



JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6

6550 Walden Road
P. O. Box 20078
Beaumont, Texas 77720
(409) 842-1818

SPECIFICATIONS

For

**FMA GREEN POND GULLY DETENTION DITCH 600
DOWNSPOUTS**

**BID PROPOSAL for
IFB 15-002/SL CELLULAR CONCRETE MATTRESSES
for EROSION CONTROL**
(This is a material only bid package)

January 20, 2015

Included:

- a. Legal Notice**
- b. Notice to Bidders**
- c. Instructions to Bidders**
- d. Bid Form**
- e. Section 02279 – Cellular Concrete Mattresses**
- f. Map**
- g. Drawings**

LEGAL NOTICE
Advertisement for Invitation for Bids

January 20, 2015

Notice is hereby given that sealed bids will be accepted by Jefferson County Drainage District No. 6 for Cellular Concrete Mattresses for Erosion Control. Specifications may be obtained from Jefferson County Drainage District No. 6 offices located at 6550 Walden Rd., Beaumont, Texas (409) 842-1818.

Bids are to be addressed to Jefferson County Drainage District No. 6 with Sealed Bid and bid name marked on the outside of the envelope. Bidders shall forward their bid to the address shown below. Late bids will be rejected and returned to the bidder. Bids will be publicly opened and read aloud in the Administrative Bid opening at our offices at the time and date below. The right is reserved by Jefferson County Drainage District No. 6 as its interests may require, to accept or to reject any or all bids and to waive any informality in the bids received.

BID NAME: **IFB 15-002/SL Cellular Concrete Mattresses for Erosion Control for FMA Green Pond Gully Detention Ditch 600 Downspouts**

SEALED BID

DUE DATE/TIME: **February 5, 2015 at 2:00 p.m.**

MAIL OR DELIVER TO: **Jefferson County Drainage District No. 6**
6550 Walden Rd.
Beaumont, Texas 77707

Any questions relating to these requirements should be directed to Stephen LeBlanc, Project Manager at (409) 842-1818.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

RESPONDENTS ARE STRONGLY ENCOURAGED TO CAREFULLY READ THE ENTIRE INVITATION.

Submitted by:

Stephen LeBlanc
Project Manager
Jefferson County Drainage District No. 6

Advertised: Beaumont Enterprise (01-21-15 & 01-28-15)



NOTICE TO BIDDERS

***IFB 15-002/SL Cellular Concrete Mattresses for Erosion Control
for FMA Green Pond Gully Detention Ditch 600 - Downspouts***

Sealed Bids Shall be Submitted To:

Jefferson County Drainage District No. 6
6550 Walden Road
Beaumont, Texas 77707

Or mailed to:

Jefferson County Drainage District No. 6
P. O. Box 20078
Beaumont, Texas 77720

Mark Envelope:
SEALED BID

***IFB 15-002/SL Cellular Concrete Mattresses for Erosion Control
for FMA Green Pond Gully Detention Ditch 600 - Downspouts***

The District will not be responsible for unmarked or improperly marked envelopes.

Bids will be received until opening at 2:00 pm, February 5, 2015.

All bids must be received at Jefferson County Drainage District No. 6 offices before opening date and time. Bids received after the date and time above will be considered void and unacceptable and returned to the vendor unopened. Jefferson County Drainage District No. 6 is not responsible for lateness or non-delivery of mail, etc. Facsimile Transmittals Shall Not Be Accepted.

The enclosed Notice to Bidders and accompanying Specifications and Bid Forms must be completed prior to submission. Failure to complete forms/affidavits may render your bid null and void. Bids will be opened and read aloud the day of the bid opening. District office hours are 7:00 am to 5:00 pm daily Monday through Friday.



Instructions to Bidders

Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

**Jefferson County Drainage District No. 6
6550 Walden Rd
Beaumont, Texas 77707**

Or

**Mailing address:
P. O. Box 20078
Beaumont, Texas 77720**

Bids will be accepted at the above address until the 2:00 pm, February 5, 2015, and immediately after will be publicly opened and read aloud.

All bids shall be tightly sealed in an opaque envelope and plainly marked with the bid name, due date, and the bidders name and address.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County Drainage District No. 6 and will be a matter of public record available for review.

Project Description

Jefferson County Drainage District No. 6 is requesting bids for approximately 62,784 sq. ft. of cellular concrete mattresses for erosion control to be placed next to the FMA Green Pond Gully Detention Ditch 600 - Downspouts in Jefferson County, Texas.



Preparation of Bids

Prices are requested for:

Supply approximately 62,784 sq. ft. of cellular concrete mattresses for erosion control to be placed next to the FMA Green Pond Gully Detention Ditch 600 - Downspouts in Jefferson County, Texas. Refer to attached specifications and drawings for details.

Pricing shall include delivery to the job site. Unloading will be by others.

