

**SPECIFICATIONS  
AND  
CONTRACT DOCUMENTS  
FOR**

**SEWERAGE PRE-TREATMENT SYSTEM**

**EAST MISSISSIPPI CORRECTIONAL FACILITY  
MERIDIAN, MISSISSIPPI**

**PREPARED FOR**

**EAST MISSISSIPPI CORRECTIONAL FACILITY AUTHORITY  
MERIDIAN, MISSISSIPPI**

**ENGINEERING PLUS, INC.  
1724-B 23<sup>RD</sup> AVENUE  
MERIDIAN, MS 39301  
601-693-4234**



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East Mississippi Correctional Facility Authority  
P.O. Box 1310  
Meridian, MS 39302

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Sealed bids for **SEWERAGE PRE-TREATMENT SYSTEM** will be received by the Board of Commissioners of the East Mississippi Correctional Facility Authority at the Office of Engineering Plus, Inc., 1724-B 23<sup>rd</sup> Avenue, Meridian, Mississippi 39301, until **NOVEMBER 9, 2021 AT 10:00 AM** and shortly thereafter publicly opened and read aloud.

Contractors also have the option of submitting bids either electronically by Central Bidding, [www.centralbidding.com](http://www.centralbidding.com) or paper sealed bids addressed and delivered by mail to the East Mississippi Correctional Facility Authority, P.O. Box 1310, Meridian, MS 39302, up until the time and date noted above.

**BASIS OF AWARD:**

The award, if made, will be made to the lowest qualified bidder on the basis of unit price in the contract documents. Actual work performed shall be based on availability of local funds. The work to be done is generally as shown in the plans and in the technical specifications. The Board of Commissioners hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement all minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

OFFICIAL BID DOCUMENTS may be secured from either of the following locations:

1. Engineering Plus, Inc., at 1724-B 23<sup>rd</sup> Avenue, Meridian, MS 39301. The cost is twenty-five dollars (\$25.00) for the plans and twenty-five dollars (\$25.00) for the proposal, non-refundable.
2. Downloaded from Central Bidding at [www.centralbidding.com](http://www.centralbidding.com). Electronic bids can be submitted at [www.centralbidding.com](http://www.centralbidding.com). For any questions relating to the electronic bidding process, please call Central Bidding at 225-810-4814.

Certified check or bid bond for five (5%) percent of the total bid, made payable to East Mississippi Correctional Facility Authority, must accompany each proposal as required by State Law. Bidders are hereby notified that any proposal accompanied by letters qualifying in any manner the condition under which the proposal is tendered will be considered an irregular bid and such proposal will not be considered in making the award. The Board of Commissioners reserves the right to accept or reject any and/or all bids and to waive informalities.

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There will be a Pre-Bid meeting, Monday, November 1, 2021, 10:00am at the East Mississippi Correctional Facility, 10641 Old Hwy 80 W, Meridian, MS. Site Location Coordinates:  
32°20'25.89"N 88°48'03.27"W

John D. McEachin  
President, Board of Commissioners

10/7/2021  
10/14/2021

## INFORMATION FOR BIDDERS

BIDS will be received by BOARD OF COMMISSIONERS OF THE EAST MISSISSIPPI CORRECTIONAL FACILITY AUTHORITY, MERIDIAN, MISSISSIPPI (herein called the OWNER), at THE OFFICE OF ENGINEERING PLUS, INC., 1724-B 23<sup>RD</sup> AVENUE, MERIDIAN, MISSISSIPPI 39301 until TUESDAY, NOVEMBER 9, 2021, AT 10:00 AM and then at said office publicly opened and read aloud.

Contractors also have the option of submitting bids either electronically by Central Bidding, [www.centralbidding.com](http://www.centralbidding.com) or paper sealed bids addressed and delivered by mail to the East Mississippi Correctional Facility Authority, P.O. Box 1310, Meridian, MS 39302 up until the time and date noted above. For any questions relating to the electronic bidding process, please call Central Bidding at 225-810-4814.

Each paper BID must be submitted in a sealed envelope, addressed to BOARD OF COMMISSIONERS OF THE EAST MISSISSIPPI CORRECTIONAL FACILITY AUTHORITY at THE OFFICE OF ENGINEERING PLUS, INC., 1724-B 23<sup>RD</sup> AVENUE, MERIDIAN, MISSISSIPPI 39301. Each sealed envelope containing a BID must be plainly marked on the outside as BID for SEWERAGE PRE-TREATMENT SYSTEM and the envelope should bear on the outside the name of the **BIDDER**, his **address**, and his **license number**. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at P.O. BOX 1310, MERIDIAN, MISSISSIPPI 39302.

All BIDS must be made on the prepared BID form. All blank spaces must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after that time and date specified shall not be considered. No BIDDER may withdraw a BID within 120 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and review of the contract documents including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the contractor or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID BOND or CERTIFIED CHECK payable to the OWNER for five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible BIDDERS.

When the agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment BOND and performance BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and payment BOND, each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorney-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. In case of failure of the BIDDER to execute the Agreement AND furnish an acceptable performance BOND and payment BOND, the OWNER may at his option consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable performance BOND, payment BOND and Agreement signed by the party to whom the agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the agreement. Should the OWNER not execute the agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as he deems necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest qualified responsible BIDDER only as deemed to be in the best interest of the East MS Correctional Facility Authority by the Board of Commissioners.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any bidder from any obligations in respect to his bid.

The BIDDER must agree to commence work on or before a date to be specified in the written "Notice to Proceed" of the OWNER and to fully complete the project within 120 consecutive calendar days thereafter. BIDDER must agree also to pay as liquidated damages, the sum of \$500.00 for each consecutive calendar day thereafter as hereinafter provided in the Special Conditions.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the OWNER.

The PROJECT ENGINEER is KEITH H. MCCRANEY, P.E. His address is 1724-B 23RD AVENUE, MERIDIAN, MS 39301; (601) 693-4234.

THERE WILL BE A PRE-BID MEETING MONDAY, NOVEMBER 1, 2021 10:00AM AT THE EAST MISSISSIPPI CORRECTIONAL FACILITY, 10641 OLD HWY 80 W, MERIDIAN, MS. SITE ACCESS REQUIREMENTS AND SECURITY MEASURES WILL BE DISCUSSED.

## **NOTICE TO BIDDERS NO. 1**

### **PROPOSAL AND CONTRACT CLARIFICATIONS**

1. The Mississippi Department of Transportation will not participate in the referenced project. Reference to the Department, Executive Director, Engineer, etc. shall mean the East MS Department of Corrections Authority and the project engineer as appropriate.
2. East MS Correctional Facility Authority has certain funds available for the proposed construction. Project award will be based upon the total base bid.

## **NOTICE TO BIDDERS NO. 2**

### **(Utilities Serving the Facility )**

Existing utilities are as follows:

1. City of Meridian Water and Sewer – Meridian, MS
2. Southwest Lauderdale Water Association – Meridian, MS
2. AT&T – Meridian, MS
3. East MS Electric Power Assoc. (EMEPA) – Meridian, MS

East Mississippi Correctional Facility Maintenance Supervisor:  
Cody McClelland 601-934-4431

This does not guarantee that all utilities and services are listed. It shall be the contractor's responsibility to confirm and coordinate existing utility locations and services and any interruptions that may be required to perform the necessary work.

