize impacts to natural hydrology. Such projects shall not cause erosion of adjacent properties, critical dune areas, or the public beach;

Standard Conditions

- 3. Work approved under this permit shall be completed within three (3) years from the date this permit is issued. If work is not completed in this time period, it will be necessary for the applicant to reapply for a Beachfront Construction Certificate/Dune Protection Permit, unless an extension of the period, prior to the expiration, has been submitted to the Texas General Land Office for review and approved by the City. The applicant shall submit an annual written report to the City on the progress of the construction project and compliance with the approved permit;
- 4. The applicant shall adhere to all comments/conditions received from city departments. Should conformance with the comments/conditions require alterations to the project, as approved, the case must be returned to the Planning Commission for additional review and approval;
- 5. The applicant shall ensure that, as a result of the construction, runoff or drainage patterns are not affected such that they would aggravate erosion on or off site, result in significant changes to dune hydrology, or significantly increase the potential for washovers or blowouts to occur. Runoff should be directed toward the drainage infrastructure in the subdivision and in the street landward of the lot, and away from the dune area. Runoff within the lot must approximate natural rates, volumes, and direction of flow in order to avoid erosion and dune damage. Drainage plans shall be submitted to the City of Galveston Public Works Department, Division of Engineering for approval;



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6. The area seaward of the dwelling shall be designated a dune protection area, prohibiting any alteration of natural conditions in this area, except for any future proposed dune walkovers, approved by the Development Services Department and the Texas General Land Office under separate review;
7. The applicant shall coordinate any/all dune enhancement plans with the Development Services Department; and,
8. The applicant must adhere to all aspects of Section 29: Planning-Beach Access Dune Protection & Beachfront Construction.

Any changes (whether intentional, unintentional, or unanticipated) in the project design, construction methods, construction materials, or in the condition of the construction site that occur after this permit has been issued constitute a "Material Change." Should a material change exist, no further construction is authorized under this permit until the changes have been reviewed by the GLO and City for consideration of an amendment to this permit. The City may conduct inspections during and following completion of construction.

Work approved under this permit shall be completed within three (3) years of the date the permit was issued. The applicant shall submit an annual written report to the City on the progress of the construction project and compliance with the approved permit. The report shall be submitted no later than one (1) year from the date the permit was issued, with subsequent reports submitted thereafter. If work is not completed within this timeframe, it will be necessary for the applicant to reapply for a Beachfront Construction Certificate/Dune Protection Permit, unless an extension of the period, prior to the expiration, has been submitted to the Texas General Land Office and approved by the City.

If you have any questions, or need further assistance, please contact our office at (409)797-3660 or CoastalResources@GalvestonTX.Gov

Thank you,

Dustin Henry, AICP

Coastal Resource Manager