Shop drawings shall be submitted for review prior to order placement. Shop drawings will include cellular mat layout, layout sequence, anchor details, mat junction details, anchor to mat connection details, and details for all grade changes.

Price will include any and all material for junction connections and anchoring.

After the successful bidder has been selected, Jefferson County Drainage District No. 6 and the bidder will coordinate to design the actual project scope and mat configuration to meet the project requirements.

Under the "Hazardous Communication Act," commonly known as "Texas Right to Know Act," a bidder must provide the District with a Material Safety Data Sheet which is applicable to hazardous substances defined in the act. Failure to supply these documents by any bidder will be a cause to reject any bid.

The bids shall be legibly printed in ink or typed.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder. Bids cannot be altered or amended after submission deadline. Any alterations or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder. The bid shall be legally signed and shall include the complete address of the bidder. Jefferson County Drainage District No. 6 is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any disagreements in the bid as a result of omission, error, or illegible wording shall be interpreted in the favor of Jefferson County Drainage District No. 6.



Ownership of Documents

The State of Texas and Jefferson County Drainage District No. 6 shall have unlimited rights to technical or other data resulting from the performance of services under this bid. It is agreed that all reports, drafts of reports, or other material, data, and drawings, associated with this bid and developed by the contractor shall become the joint property of the contractor, Jefferson County Drainage District No. 6 and State of Texas.

State Auditor Clause

By executing this bid, the bidder, if awarded a contract, accepts the authority of the State Auditor's Office, under direction of the legislative audit committee, to conduct audits and investigations in connection with any and all state funds received pursuant to a contract. The successful bidder or any of its subcontractors shall comply with and cooperate in any such investigation or audit. The successful bidder agrees to provide the State Auditor with access to any information the State Auditor considers relevant to the investigation or audit. The successful bidder also agrees to include a provision in any subcontract related to this bid that requires the subcontractor to submit to audits and investigation by the State Auditor's Office in connection with any and all state funds received pursuant to the bid and or contract, if an award is made to the bidder.

Financial Records

The successful bidder and its subcontracted parties shall maintain satisfactory financial accounting documents and records, including copies of invoices and receipts, and shall make them available for examination and audit by the State or Jefferson County Drainage District No. 6. Accounting by successful bidder and its subcontracted parties shall be in a manner consistent with generally accepted accounting principles.

No Debt Against the State

Any contract issued as a result of this bid is in agreement and shall not be construed as creating any debt by or on behalf of the State of Texas, and all obligations of the State of Texas are subject to the availability of funds.



The validity or construction of any Agreement resulting from this bid, as well as the rights and duties of the parties herein under, shall be governed by the laws of the State of Texas, in Jefferson County.

Rejection or Withdrawal

Jefferson County Drainage District No. 6 reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids.

Award

The bid will be awarded to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to Jefferson County Drainage District No. 6, price and other factors considered. Unless otherwise specified, Jefferson County Drainage District No. 6 reserves the right to accept a bid in whole or in part, and to award the bid that is deemed to be in the best interest of Jefferson County Drainage District No. 6.

In evaluating bids, Jefferson County Drainage District No. 6 shall consider the qualifications of the bidders, and where applicable, operating cost, delivery time, performance data, and guarantees of material and equipment. In addition, Jefferson County Drainage District No. 6 may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County Drainage District 6 reserves the right to award this contract on the basis of lowest and best bid, in accordance with the laws of the State of Texas, and/or reject any or all bids.

NO PERSON shall have the authority to verbally alter these specifications. All changes will be made in writing and sent to each person having a bid package.



Contract/Notice to Proceed/Purchase Order

All specifications listed will be incorporated into and become part of a contract upon notification of award to a bidder. The successful bidder may not commence work until authorized to do so by Jefferson County Drainage District No. 6.

Delivery

Bids shall include all charges for delivery and/or standby by time, etc. Unless otherwise stated by the bidder, prices bid will be considered as being based on F.O.B. delivered to project site laydown yard, located near the FMA Green Pond Gully Detention Ditch 600 - Downspouts. (see project aerial map).

Payments

After an award of contract, Contractor will submit all billings to the District with proper documentation. Providing the invoicing has been received with correct format within 5 working days before the next regularly scheduled Board of Directors meeting, held twice monthly, the payment will be processed and mailed within 3 business days after each board meeting.

For further information concerning these specifications, please contact the following:

Stephen LeBlanc, Project Manager
Phone: (409) 842-1818
Fax: (409) 842-2729



Certification

By signing this page, bidder certifies:

1. The submission of the offer did not involve collusion or other anti-competitive practices.
2. The bidder has not given or offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
3. The bidder hereby certifies that the individual signing the bid is an authorized Agent for the bidder and has the authority to bind the bidder to the contract.
4. The bidder understands that Jefferson County Drainage District No. 6 makes No guarantee of any amount of work.

By execution of this document, bidder accepts all general and special conditions of these specifications. This entire document will be included as part of the final contract document for successful bidder.