Additional assistance may be obtained for utility location by contacting the following:

**MISSISSIPPI ONE-CALL CENTER  
BEFORE YOU DIG CALL:  
811  
MS 1-800-227-6477 JACKSON 362-4374  
OUT-OF-STATE 1-800-445-1988**



NOTICE TO BIDDERS NO. 4

SUBJECT: HIGH VOLTAGE OVERHEAD LINES

NOTICE OF WORK TO BE PERFORMED  
IN PROXIMITY OF HIGH VOLTAGE POWER LINES

In accordance with Section 45-15-1, et sec., Mississippi Code of 1972 (as amended effective July 1, 1988), \_\_\_\_\_ (herein after referred to as "Applicant")(Supervisor in Charge: \_\_\_\_\_), whose address is \_\_\_\_\_, and whose telephone number is \_\_\_\_\_, hereby gives notice to the electric utility (hereinafter referred to as "Utility") that Applicant will be performing functions or activities at the location of \_\_\_\_\_ and that the estimated starting date of this work is \_\_\_\_\_. This work could reasonably be expected to cause persons, equipment or parts of tools or material to be brought within ten (10) feet of Utility's high voltage lines at the proposed work area. Applicant hereby requests the Utility to confer with Applicant or his representative at the work site to ascertain the type of work activity that will take place and if further safety measures need to be taken by either the Applicant or the Utility. The Utility will give the Applicant a written cost estimate for safety arrangements to deter contact with on-site power lines. Applicant agrees not to perform such functions or activities until mutually satisfactory arrangements as provided by Section 45-15-9 have been made to deter contact with Utility's lines.

Nothing contained in this Notice shall diminish or affect the obligation imposed upon the Utility under Section 45-15-1, et sec., or under existing laws or be construed as a waiver of the Applicant's or the Utility's rights under the law.

NOTICE GIVEN THIS, the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
APPLICANT

BY: \_\_\_\_\_

\_\_\_\_\_  
(Title)

Notice received by the Utility this the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

UTILITY COMPANY OR ASSOCIATION: \_\_\_\_\_

BY: \_\_\_\_\_

\_\_\_\_\_  
(Title)

## PROPOSAL

DATE: \_\_\_\_\_

Proposal of \_\_\_\_\_  
from \_\_\_\_\_

For SEWERAGE PRE-TREATMENT SYSTEM at East Mississippi Correctional Facility in Meridian, Mississippi within 120 Calendar Days.

BOARD OF COMMISSIONERS  
EAST MS CORRECTIONAL FACILITY  
MERIDIAN, MISSISSIPPI

Sirs: The following is made on behalf of \_\_\_\_\_

\_\_\_\_\_  
(name and address of those interested)

and no other. Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporations. I (we) certify that I (we) have carefully examined the specifications, including revisions, if any, I (we) propose to furnish all necessary materials, machinery, tools, labor, apparatus, taxes and other means of construction and do all work in the manner specified. I (we) understand quantities mention below are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit price bid.

The following is my (our) UNIT PRICE proposal:

**Proposed work consists of construction of sewage grinder-screen-auger system to provide pre-treatment of prison sewage prior to being received by the City of Meridian, MS sewer system – complete with all necessary concrete work, appurtanences, water supply line, electrical power and control system.**

I (we) agree to finish the contract for East MS Correctional Facility within 120 Calendar Days after the receipt of a work order.

The following is our proposal:

I (we) further propose to execute the attached contract agreement within ten (10) days after the work is awarded to me (us), and to begin the work within 10 days after the issue of a work order by the Engineer. I (we) further agree to complete the work within the time stipulated in the proposal.

I (we) also propose to execute the attached Payment and Performance Bonds within ten (10) days of the receipt of a notice of award. The bond will be in the amount of 100% of the total of my (our) bid. This bond shall not only serve to guarantee the completion of the work on my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (we) enclose a certified check or bid bond for \_\_\_\_\_ dollars and hereby agree that failure to execute the contract and furnish bond within ten (10) days after notice of award, the amount of this check or bid bond will be forfeited to East MS Correctional Facility Authority as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check or bid bond will be returned to me.

Respectfully submitted,

\_\_\_\_\_  
Contractor

By \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of Mississippi and the names, titles and business addresses of the executives are as follows:

_____ President	_____ Address
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_____ Secretary	_____ Address
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_____ Treasurer	_____ Address
--------------------	------------------

**BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED**

TOTAL BID:

By: \_\_\_\_\_

Date: \_\_\_\_\_

## BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, \_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are hereby held and firmly bound unto EAST MS CORRECTIONAL FACILITY AUTHORITY as owner in the penal sum of \_\_\_\_\_ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. Signed, this the \_\_\_\_ day of \_\_\_\_\_, 2021.

The condition of the above obligation is such that whereas the Principal has submitted to EAST MS CORRECTIONAL FACILITY AUTHORITY a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for SEWERAGE PRE-TREATMENT SYSTEM.

NOW THEREFORE,

- a. If said Bid shall be rejected, or in the alternate,
- b. If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Performance Bond for his faithful performance of said contract, and a Payment Bond for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bonds shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_(L.S.)  
Principal

\_\_\_\_\_  
Surety

SEAL

By: \_\_\_\_\_

LAUDERDALE COUNTY, MISSISSIPPI

CONTRACTOR EEV CERTIFICATION AND AGREEMENT

Project: SEWERAGE PRE-TREATMENT SYSTEM

Owner: E MS Correctional Facility

By executing this Certification and Agreement, the undersigned verifies its compliance with Senate Bill 2988 from the 2008 Mississippi Legislative Session, "Mississippi Employment Protection Act," as published in Laws, 2008 and codified in the Mississippi Code of 1972, as amended, and any rules or regulations promulgated by the E MS Correctional Facility Board of Commissioners, Department of Employment Security, State Tax Commission, Secretary of State, and Department of Human Services in accordance with the Mississippi Administrative Procedures Law (Section 25-43-1 et seq., Mississippi Code of 1972, as amended), stating affirmatively that the individual, firm, or corporation which is contracting with the County has registered with and is participating in a federal work authorization program\* operated by the United States Department of Homeland Security to electronically verify information of newly hired employees pursuant to the Immigration Reform and Control Act of 1986, Pub.L. 99-603, 100 Stat 3359, as amended. The undersigned agrees to inform the E MS Correctional Facility Board of Commissioners if the undersigned is no longer registered or participating in the program.

The undersigned agrees that, should it employ or contract with any subconsultant(s) and/or subcontractor(s) in connection with the performance of this Contract, the undersigned will secure from such subconsultant(s) and/or subcontractor(s) verification of compliance with the Mississippi Employment Protection Act. The undersigned further agrees to maintain records of such compliance and provide a copy of each such verification to the E MS Correctional Facility Board of Commissioners, if requested, for the benefit of the Commission or this Contract.

EEV\* Company Identification Number [Required]

The undersigned certifies that the above information is complete, true and correct to the best of my knowledge and belief. The undersigned acknowledges that any violation may be subject to the cancellation of the contract, ineligibility for any state or public contract for up to three (3) years, the loss of any license, permit, certificate or other document granted by any agency, department or government entity for the right to do business in Mississippi for up to one (1) year, or both, any and all additional costs incurred because of the contract cancellation or the loss of any license or permit, and may be subject to additional felony prosecution for knowingly or recklessly accepting employment for compensation from an unauthorized alien as defined by 8 U.S.C §1324a(h)(3), said action punishable by imprisonment for not less than one (1) year nor more than five (5) years, a fine of not less than One Thousand Dollars (\$1,000.00) nor more than Ten Thousand Dollars (\$10,000.00), or both, in addition to such prosecution and penalties as provided by Federal law.