Bidder

Date

Address

Address

Phone number



BID FORM
BIDDER MUST RETURN THIS PAGE WITH BID
January 20, 2015

FMA GREEN POND GULLY DETENTION DITCH 600
DOWNSPOUTS

BID PROPOSAL for
IFB 15-002/SL CELLULAR CONCRETE MATTRESSES
for EROSION CONTROL

Company Name: _____

Street Address: _____

Mailing Address: _____

City, State & Zip: _____

Phone: _____

Signature of Bidder: _____

Print or Type Name: _____

Title: _____

By execution of this document, bidder accepts all general and special conditions of these specifications. This entire document will be included as part of the final contract document for the successful bidder.



BID FORM
BIDDER MUST RETURN THIS PAGE WITH BID
January 20, 2015

FMA GREEN POND GULLY DETENTION DITCH 600
DOWNSPOUTS

BID PROPOSAL for
IFB 15-002/SL CELLULAR CONCRETE MATTRESSES
for EROSION CONTROL

BASE BIDS:

Approximately 62,784 sq. ft. of cellular concrete mattresses for erosion control to be placed next to the FMA Green Pond Gully Detention Ditch 600 - Downspouts in Jefferson County, Texas, as per the specifications and drawings.

Shoreblock BD-500 or EQUAL

For approximately _____ square feet.

For the sum of: \$ _____ per square foot.

Manufacturer/Model No.: _____.

SECTION 02279
CELLULAR CONCRETE MATTRESSES FOR EROSION CONTROL

PART 1 – GENERAL

1.1 SCOPE OF WORK. The work covered by this Section consists of furnishing all plant, labor, equipment, and materials, and performing all operations in connection with the installation of cellular concrete mattresses in accordance with the lines, grades, design, and dimensions shown on the drawings and as specified herein.

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

American Society for Testing and Materials (ASTM) Publications.

ASTM C 33-93	Concrete Aggregates
ASTM C 140-96B Units	Sampling and Testing Concrete Masonry Units
ASTM C 476-95	Grout for Masonry
ASTM D 698-78	Moisture Density Relationship of Soils
ASTM D 6684	Materials and Manufacture of Articulating Concrete Block (ACB) Revetment Systems

U.S. Federal Highway Administration (FHWA) and U.S. Bureau of Reclamation (USBR) Report.

FHWA-RD-89-199 Hydraulic Stability of Articulated Concrete Block Revetment Systems During Over-topping Flow.

1.3 DELIVERY, STORAGE, AND HANDLING OF MATERIALS.

1.3.1 Delivery and Storage. Materials delivered to the site shall be inspected for damage, unloaded and stored with the minimum of handling. Materials shall be kept free of dirt and debris.

SECTION 02279 – CELLULAR CONCRETE MATTRESSES

1.3.2 Handling. Materials shall be handled in such a manner as to ensure delivery to the site in sound, undamaged condition. Synthetic geotextiles that are not to be installed immediately shall be protected from the direct sunlight and in accordance with the applicable portions of the Section entitled GEOTEXTILES USED AS FILTERS.

1.4 SUBMITTALS. The following shall be submitted in accordance with the Section entitled SUBMITTAL PROCEDURES.

1.4.1 Shop Drawings. At least 30 days prior to the start of any installation of the cellular concrete mats, the Contractor shall submit to the owner shop drawings for the layout and details of the cellular concrete mats. The cellular concrete mats layout shall be to the lines and grades shown on the drawings. The shop drawings shall include layout, layout sequence, anchor details, mat junction details, anchor to mat connection details, and details for grade change.

1.4.2 Representative Samples. Product literature and suitable samples of the cellular concrete mattresses, cable, fittings, anchors and filter fabric shall be submitted to the Owner for approval, prior to delivery of any such material to the site of the work. All samples shall be obtained by the Contractor and delivered at his expense to a point designated by the Owner within 10 days after award of contract. The contractor shall submit the cellular concrete block revetment system Manufacturer's certification that the revetment system and components meet the requirements of this specification.

1.4.3 Documentation of Testing. The contractor shall provide to the owner test results documenting that the revetment system has been tested under controlled flow conditions for hydraulic performance characteristics in accordance with FHWA-RD-89-199, utilizing a 2:1 slope in the direction of flow.

1.5 MEASUREMENT OF CELLULAR CONCRETE MATTRESSES. The unit of measurement for the cellular concrete mattresses shall be by the square foot of cellular concrete mattresses placed.

1.6 PAYMENT for acceptable cellular concrete mattresses delivered and received in good condition will be made at the contract unit price for "Cellular Concrete Mattresses," which prices shall include all costs for furnishing, hauling, and placing the cellular concrete mattresses as specified herein and as shown on the drawings.

PART 2 - MATERIALS

2.1 MATERIALS FOR CELLULAR CONCRETE MATTRESSES.

2.1.1 Cellular Concrete Mattresses shall be manufactured in conformance with the requirements of ASTM D 6684 “Materials and Manufacture of Articulating Concrete Block (ACB) Revetment /Systems”, except that, unless otherwise specified, freeze-thaw requirements shall not apply.

2.1.2 Concrete shall conform to ACI requirements for normal weight concrete and shall have a minimum compressive strength of 4,000 psi at 28 days when tested in accordance with ASTM C140-96B.

2.1.3 Aggregate shall meet the requirements of ASTM C 33 except for grading requirements. Aggregate grading shall be reasonably consistent and shall be well graded from the maximum size, which can be conveniently handled with available equipment.

2.2 CELLULAR CONCRETE BLOCKS shall be formed by a vibratory block forming machine. Cellular concrete blocks shall be interlocking; and penetrations shall be included for revetment cables as necessary to bind the individual blocks into mattresses in two perpendicular directions. Cable penetrations shall prevent any exposure of cables to potential UV degradation within the dimensions of the individual blocks (i.e., cables shall not pass through open areas within the dimensions of individual blocks). The blocks shall be open cell, as shown in the plans, and capable of articulation when formed into mattresses.

2.2.1 Design Requirements. The weight of the block shall have the following minimum requirements:

Product	Nominal Thickness	Weight (lb./sq. ft.)	% Open Area
SHOREBLOCK BD or EQUAL	5.00	40-45	20

2.3 CELLULAR CONCRETE MATTRESSES shall be SHOREBLOCK® BD or EQUAL. Cellular concrete mattresses shall be pre-manufactured as an assembly of concrete blocks when connected into mattresses by the use of revetment cables. Two (2) integral longitudinal cables per block are required, as well as one (1) integral transverse cable. No partial or “half” blocks will be allowed without a transverse

SECTION 02279 – CELLULAR CONCRETE MATTRESSES

cable. The final revetment system must be tied continuously throughout with cables in two perpendicular directions. Proposed equals must be noted as such on the bid proposal. The owner or his engineer reserves the right to accept or reject any proposed equal cellular concrete mattress system for reasons including but not limited to previous performance record, appropriate and applicable testing, hydraulic performance characteristics, and qualified technical support. The following information must be included in the submittal to be considered for approval:

1. Test results documenting the critical shear stress and velocity of the specific revetment system (geometry and thickness) being proposed as an equal utilizing a 2:1 slope in the direction of flow.
2. Manufacturer’s certification that the revetment system designs and components meet all of the requirements of this specification.

2.3.1 Size of Cellular Concrete Mattresses. The Cellular concrete blocks and cables and fittings shall be fabricated at the manufacturer’s plant or another approved location into mattresses with a width of up to 8 feet and a length that is capable of being transported without special permitting.

2.4 REVETMENT CABLE. The concrete blocks shall be bound into mats by the use of polyester revetment cable and fittings. Revetment cables shall be placed in both the longitudinal and transverse directions. Individual blocks shall be interconnected in two (2) perpendicular directions.

2.4.1 Polyester Revetment Cable shall be constructed of high tenacity, low elongating, and continuous filament polyester fibers. Cable shall consist of a core construction comprised of parallel fibers contained within an outer jacket or cover. The weight of the parallel core shall be between 65 to 70 percent of the total weight of the cable. Longitudinal cables shall be sized to provide a minimum cable strength to mat weight ratio of 5:1 for safe material lifting/handling. Additionally, all revetment cable shall have the following minimum physical characteristics:

DIRECTION	NOM. CABLE DIAMETER	APPROX. AVG. STRENGTH LB.	WEIGHT/100 FT. (LB.)
Longitudinal & Transverse	¼”	3,700	2.47

2.4.2 Elongation Requirements specified below are based upon stabilized new, dry cable. Stabilization refers to a process in which the cable is cycled fifty (50)

SECTION 02279 – CELLULAR CONCRETE MATTRESSES

times between a load corresponding to $200D^2$ and a load equal to 10, 20, or 30 percent of the cable’s approximate average breaking strength. Relevant elongation values are as shown on the table below. The tolerance of these values is ± 5 percent.

2.5 GEOTEXTILES USED AS FILTERS.

2.5.1 Nonwoven needlepunched geotextile made of 100% polypropylene staple filaments resistant to ultraviolet and biological deterioration, rotting, naturally encountered basics and acids. Provide in 15’ x 300’ rolls. Provide for 3’ minimum overlap at all joints.

2.5.2 Chart

PROPERTY	TEST METHOD	M.A.R.V.
Weight	ASTM D-5261	12.0 oz. / sq. yd.
Tensile Strength	ASTM D-4632	300 lbs.
Elongation Break	ASTM D-4632	50%
Tear Strength	ASTM D-4533	115 lbs.
CBR Puncture Resistance	ASTM D-6241	850 lbs.
Permittivity	ASTM D-4491	1.00 Sec ⁻¹
Water Flow Rate	ASTM D-4491	75 g. / min. / s.f.
UV Resistance @ 500 hours	ASTM D-4355	70%

PART 3 - INSTALLATION

3.1 INSTALLATION OF CELLULAR CONCRETE MATTRESSES.

NOTE: Unloading and placement of the cellular concrete mattresses, including any and all site preparation, is the sole responsibility of Jefferson County Drainage District No. 6. This bid package is for the supplying and delivering of the cellular concrete mattresses to the project site only. This section is being included for informational purposes only.