BY: \_\_\_\_\_  
Authorized Officer or Agent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

SWORN TO AND SUBSCRIBED before me on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_

\* As of the effective date of the Mississippi Employment Protection Act, the applicable federal work authorization program is E-Verify™ operated by the U. S. Citizenship and Immigration Services of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration.

**FAILURE TO SUBMIT COMPLETED FORM WITH BID MAY BE GROUNDS  
FOR REJECTION.**

CONTRACT FOR Proposed work involves SEWERAGE PRE-TREATMENT SYSTEM at East Mississippi Correctional Facility in Meridian, Mississippi

STATE OF MISSISSIPPI  
COUNTY OF LAUDERDALE

This contract entered into by and between the Board of Commissioners of East MS Correctional Facility, Meridian, Mississippi, on the one hand, and the undersigned contractor, on the other, witnesseth:

That, in consideration of the payment by the Board of Commissioners of the prices set out in the proposal hereto attached, to the undersigned contractor made in the manner and at the time or times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertisement for bids, the information for bidders, the bid bond form, the proposal for the contract, the contract, the payment bond, the performance bond, the notice to contractors, the general conditions, the special conditions, and the specifications for the work herein contemplated, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work for faithfully completing the whole work in good and workmanlike manner according to the approved Specifications, Special Provisions and requirements of the Board of Commissioners.

It is further agreed that the works shall be done to the complete satisfaction of the Engineer or his authorized representatives.

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the \_\_\_\_ day of \_\_\_\_\_, 2021.

\_\_\_\_\_  
Contractor

By \_\_\_\_\_

Title \_\_\_\_\_

Signed and sealed in the Presence of:

(Name and Addresses of Witnesses)

\_\_\_\_\_

\_\_\_\_\_

BOARD OF COMMISSIONERS  
EAST MS CORRECTIONAL FACILITY  
MERIDIAN, MISSISSIPPI

By \_\_\_\_\_



## PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called Principal,  
(Corporation, Partnership or Individual)

and \_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter call OWNER, in the penal sum of \_\_\_\_\_ Dollars, \$ (\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_ 2021, a copy of which is hereto attached and made a part hereof for the construction of:

SEWERAGE PRE-TREATMENT SYSTEM AT EAST MS CORRECTIONAL FACILITY

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_ counterparts, each one  
(number) of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 2021.

ATTEST:

\_\_\_\_\_  
(Principal) Secretary

(SEAL)

By \_\_\_\_\_ (s)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Witness as to Principal)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Surety

ATTEST:

By \_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
(Witness as to Surety)

NOTE: Date of BOND must not be prior to date of Contract.  
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasure Departments most current list (Circular 570 as amended ) and be authorized to transact business in the **State where the PROJECT is located.**

## PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called Principal,  
(Corporation, Partnership, or Individual)

and \_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_

- \_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter call OWNER, in the penal sum of \_\_\_\_\_ Dollars, \$ (\_\_\_\_\_)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_ 2021, a copy of which is hereto attached and made a part hereof for the construction of:

SEWERAGE PRE-TREATMENT SYSTEM AT EAST MS CORRECTIONAL FACILITY

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice too the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_ counterparts, each one  
(number)  
of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_ 2021.

ATTEST:

_____ (Principal) Secretary	_____ Principal
(SEAL)	By _____(s)
	_____ (Address)
	_____
_____ (Witness as to Principal)	
_____ (Address)	
_____	_____ Surety
ATTEST:	By _____
	_____ Attorney-in-Fact
_____ (Witness as to Surety)	_____
_____	_____
_____	

NOTE: Date of BOND must not be prior to date of Contract.  
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasure Departments most current list (Circular 570 as amended ) and be authorized to transact business in the **State where the PROJECT is located.**

## **GENERAL CONDITIONS**

### **1. DEFINITIONS OF TERMS**

- A. The contract documents consist of the Contract, the General Conditions of the contract, the Special Conditions and Specifications, including all modifications thereof incorporated in the documents before their execution. These form the Contract.
- B. The Owner, the Contractor and the Engineer are those mentioned as such in the Contract. They are treated throughout the contract documents as if each were of the singular number and masculine gender.
- C. Wherever in this Contract the word engineer is used, it shall be understood as referring to the engineer of the owner, acting personally or through an assistant duly authorized in writing for such act by the Engineer.
- D. Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm, or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered mail to the last business address known to he who gives the notice.
- E. The term sub-contractor, as employed herein, includes only those having a direct contract which the contractor and it includes one who furnished material worked to a special design according to the plans and specifications of this work, but does not include one who merely furnishes material not so worked.
- F. The term work of the contractor or sub-contractor includes labor, materials or both, equipment, transportation, or other facilities necessary to complete the contract.
- G. The term laboratory refers to any testing laboratory designated or approved by the engineers to perform tests on materials entering the work.
- H. A change order is a written agreement between the Owner and the Contractor, with the approval of the Engineer, which when duly executed becomes part of the contract. Change orders may either decrease or increase the work to be performed under the contract.
- I. A work order is a written notice from the Owner notifying the Contractor to begin work.

### **2. INTENT OF DOCUMENTS**

The intention of the documents is to include all labor, materials, equipment and transportation necessary for the proper execution of the work.

3.     DETAIL DRAWINGS AND INSTRUCTIONS

The engineer shall furnish with reasonable promptness additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the contract documents and will be so prepared that they can be reasonably interpreted as part thereof.

4.     OWNERSHIP OF DRAWINGS

All drawings, specifications and copies furnished by the engineer are his property.

5.     CONTRACTORS UNDERSTANDING

It is understood and agreed that the contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this contract. No verbal agreement or conversation with any officer, agent or employee of the owner, either before or after the execution of this contract, shall affect or modify any of the terms or obligations herein contained.

6.     MATERIALS, APPLIANCES, EMPLOYEES

The contractor shall provide and pay for all materials, labor, water, tools, equipment, light power, transportation and other facilities necessary for the execution and completion of the work.

The contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the work an unfit person or anyone not skilled in the work assigned to him.

7.     ROYALTIES AND PATENTS

Contractor shall pay all royalties and license fees. He shall defend all suites or claims for infringement of any patent rights and shall save the owner harmless from loss on account thereof, except the owner shall be responsible for all such loss when a particular manufacturer or manufacturers is specified. But, if the contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the engineer.

8. SURVEYS, PERMITS AND REGULATIONS

The owner shall furnish all surveys unless otherwise specified. Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the contractor. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the owner, unless otherwise specified.

The contractor shall give all notices and comply with all laws ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the contractor observes that the drawings and; specifications are at a variance therewith, he shall promptly notify the engineer in writing, and any necessary changes shall be made as provided in the contract for changes in the work. If the contractor performs any work, knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the engineer, he shall bear all costs arising therefrom.

9. PROTECTION OF WORK AND PROPERTY

The contractor shall continuously maintain adequate protection of all his work from damage and shall protect the owner's property from injury or loss arising in connection with this contract. He shall make good any such damage, injury or loss, except such as may be directly due to any errors in the contract documents or caused by agents or employees of the owner. He shall adequately protect adjacent property as provided by law and the contract documents. He shall provide and maintain all passageways, guard fences, lights and other facilities for protection required by Public Authority or local conditions.

In an emergency affecting the safety of life, of work, or of adjoining property, the contractor, without special instruction or authorization from the engineer, is hereby permitted to act at his discretion to prevent such threatened loss or injury, and he shall so act if so instructed or authorized. Any compensation claimed by the contractor on account of emergency work shall be determined by agreement arbitration.

10. INSPECTION OF WORK

The engineer and his representative shall at all times have access to the work wherever it is in preparation or progress, and the contractor shall provide proper facilities for such access and for inspection. If the specifications, the engineer's instructions, laws, ordinances or any Public Authority require any work to be specially tested or approved, the contractor shall give the engineer timely notice of its readiness for inspection, and if the inspection is by any other authority other than the engineer, of the date fixed for such inspection. Inspections by the engineer shall be promptly made and where practicable at the source of supply. If any work should be covered up without approval or consent of the engineer, it

must, if required by the engineer, be uncovered for examination at the contractors expense. Re-examination of questioned work may be ordered by the engineer and if so ordered, the work must be uncovered by the contractor. If such work is found to be in accordance with contract documents, the owner shall pay the cost of re-examination and replacement.

If such work is found not to be in accordance with the contract documents, the contractor shall pay the cost.

#### 11. SUPERVISION

The contractor shall keep on his project during its progress a superintendent and pay any necessary assistants, all satisfactory to the engineer. The superintendent shall not be changed except with the consent of the engineer, unless the superintendent proves to be unsatisfactory to the contractor and ceases to be in his employ. The superintendent shall represent the contractor in his absence and all directions given to him shall be binding as if given to the contractor. Important directions shall be confirmed on written request in each case. The contractor shall give efficient supervision to the work, using his optimum skilled attention. If the contractor in the course of the work finds any discrepancy between the drawings and the physical conditions of the locality, or any errors or omissions in the drawings or in the layout as given by points and instructions, it shall be his duty to immediately inform the engineer in writing, and the engineer shall promptly verify the same. Until authorized, any work done after such discovery will be done at the contractor's risk.

Neither party shall employ or hire any employee of the other party.

#### 12. CHANGES IN WORK

The owner without invalidating the contract, may order extra work or make changes by altering, adding to, or deducting from the work - the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract, except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. The owner reserves the right to increase or decrease work.

In giving instructions, the engineer shall have authority to make minor changes in work not involving extra cost and not inconsistent with the purposes of the work, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the engineer, and no claim for an addition to the contract sum shall be valid unless so ordered.



The value of any such extra work or change shall be determined in one or more of the following ways:

- (a) By acceptance of a lump sum estimate.
- (b) By unit prices named in the contract or subsequently agreed upon.
- (c) By cost and percentage or by cost and a fixed fee.

If none of the above methods is agreed upon the contractor, provided he receives an order as above, shall proceed with the work. In such case and also under case (c), he shall keep and present in such form as the engineer may direct a correct amount of the net cost of labor and materials together with vouchers. In any case, the engineer shall certify to the amount including reasonable allowance for overhead and profit due to the contractor. Pending final determination of value, payments on account of changes will be made on the engineers estimate.

### 13. CLAIMS FOR EXTRA COST

If the contractor claims that any instructions by drawings or otherwise involve extra cost under this contract, he shall give the engineer written notice thereof within a reasonable time after receipt of such instructions, and in any event before proceeding to execute the work, except in an emergency endangering life or property; the procedure shall then be as provided for changes in the work. No such claim shall be valid unless so made.

### 14. DEDUCTIONS FOR UNCORRECTED WORK

If the engineer deems it inexpedient to correct work injured or done not in accordance with the contract, an equitable deduction from the contract price shall therefore be made.

All work which has been rejected shall be satisfactorily remedied or else removed and replaced in an acceptable manner by the contractor and no additional compensation shall be allowed for such correction, removal or replacement.

### 15. DELAYS AND EXTENSION OF TIME

If the contractor is delayed at any time in the progress of the work by any act or neglect by the owner, his employees, any other contractor employed by the owner, changes ordered in the work, strikes, lockouts, fire, unusual delay in transportation, delay authorized by the engineer, or by any cause which the engineer shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the engineer may decide.

No such extension shall be made for delay occurring more than five (5) days before claim is made in writing to the engineer. In the case of a continuing cause of delay only one claim is necessary.

If no schedule or agreement stating the dates upon which drawings shall be furnished is made, then no claim for delay shall be allowed on account of failure to furnish drawings until two weeks after demand for such drawings and not then unless such claim is reasonable.

This article does not exclude the recovery of damages for delay by either party under other provisions in the contract documents.

16. CORRECTION OF WORK BEFORE FINAL PAYMENT

The contractor shall promptly remove from the premises all materials condemned by the engineer as failing to conform to the contract, whether incorporated in the work or not, and the contractor shall promptly replace and re-execute his own work in accordance with the contract and without expense to the owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such replacement or removal.

17. SUSPENSION OF WORK

The owner may at any time suspend the work, or any part thereof by giving one day notice to the contractor in writing. The work shall be resumed by the contractor within ten (10) days after the date fixed in the written notice from the owner to the contractor to do so.

18. THE OWNERS RIGHT TO DO WORK

If the contractor should neglect to prosecute the work properly or fail to perform any provision of this contract, the owner, after three (3) days written notice to the contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost from the payment then or thereafter due to the contractor.

19. THE OWNERS RIGHT TO MATERIALS

If the contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistent disregard of laws, ordinances, or the instructions of the engineer, otherwise be guilty of a substantial violation of any provision of the contract, then the owner, upon the certificate of the engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the contractor seven (7) days written notice, terminate the employment of the contractor and take possession of the premises and all materials, tools, and appliances thereon and

finish the work by whatever method he may deem expedient. In such case the contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the expense of finishing the work, including compensations for administrative services, such excess shall be paid to the contractor. If such expense exceeds the unpaid balance, the contractor shall pay the difference to the owner. The expense incurred by the owner as herein provided, and the damage incurred through the contractor's default shall be certified by the engineer.

20. THE OWNERS RIGHT 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 of its intention to terminate the contract, such notice is to contain the reasons for such intention to terminate and unless with ten (10) days after the serving of such notice upon the contractor, such violations or delay shall cease and satisfactory arrangement of correction will be made, 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 contractor, and the owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the contractor and the contractor shall be liable to the owner for any excess cost occasioned the owner thereby, and in such event the owner may take possession of and utilize in completing the work, such materials, appliance and plant, as may be on the site of the work and necessary therefore.

21. CONTRACTORS RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the work should be stopped under an order of any court or other Public Authority for a period of three (3) months, through no act or fault of the contractor or of anyone employed by him, or if the engineer should fail to issue an estimate for payment within seven (7) days after it is due, or if the owner should fail to pay the contractor within seven (7) days of its maturity and presentation any sum certified by the engineer or awarded by arbitrators, then the contractor may, upon seven (7) days written notice to the owner and the engineer, stop work or terminate this contract and recover from the owner payment for all work executed and any loss sustained upon an plant or materials and reasonable profit damages.

22. PAYMENTS WITHHELD

The owner may withhold, or on account of subsequently discovered evidences, nullify the whole or part of any certificate to such extent as may be necessary to protect himself from loss on account of:

- (a) Defective work not remedied.

- (b) Claims filed or reasonable evidence indicating probable filing of claim.
- (c) Failure of the contractor to make payments properly to subcontractors, or for material or labor.
- (d) A reasonable doubt that the contract can be completed for the balance then unpaid.
- (e) Damage to another contractor.