3.1.1 Construction Methods. Areas on which filter fabric and cellular concrete mattresses are to be placed shall be constructed to the lines and grades shown on the drawings. The subgrade for the cellular concrete mats shall be free of voids, pits, or depressions and shall be proof-rolled to a minimum of 90% of the ASTM D 698 density. Voids, pits or depressions shall be brought to grade by backfilling in accordance with the applicable portions of the project specifications. All obstructions, such as roots and projecting stones larger than 1 inch remaining on the surface, shall be removed and all of the soft or low density pockets of material removed must be filled with selected material and compacted to a minimum of 90% of the ASTM D 698 density. Special consideration for buried obstructions (i.e. stumps, debris, etc.) will be as shown on the drawings.

3.1.2 Excavation and Preparation for anchor trenches, side trenches, and toe trenches or aprons shall be done in accordance to the lines, grades and dimensions shown on the drawings.

3.1.3 Inspection and Approval. Immediately prior to placing the filter fabric and cellular concrete mattresses, the prepared area shall be inspected by the owner's representative and approval obtained before any fabric or mattresses are placed thereon.

3.2 INSTALLATION OF CELLULAR CONCRETE MATTRESSES.

3.2.1 General. Cellular Concrete Mattresses shall be placed within the limits shown on the drawings. The cellular concrete mats or blocks shall be placed on the filter fabric in such a manner as to produce a relatively planar surface. No more than 200 linear feet of filter fabric shall be laid before being covered with concrete mattresses, and any fabric installed more than 2 days shall be lifted and the surface of the slope inspected for any slope defects. The owner may require any uncovered fabric to be lifted after heavy rainfall to inspect for slope damage. Final acceptance and approval of the installation will be made by the owner. The Contractor shall hold the

owner harmless from liability of any kind arising from the use of any patented or non-patented invention used in the performance of this work.

3.2.2 Placement of Prefabricated Mattresses shall be done with mats attached to a spreader bar or other approved device to aid in the lifting and placing of the mats in their proper position by the use of a crane or other approved equipment. The mats shall be placed side-by-side and/or end-to-end so that the mats abut each other. The maximum space or gap between mattresses shall be 3 inches, except that local wider gaps may be accepted if the length of the gap is less than 3 feet and the entire gap is grouted. No overlapping of mats will be accepted and no blocks shall project vertically more than 1 inch beyond the adjacent blocks. All placements of mats shall be in accordance with the manufacturer's recommendations and the Contractor's approved shop drawings. As adjacent mats are placed, they shall be secured to each other by fastening the protruding horizontal and vertical cable connections and end cable loops together along each side of the mats. The fastening shall be done with approved sleeves.

3.2.3 Individual Concrete Blocks that are hand placed shall be subject to the spacing and level parameters specified in Subparagraph: Placement of Prefabricated Mattresses above. Revetment cables shall be threaded into the blocks as the placement proceeds and fastened with approved sleeves, fittings or fasteners.

3.2.4 Filter Fabric for the cellular concrete mattresses shall be installed in accordance with the Section entitled GEOTEXTILES USED AS FILTERS. Adjacent layers of filter fabric shall have a minimum of two feet of overlap. Fabric shall be secured with 6" x 1" x 6" steel pins prior to placement of cellular concrete mattresses.

3.3 FINISHING.

3.3.1 Surface Treatment. If required on the plans, the voids of the cellular concrete mats for the limits shown on the drawings shall be filled with topsoil. The soil should then be seeded.