When the above grounds are removed payment shall be made for amounts withheld because of them.

## 23. CONTRACTORS LIABILITY INSURANCE

The contractor shall maintain Workmen's Compensation Insurance on his employees which fully complies with the laws of the State of Alabama. The contractor shall insure that all subcontractors carry such Workmen's Compensation Insurance. The employee of any subcontractor who is not required to carry Workmen's Compensation shall be carried as employees of the contractor. The contractor shall procure and keep in force during the life of this contract General Liability Insurance protecting contractor from all claims for personal injury including death and for property damage which may arise from contractors performance of this contract and from the performance of any subcontractor and anyone employed by or being the agent of the contractor. General Liability Coverage with limits equal to or excess of \$1,000,000 per occurrence/\$1,000,000 per aggregate. Automobile Liability - \$500,000 combined single limit. Builders Risk - 100% of contract amount. All policies of General Liability Insurance shall name therein as an additional named insured the owner. Certificates evidencing Workmen's Compensation and General Liability Insurance shall be filed with and approved by the Engineer prior to commencement of any work by contractor.

## 24. INDEMNITY

The contractor shall indemnify and protect the owner and engineer from and against all losses, claims, demands, payments, suits, actions, recoveries and judgment of every nature and description brought against him which may arise out of this contract, or the execution of the work or of the guarding of it, and shall furnish evidence of insurance to cover this exposure in the same amounts specified in the preceding paragraph.

## 25. LIENS

Neither the final payment nor any part of the retained percentage shall become due until the contractor delivers to the owner, a complete release of all liens and rights to claim liens by all subcontractors and material suppliers providing any work or material covered by this contract, or receipts in full in lieu thereof, and if required in either case, an affidavit that so far as he has the knowledge or

information the releases and receipts include all labor and material for which a lien could be filed; but the contractor may, if any subcontractor refuses to give such release and/or receipt, furnish a bond satisfactory to the engineer, or indemnify the owner against any lien. If any liens is filed by anyone claiming to be a subcontractor or material man after the final payment is made, the contractor shall pay to the owner upon demand all sums that the owner may be compelled to pay in discharging such a lien, and all costs, including a reasonable attorney=s fee incurred in defending the claim of any person filing a lien.

26. ASSIGNMENT

Neither party to the contract shall assign the contract or sublet it as a whole without the written consent of the other, nor shall the contractor assign any money due or to become due to him without the previous written consent of the engineer.

27. POINTS AND INSTRUCTIONS

The contractor shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. He shall not proceed until he has made timely demand upon the engineer for, and has received from him, such points and instructions as may be necessary as the work progresses. The work shall be done in a strict conformity with such points and instructions.

28. ENGINEERS STATUS

The engineer has the authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the contract. He shall also have authority to reject all work and materials which do not conform to the contract, to direct the application of forces to any portion of the work as in his judgment is required, to order the force increased or diminished, and to decide questions as to the interpretation of plans and specifications and to the acceptable completion of the project. The decision of the engineers or their authorized representative shall be final and binding as all technical questions concerning the execution of the work and interpretation of the plans and specifications.

29. ENGINEERS DECISION

The engineer shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the owner or the contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. All such decisions of the engineer shall be final, except in cases where time and/or financial considerations are involved, which if no agreement in regard thereto is reached shall be subject to arbitration.

30. LANDS FOR WORK

The owner shall provide the lands upon which the work under this contract is to be done, except that the contractor shall provide land required for the erection of temporary construction facilities and storage of his material, together with the right of access to the same.

31. CLEANING UP

The contractor shall, as directed by the engineer, remove from the owner's property and from all public and private property at his own expense, all temporary structures, rubbish and waste materials resulting from his operations. The completed work shall be left in a neat and presentable condition throughout.

All property, both public and private, which has been damaged, shall be restored in an acceptable manner at no extra cost to the owner. Materials cleared from the project may not be deposited on the property adjacent thereto unless such disposal is approved by the engineer.

32. GUARANTEE

The contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of substantial completion. The contractor warrants and guarantees for a period of one (1) year from the date of Substantial completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The owner will give notice of observed defects with reasonable promptness. In the event that the contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the owner may do so and charge the contractor the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

Manufacturer's warranty shall be twenty (20) years NDL warranty as further defined in technical specifications section 1.12.

## SPECIAL CONDITIONS

### 1. QUALIFICATION OF BIDDERS

Bidders must be certified by the approved manufacturer and capable of performing the various items of work bid upon. They may be required after bidding to furnish a satisfactory statement covering experience in similar work, a list of machinery, organization and other equipment available for the proposed work and such statement of their financial resources as may be deemed necessary.

### 2. INTERPRETATION OF PROPOSAL

This is a lump sum contract. Contractor shall satisfy himself as to accuracy of quantities or estimates shown or stated in the contract documents.

### 3. CHANGES, INCREASE OR DIMINUTIONS

The owner shall have the right to increase or diminish the amount of work to be done under the contract at any time or times during the life of the contract. The total increase may be applied to any one item or to a number of items, or any item or items may be entirely eliminated. No allowance will be made for real or supposed loss of anticipated profits on account of such increase or diminution.

### 4. ESTIMATES FOR PARTIAL PAYMENT

The Contractor shall submit to the engineer's estimate of costs to cover application for partial payments. These periodical estimates shall show the amount of the original estimate for each item, the amount due on each item, the gross total, the retained percentage, the amount previously paid and the net amount of payment due. Partial payment will be paid monthly from the Notice to Proceed or from the beginning of work with retainage of 10% for the first 50% of the contract amount. After 50% of the contract is completed retainage may then be reduced to 5% for remaining contract amount. Final payment with retainage will be made after project is completed and final inspection has been approved.

### 5. LABOR

No aliens or foreign unnaturalized laborers shall be employed on this work. Preference shall be given to local labor available. All laborers, as well as mechanics, must be proficient in the respective trades, as no mediocre work will be accepted. Contractors may comply with all local ordinances and state laws regarding labor and mechanics in effect at the time of the signing of this contract or passed during the construction of the work. The contractor shall include in his bid and pay all Federal and State taxes or assessments on labor.

### 6. STORAGE OF MATERIALS

Materials shall be stored so as to insure the preservation of their fitness for the work and in a manner that leaves the material accessible to inspectors. With the approval of the Owner and project engineer, adequate space will be designated for material storage. Material and equipment may be stored only in designated areas.

7. COMPLETION TIME AND LIQUIDATED DAMAGES

The contractor will be required to complete the work for final acceptance and use by the owner within the time set out in the proposal for proposed site. Liquidated damages in the amount of \$500 per day of delinquency will be charged.

Extensions of the time may be granted to the contractor upon receipt of written request for such extensions, provided that such delays were occasioned by the owner, by high water, by Acts of God, or by other causes entirely beyond the Contractor's control. Request for extension shall be made within five (5) days following the event occasioning the delay.

8. COOPERATION WITH PUBLIC UTILITIES

The Contractor shall be responsible for notifying all public utilities or other interested parties to make necessary adjustment of utility structures or appurtenances affected by the work. The Contractor shall perform and carry on the work so as not to interfere with or damage utility structures, aforementioned or shown on the plans or discovered during construction, which are to be left within the limits of the work. The owner will not be responsible for any delay or inconvenience to the contractor in carrying out the work resulting from the existence, removal, or adjustment of any public utility. Additional costs incurred as a result thereof shall be the expense of the contractor.

9. TESTING

All materials incorporated into items of work shall be tested in accordance with manufacturer's recommendations.

10. CLEAN-UP

The Contractor shall keep job site clean at all times. Loose materials shall not be allowed to migrate off-site. The Owner reserves the right to demand that the Contractor's forces be diverted to this clean-up at any time that conditions warrant such diversion. Such diversion of Contractor's forces will not entitle the Contractor to any extension of time or additional compensation.

11. WAGE RATES

The construction of said Project shall in all respects conform to all applicable requirements of federal, state, and local laws and ordinances.

12. WEATHER CONDITIONS

In the event of temporary suspension of work or during inclement weather, or whenever the Owner shall direct, the Contractor shall, and will cause his subcontractor to protect carefully his and their work and materials against damage or injury from weather. If any work or materials have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors to protect his work, such materials shall be removed and replaced at the expense of the contractor.



13. RESPONSIBILITY:

The Contractor shall accept ultimate responsibility for completion and final acceptance of the overall project including work done by subcontractors and material and equipment provided by vendors and suppliers. The Contractor shall be responsible for coordination of Project execution in order to prevent duplication of work, omissions, and other inter-contract conflicts. References to duties and responsibilities of subcontractor's, vendors, suppliers, etc., within these specifications are intended to be addressed through the general Contractor's overall responsibility.

14. SECURITY AND ACCESS:

East Mississippi Correctional Facility is a regional prison. Requirements for site access and approval to work on site will be discussed at the Pre-Bid meeting. Prior to commencing any work Contractor shall meet with prison security personnel to coordinate work activities and security measures.

**PLANS  
AND  
TECHNICAL SPECIFICATIONS  
FOR**

**SEWERAGE PRE-TREATMENT SYSTEM**

**EAST MISSISSIPPI CORRECTIONAL FACILITY  
MERIDIAN, MISSISSIPPI**

**PREPARED FOR**

**EAST MISSISSIPPI CORRECTIONAL FACILITY AUTHORITY  
MERIDIAN, MISSISSIPPI**



**ENGINEERING PLUS, INC.  
1724-B 23<sup>RD</sup> AVENUE  
MERIDIAN, MS 39301  
601-693-4234**

## **Plans and Technical Specifications**

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#### General

- 1.0 Modular Grinding, Screening, Compacting Equipment
- 2.0 Sewer Grinder, Screen and Auger Appurtenances
- 3.0 Grassing
- 4.0 Structural Concrete and Reinforcing Steel
- 5.0 Electrical Installation and Equipment

Plan Sheets No. 1 thru 5 dated 9/14/2021

## **MODULAR GRINDING-SCREENING-COMPACTING EQUIPMENT**

### **GRINDING and SHREDDING EQUIPMENT**

**AUGER MONSTER AGE (30K5 GRINDER AND INCLINED SPIRAL SCREEN) (Electric Drive)**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes Open-channel Grinder, Spiral Screen, Installation Frames, Pivoting Support and Controller.

##### **1.2 REFERENCE STANDARDS**

- A. Equipment shall, as applicable, meet the requirements of the following industry standards.
- B. ASTM International (ASTM):
  - 1. ASTM A36 - Carbon Steel Plate.
  - 2. ASTM A536 - Ductile Iron Castings.
  - 3. ASTM A48 - Gray Iron Castings.
  - 4. ASTM A564 Grade 630 condition H1150 (17-4) stainless steel
- C. American Iron and Steel Institute (AISI):
  - 1. AISI Type 1020 Steel
  - 2. AISI Type 1045 Steel.
  - 3. AISI Type 4130 - Heat Treated Alloy Steel.
  - 4. AISI Type 4140 Heat Treated Alloy Steel.
  - 5. AISI Type 18-8 Stainless Steel
  - 6. AISI Type 303 Stainless Steel.
  - 7. AISI Type 304 and 304L Stainless Steel.
  - 8. AISI Type 316 and 316L Stainless Steel.
- D. Society of Automotive Engineers (SAE):
  - 1. SAE Type 660 Bearing Bronze.
- E. National Electrical Manufacturer's Association (NEMA) Standards.
- F. National Electrical Code (NEC).
- G. Underwriters Laboratory (UL and cUL).
- H. International Electrotechnical Commission (IEC).

##### **1.3 QUALITY ASSURANCE**

- A. Qualifications:
  - 1. Manufacturer is documented as being engaged in the sale of similar products for over forty-years.

2. Manufacturer is single supplier for equipment listed in this section.
3. Manufacturer's Service Center is located domestically for repairs and upgrades.
4. Manufacturer supports Renew Program, providing new factory-built replacements of selected products for install without requirement to return existing equipment.
5. Manufacturer supports Preventative Maintenance Program, providing inspection and service of equipment by Manufacturer's Factory Technicians.
6. Manufacturer stocks all non-custom spare Parts.

B. Regulatory Requirements:

1. Manufacturer is U.L. listed for the construction of controller.

C. Certifications:

1. Manufacturer's management system is ISO9001 certified.
- 2.

#### 1.4 SUBMITTALS

Submittal documentation is provided for approval in ".pdf" format.

A. Product Data:

1. Product description text.
2. Performance curves or capacity tables.
3. Catalog data.

B. Shop Drawings

1. General arrangement of installation.
2. Product Configuration.
3. Assembly

C. Operation and Maintenance Manuals:

Submit one copy of a suitable operation and maintenance manual with shipment of product. An electronic version shall be supplied to create additional copies.

1. The manuals shall include but not be limited to the following: Equipment descriptions, operating instructions, drawings, troubleshooting techniques, recommended maintenance schedule, recommended lubricants, and recommended replacement parts list.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging, Shipping, Handling, and Unloading

1. Packaged in containers or on skids suitable for normal shipping, handling, and storage.
2. Protected from rain, snow, impact, and abrasion while in the possession of the carrier.

B. Acceptance at Site

1. Contractor shall review the contents of the shipment at time of delivery and promptly notify the carrier and supplier of any discrepancies.

C. Storage and Protection

1. Equipment to remain in the packaging provided by the supplier until it is installed.
2. Equipment to be stored in a dry environment between 40 and 100 degrees F.

D. Waste Management and Disposal

1. Contractor shall be responsible for discarding all packaging materials in an environmentally friendly manner and in accordance with local regulations.

1.6 WARRANTY

A. 12-month Limited Warranty

1. Manufacturer submits a standard twelve-month limited warranty document clearly identifying the scope, term and exclusions from the coverage.

1.7 SERVICE

A. Supplier supports product with multiple programs options available.

1. Service Center located domestically for repairs and upgrades.
2. Renew Program: Provides new factory-built replacements of selected products for install without requirement to return existing products.
3. Preventative Maintenance Program: Inspection and service of equipment by Factory Technicians.
4. Spare Parts.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. JWC Environmental Inc, 2850 S. Red Hill Ave. Suite 125, Santa Ana, CA 92705; Tel: 800-331-2277; [www.jwce.com](http://www.jwce.com)
- B. Equipment Substitution:
  1. Substitution requests will be considered in accordance with the following conditions.
    - a. Manufacturers who deem their product comparable shall perform the following tasks at the sole expense of the manufacturer to be considered.
      - 1) Submit certified documentation showing compliance with these specifications a minimum of ten days prior to bid opening.