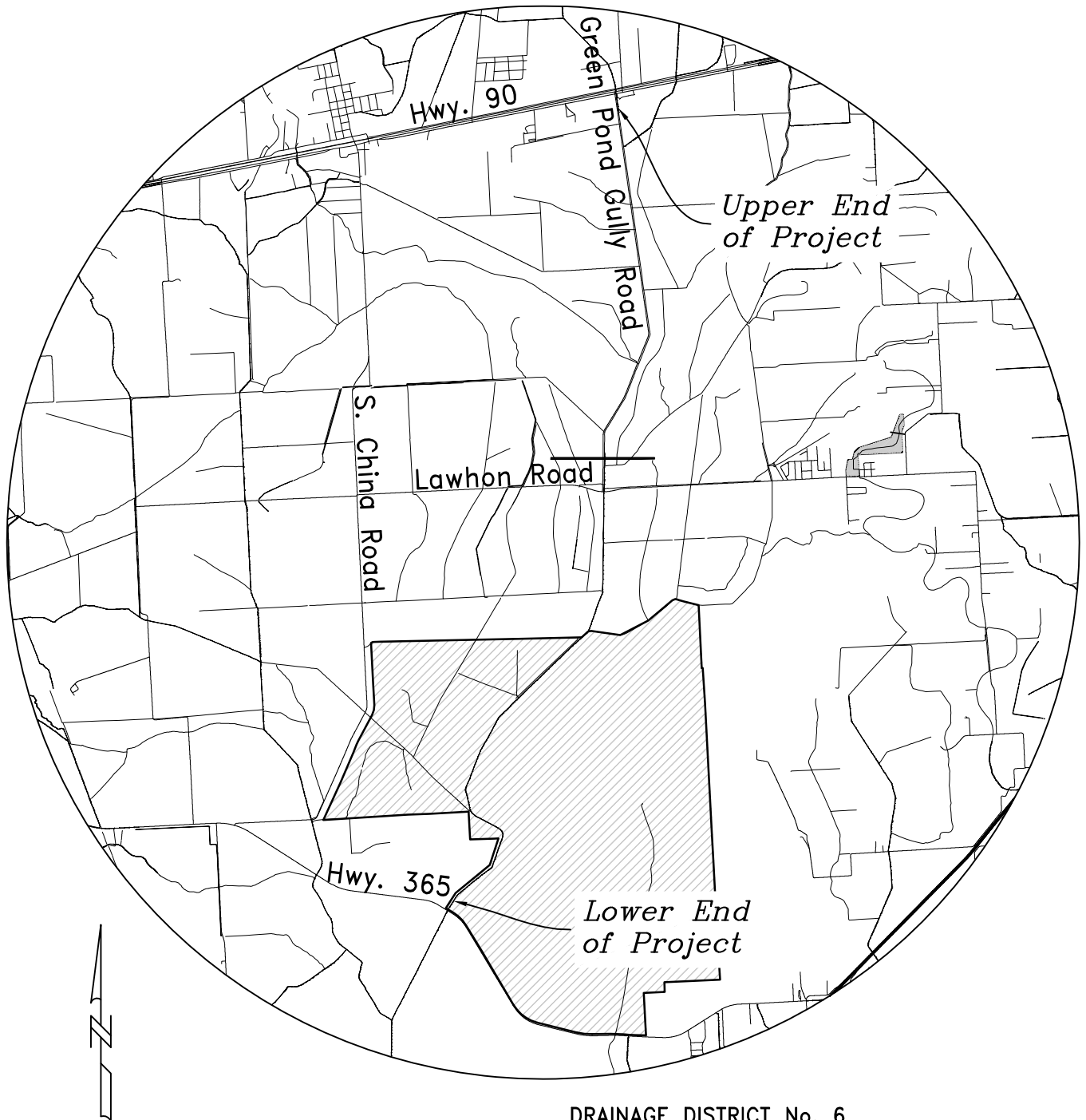
3.3.2 Inspection and Approval. Prior to the placement of any required surface treatment per section 3.3.1, the owner shall inspect the installed cellular concrete mattresses for defects and/or damage. Individual blocks which are broken and the weight reduced below 1/3 of the original individual block weight shall be replaced or removed and grouted per section 2.6 prior to the placement of any required surface treatment.

3.4 CONTRACTOR QUALITY CONTROL.

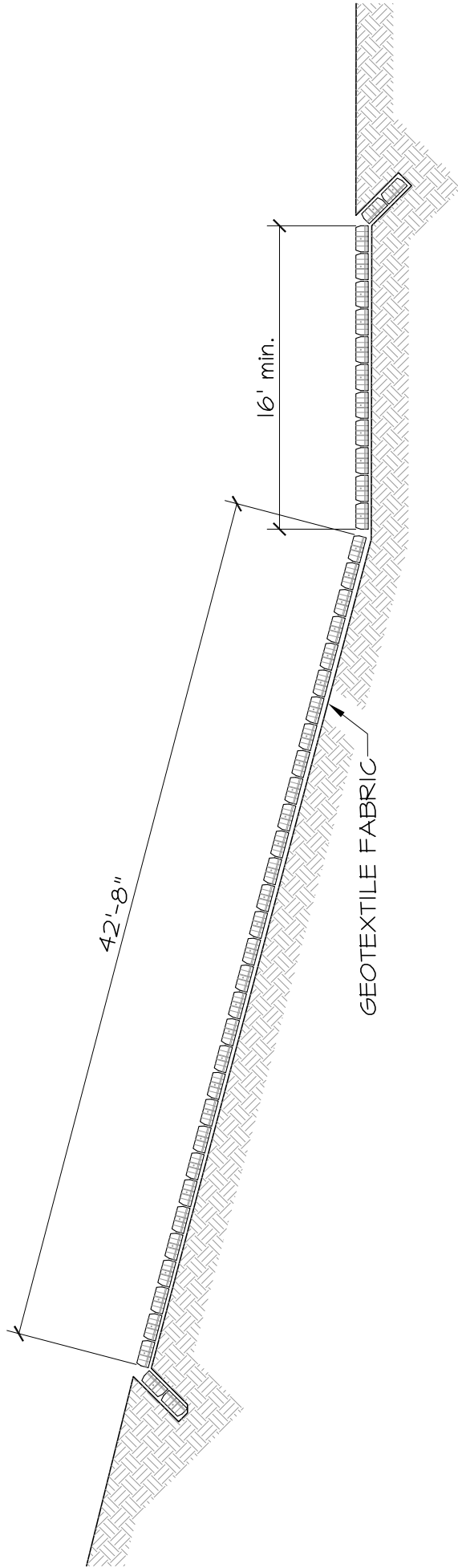
3.4.1 The Contractor shall inspect for compliance with contract requirements and record the inspection of all operations including but not limited to the following, as applicable:

1. Preparation of surface to receive cellular concrete mattresses.
2. Individual concrete blocks and filter fabric soundness and free of defects.
3. Cables and fittings - breaking strength.
4. Assembly of cellular concrete blocks bound by cables to form cellular concrete mattresses.
5. Placement of mattresses and filter fabric on the prepared subgrade.
6. Embedment of cables in the anchor trenches, side trenches, and toe trenches.

JEFFERSON COUNTY
DRAINAGE DISTRICT No. 6
FMA GREEN POND GULLY DETENTION
DITCH 600 DOWNSPOUTS



DRAINAGE DISTRICT No. 6
JOSHUA W. ALLEN, SR., PRESIDENT
WILLIAM F. MIRANDA, VICE PRESIDENT
CHARLES "CHUCK" GUILLORY, SECRETARY
JAMES D. McNICHOLAS, DIRECTOR
MIRIAM K. JOHNSON, DIRECTOR
RICHARD P. LeBLANC, JR., GENERAL MANAGER



SECTION
N.T.S.

NOTES:

1. SHORE BLOCK BD-500 OR EQUAL.
2. PROVIDE MATTRESSES NO LARGER THAN 8' WIDE X 16' LONG.
3. PROVIDE 8' WIDE MATTRESSES FOR APPROXIMATELY 25600 SQ. FT.
4. PROVIDE ALL CABLE, CABLE CONNECTORS AND ALL ACCESSORIES TO JOIN ALL JOINTS, INCLUDING ALL ANCHORING HARDWARE.
5. PROVIDE 15' X 300' ROLLS NONWOVEN NEEDLEPUNCHED GEOTEXTILE FABRIC. ALLOW FOR A MINIMUM OF 3' LAP AT ALL JOINTS.

DATE OF ISSUE: 01/15/2015



JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6
FMA GREEN POND GULLY DETENTION DITCH 600
DOWNSPOUTS

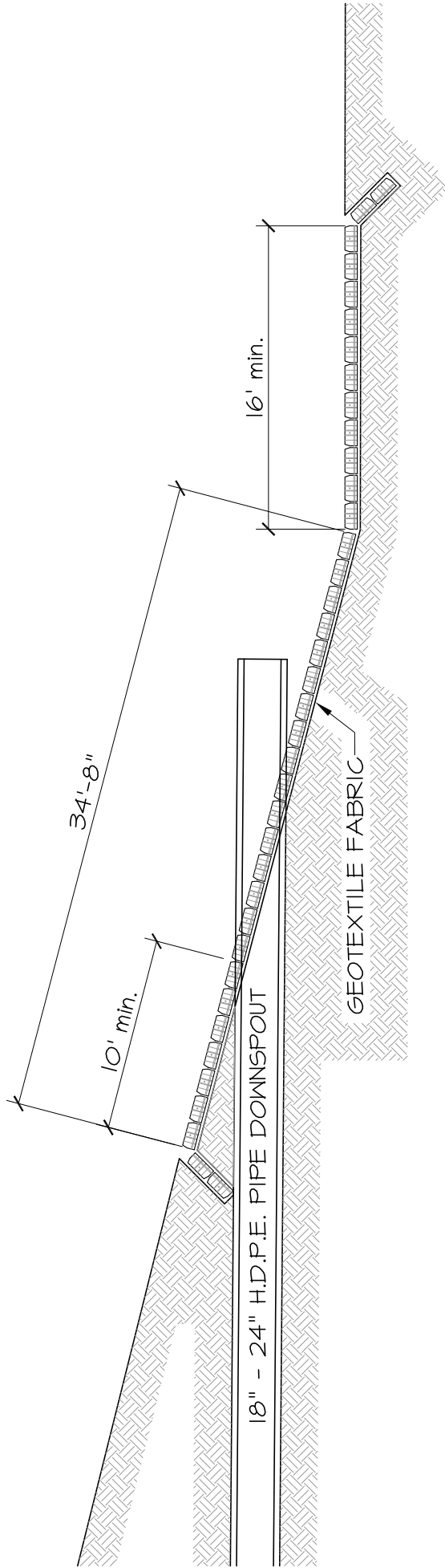
6550 WALDEN RD.