2.2 MODULAR GRINDING-SCREENING-COMPACTING EQUIPMENT

Combines Open-Channel Grinder with Spiral Screen to pre-condition waste stream solids through solids reduction enhancing spiral screen's ability to separate, wash, convey, compacts and e-waters. All flow and solids are directed first through grinder for solids reduction and then through perforated screen trough of spiral screen. Spiral lifts solids to discharge point for collection and disposal. Grinder operates continually with spiral screen run sequence operation controlled by water level sensing either upstream only or with upstream and downstream sensing using differential.

A. Basis of Design:

1. Auger Monster model# AGE3200-285 as manufactured and supplied by JWC Environmental Inc
  - a. Spiral Diameter: 285mm (11-1/4-inch).
  - b. Spiral Diameter (transport section): 285mm (11-1/4-inch).
  - c. Inclination angle of Spiral Screen: 35-degrees.

- d. Grinder: Muffin Monster model# 30005-0032-DI
  - 1) Cutter Stack Height: 32-inches
- e. Maximum Design Flow Capacity: 980 GPM (1.41 MGD)

### 2.3 OPEN-CHANNEL GRINDER

Reduces solids conveyed in a wastewater stream to a size that is non-detrimental to downstream equipment. Grinder uses side rail with flow channel and specially designed fingers with a shape to create a pressure gradient increasing flow capacity and maximize capture of solids. Grinder uses low speed and high torque drive with two counter-rotating shafts stacked with intermeshed individual cutters and spacers supported on both ends of each shaft with mechanical seal and bearing cartridges, driven by an electric motor and speed reducer.

#### A. Cutter Assembly-Single Zone

- 1. Material: Alloy Steel.
  - a. Cutters: Through hardened to 45-52 HRC
  - b. Spacers: Through hardened to 34-52 HRC.
- 2. Configuration: Single Stack.
- 3. Cutters
  - a. 7-tooth Cam style, .438-inch thick, 4.710-inch diameter. Designed specifically for waste streams containing heavy volumes of solids.
  - b. Precision ground individual cutter elements with a thickness tolerance of  $+.000/- .001$ .
  - c. Keyed to shaft with hexagon opening.
- Spacers
  - d. Smooth O.D. .446-inch thick.
  - e. Precision ground individual spacer elements with a thickness tolerance of  $+.001/- .000$ .
  - f. Keyed to shaft with hexagon opening.

#### B. Mechanical Seal and Bearing Cartridges-Standard

- 1. Seals and bearing incorporated into a cartridge style design requiring no external seal flush or lubricants to operate wet or dry.
- 2. Rated for maximum operating depth: 208 feet (90 psi).
- 3. Dynamic and Static seal faces to be Tungsten carbide with 6% nickel binder.
- 4. Cartridge bushing and housing are AISI 304 stainless steel.
- 5. O-rings to be Buna-N (Nitrile).

#### C. Shafts

- 1. 2-inch hexagon heat treated AISI 4140 alloy steel.
- 2. Minimum tensile strength of 170,000 psi.
- 3. Supported on either end by Mechanical Seal and Bearing Cartridges.
- 4. Cantilevered designs are not acceptable.

#### D. End Housings, Side Rails, Top Cover, Bottom Cover, and Gaskets

- 1. End Housings
  - a. Cast integral bushing deflector directs solids away from Mechanical Seal and Bearing Cartridge bushings.
  - b. Directional flow arrows on side of housings indicate correct installation orientation for solids discharge.
  - c. Cast ASTM A536-84 65-45-12 ductile iron.

2. Side Rails
  - a. Evenly-spaced horizontal fingers and flow channels. Flow channels create additional open area through grinder increasing flow capacity. Horizontal fingers direct solids toward cutters by creating a pressure differential towards the cutters.
  - b. Shape of flow fingers creates a pressure gradient to force solids to cutters and minimize water head loss.
  - c. Fingers and flow channel are positioned on the upstream side of the grinder terminating even with the center of the cutter providing free discharge.
  - d. Side rails with flow channel running the entire length of the side rail are not allowed.
  - e. Cast ASTM A536-84 65-45-12 ductile iron.
3. Top Cover:
  - a. Manufacturing identification plate mounting.
  - b. Cast ASTM A536-84 65-45-12 ductile iron.
4. Bottom Cover:
  - a. ASTM A36 Steel.
5. Gaskets:
  - a. Cork and neoprene rubber.
- E. Transfer Gears with integral interlocking lobes
  1. Heat treated and hardened AISI 4140 alloy steel.
  2. Number of teeth on gears creates ratio of cutter tip speed on low speed shaft to cutter tip speed of highspeed shaft greater than 0.90 and less than 1.00 to promote cleanout of processed material in cutting stack.
- F. Couplings
  1. Low Speed Coupling
    - a. Two-piece 3-jaw interlocking design.
    - b. Hardened AISI 4140 alloy steel
  2. High Speed Coupling
    - a. Type L 3-jaw with elastomer
    - b. Buna-N spider.
- G. Lifting Eyes
  1. Drop forged Steel
  2. Rated for 1300 lb
  3. Designed for lift of grinder.
- H. Speed Reducer
  1. Grease lubricated cycloidal design Cyclo Series 6000 with 29:1 reduction ratio.
  2. Manufacturer: Sumitomo Machinery Corporation of America.
- I. Motor
  1. XPFC Explosion Proof Motor: Baldor Electric Company.
    - a. Installed Horsepower: 5 HP.
    - b. Motor Service Factor: 1.15.
    - c. Minimum Motor Efficiency (at Full Load): 89.5 percent.
    - d. Minimum Motor Power Factor (at Full Load): 78.Performance:
    - e. Grinder Peak Torque with Reducer: 1,514 lb-ft.
    - f. Grinder Peak Force at Cutter Tip: 7,724 lbf.



- J. Identification:
  - 1. Corrosion resistant nameplate affixed to top cover of Grinder.
  - 2. Nameplate Information: Manufacturer's name and address, Model No., Serial No., Capacity, Max. psi, Weight, Manuf. Date.
- K. Finishes:
  - 1. Paint Coatings for Ferrous Materials: Prepared to SSPC-SP6 (Commercial Blast Cleaning) and coated with minimum 6 to 8 mils TDFT (total dry film thickness) of an aliphatic acrylic polyurethane paint in the color Hunter Green.
  - 2. Paint Coatings for Previously Coated Components (Motors, Speed Reducers, etc.): Prepared to SSPC-SP1 (Solvent Cleaning) and SSPC-SP2 (Hand Tool Cleaning) and coated with minimum 6-8 mils TDFT (total dry film thickness) of an aliphatic acrylic polyurethane paint in the color Hunter Green.

## 2.4 INSTALLATION FRAME

Installation Frame provides structure for mounting and positioning of the grinder in an open channel. Installation frame secures the grinder in position and provides structure and baffling to properly support and prevent unwanted bypass of material.

- A. Frame
  - 1. Mounts to channel walls supporting weight of grinder with suitable anchors supplied by contractor for installation.
  - 2. Frame design uses pocket or guide plate to allow grinder to be lifted or lowered in and out of frame with no removal of fasteners.
  - 3. Where possible frame uses adjustable side flanges to mount to channel walls adjusting to taper or irregularities in the wall.
  - 4. Fabricated of AISI 304L stainless steel.
  - 5. Finish: No special requirements

## 2.5 SPIRAL SCREEN

Spiral screen separates, conveys, compacts and de-waters solids in waste stream. Spiral screen uses perforated trough with spiral and attached brush to allow water and solids small enough to pass through perforations, capturing the larger solids separating the soft organics (fecal) through the perforation while lifting the rags and other solids into transport section for conveyance and then into discharge section for compaction, de-watering and discharge. Spiral is driven by electric motor and speed reducer.