BEAUMONT, TEXAS 77707-5510

SML

C1.00

600 Green Pond Downspouts



SECTION
N.T.S.

NOTES:

1. SHORE BLOCK BD-500 OR EQUAL.
2. PROVIDE MATTRESSES NO LARGER THAN 8' WIDE X 16' LONG.
3. THIS SECTION IS REQUIRED AT 35 LOCATIONS (APPROXIMATELY 15680 SQ. FT.).
4. PROVIDE ALL CABLE, CABLE CONNECTORS AND ALL ACCESSORIES TO JOIN ALL JOINTS, INCLUDING ALL ANCHORING HARDWARE.
5. PROVIDE 15' X 300' ROLLS NONWOVEN NEEDLEPUNCHED GEOTEXTILE FABRIC. ALLOW FOR A MINIMUM OF 3' LAP AT ALL JOINTS.

DATE OF ISSUE: 01/15/2015



JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6
FMA GREEN POND GULLY DETENTION DITCH 600
DOWNSPOUTS

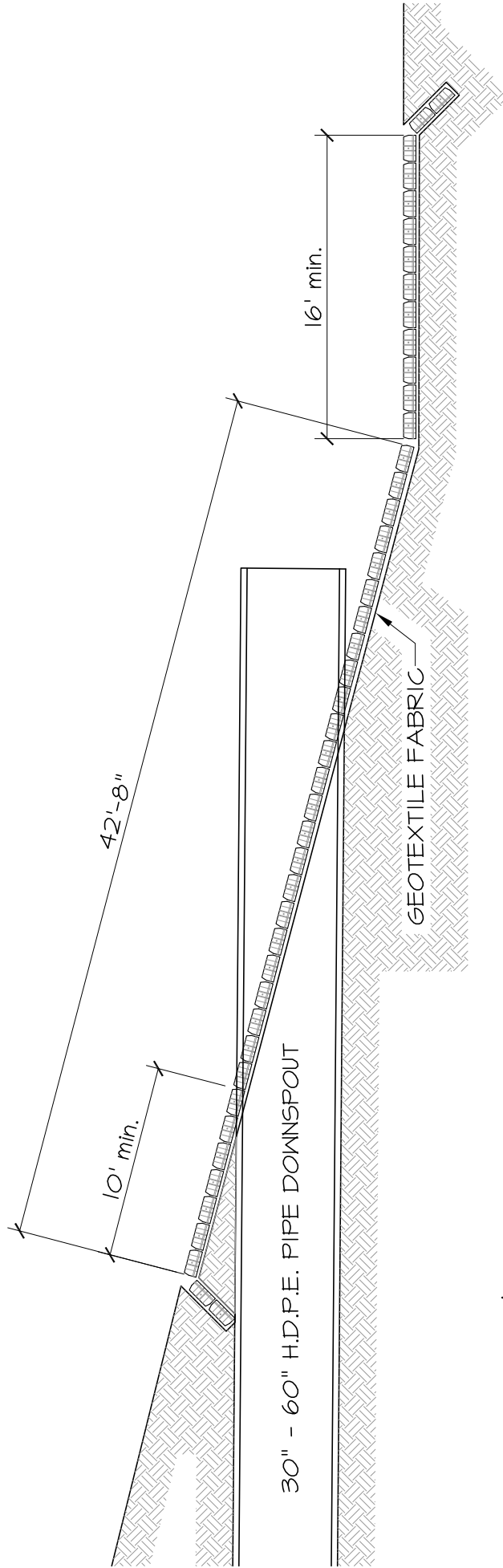
6550 WALDEN RD.

BEAUMONT, TEXAS 77707-5510

SML

C1.01

600 Green Pond Downspouts



SECTION
N.T.S.

NOTES:

1. SHORE BLOCK BD-500 OR EQUAL.
2. PROVIDE MATTRESSES NO LARGER THAN 8' WIDE X 16' LONG.
3. THIS SECTION IS REQUIRED AT 21 LOCATIONS (APPROXIMATELY 21,504 SQ. FT.).
4. PROVIDE ALL CABLE, CABLE CONNECTORS AND ALL ACCESSORIES TO JOIN ALL JOINTS, INCLUDING ALL ANCHORING HARDWARE.
5. PROVIDE 15' X 300' ROLLS NONWOVEN NEEDLEPUNCHED GEOTEXTILE FABRIC. ALLOW FOR A MINIMUM OF 3' LAP AT ALL JOINTS.

DATE OF ISSUE: 01/15/2015



JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6
FMA GREEN POND GULLY DETENTION DITCH 600
DOWNSPOUTS

6550 WALDEN RD.

BEAUMONT, TEXAS 77707-5510

SML

C1.02

600 Green Pond Downspouts