- A. Perforated Screen Trough
  - 1. Perforations: Nominal 6mm (1/4-inch diameter with 58% open area.)
  - 2. Baffles mounted on both sides of trough with replaceable 1/4-inch neoprene channel seals.
  - 3. Base plate sits flat on channel floor to position trough at 35-degree inclination.
  - 4. Material: AISI 304 stainless steel, electropolished
- B. Spiral
  - 1. Lower section of spiral includes 1/2-inch groove for mounting of brush.
  - 2. Brush mounts into groove and is secured with set screws.
  - 3. Single piece helically wound brush with 1/2-inch tall nylon bristles, wire and epoxy secured within stainless steel backing
  - 4. Upper section of spiral bolts to drive plate and shaft.

5. Material: ASTM A225GR Alloy steel minimum hardness 225BHN.
- C. Spray Nozzle Piping and Filter & Valve Manifold
1. Spray Nozzle Piping
    - a. Mounts on both sides of the Perforated Screen Trough, connects to single inlet regulated with manual ball valve.
    - b. Primary wash with V-spray nozzles rated 1.5 GPM @ 40 PSI.
    - c. Impact wash with high impact velocity nozzles rated for 1.0 GPM @ 40 PSI.
  2. Filter & Valve Manifold
    - a. Mounting bracket allows manifold to be secured to wall or floor in an accessible location.
    - b. Basket Strainer
      - 1) Size 80 wire mesh screen
      - 2) Housing Material: Bronze
    - c. Y-Strainer
      - 1) Size 20 wire mesh screen
      - 2) Housing Material: Bronze
    - d. Solenoid Valve
      - 1) 120 volt AC coil, explosion proof.
      - 2) Valve body material: Bronze
    - e. Ball Valve
      - 1) Manual operation
      - 2) Valve body material: AISI 316 stainless steel
- D. Transport Casing Segments
1. Cylindrical construction with flanged ends for bolted connection.
  2. Lower wear bars ½-inch thick 17-4 stainless steel with minimum hardness of 33 HRc
  3. Upper wear bars 3/8-inch thick 17-4 stainless steel with minimum hardness of 33 HRc.
  4. Inspection cover on segments longer than 1000mm.
  5. Casing Material: AISI 304 stainless steel.
- E. Discharge Casing Section
1. Cylindrical construction with flanged ends for bolted connection.
  2. Full diameter bottom discharge opening with flange for bolted connection.
  3. Lower wear bars ½-inch thick 17-4 stainless steel with minimum hardness of 33 HRc.
  4. Upper wear bars 3/8-inch thick 17-4 stainless steel with minimum hardness of 33 HRc.
  5. Inspection cover located over discharge outlet.
  6. Casing Material: AISI 304 stainless steel.
- F. Packing Gland Housing
1. Packing includes four (4) PTFE impregnated cords stack on top of one another to create seal.
  2. Housing material: AISI 304 stainless steel
- G. Speed Reducer
1. Helical parallel shaft mounted with 160:1 reduction ratio.
  2. Manufacturer: Nord Gear Corporation.
- H. Motor
1. TEFC Motor: Baldor Electric Company.
    - a. Installed Horsepower: 2 HP.

- b. Motor Service Factor: 1.15.
- c. Minimum Motor Efficiency (at Full Load): 86.5 percent.
- d. Minimum Motor Power Factor (at Full Load): 75.

I. Identification:

- 1. Corrosion resistant nameplate affixed to top cover of Spiral Screen.
- 2. Nameplate Information: Manufacturer's name and address, Model No., Serial No., Capacity, Max. psi, Weight, Manuf. Date.

J. Finishes:

- 1. Paint Coatings for Ferrous Materials: Prepared to SSPC-SP6 (Commercial Blast Cleaning) and coated with minimum 6 to 8 mils TDFT (total dry film thickness) of an aliphatic acrylic polyurethane paint in the color Hunter Green.
- 2. Paint Coatings for Previously Coated Components (Motors, Speed Reducers, etc.): Prepared to SSPC-SP1 (Solvent Cleaning) and SSPC-SP2 (Hand Tool Cleaning) and coated with minimum 6-8 mils TDFT (total dry film thickness) of an aliphatic acrylic polyurethane paint in the color Hunter Green.

## 2.6 PIVOTING SUPPORT

Holds spiral screen at proper inclination in waste stream and provides mechanism for lowering or raising screen. Pivot allows for 360° rotation of spiral screen and side to side movement within channel.

A. Pivot

- 1. Pivot uses tube in tube design to allow spiral screen to be removed from pivot any disassembly of fasteners.
- 2. Material: AISI 304 stainless steel.

B. Support

- 1. Support with guide slot to allow sliding movement of spiral screen for proper centering and sealing in channel.
- 1. Material: AISI 304 stainless steel.

## 2.7 LEVEL SENSORS

Measures water level in waste stream using radar and providing information to Controller for operation.

A. Level Sensor Configuration-Differential (Upstream & Downstream)

- 1. Uses two (2) level sensors to measure upstream water level and downstream water level and a percent differential to operate system.
- 2. Measuring principal: Radar
- 3. Measuring Range: 66 feet.
- 4. Ingress protection: IP68/ NEMA 6P
- 5. Output signal: 4 to 20mA
- 6. Manufactured by Endress+Hauser Micropilot FMR20

B. Mounting Bracket

- 1. Threaded connection for Level Sensor and flange for mounting to wall of channel.
- 2. Material: AISI 304 stainless steel.

## 2.8 MOTOR CONTROLLER

NEMA enclosure with programmable logic controller (PLC), operator interface terminal (OIT), operation and fail indicator, emergency stop pushbutton, reset pushbutton and selector switches.

### A. Basis of Design:

1. Model# PC2252D (Upstream and Downstream Level Sensor) as manufactured and supplied by JWC Environmental Inc.
  - a. Motor Controller Power Supply: 480 V/ 3 PH/ 60 Hz.

### B. Enclosure, Selector Switches, Pilot Lights, Pushbutton, and Emergency Stop Pushbutton.

1. Enclosure NEMA 4X:
  - a. AISI 304 stainless steel with hinged door and mounting flanges.
2. Selector Switches:
  - a. 22 mm, three-position, rated equal or better than the enclosure and indicate On-Off-Remote or On-Off-Level.
3. Pilot Lights:
  - a. 22 mm, LED (pilot lamp), rated equal or better than the enclosure and indicate POWER ON, GRINDER RUN, AUGER RUN, and FAIL.
4. Pushbutton:
  - a. 22mm momentary rated equal or better than the enclosure. Rests system after emergency stop circuit is reset and acknowledges any alarm condition and allows for re-starting of system.
5. Emergency Stop Pushbutton:
  - a. 22mm maintained (Rotate to unlatch) rated equal or better than the enclosure.

### C. Programmable Logic Controller

1. Basis of Design: Siemens S7-1200
  - a. 100kB working memory.
  - b. (14) 24 Vdc inputs, (10) relay outputs.
  - c. (2) 0-10 Vdc analog inputs.
  - d. PROFINET interface.

### D. Operator Interface Terminal

1. Basis of Design: Siemens KTP400
  - a. Key/ touch operation, 4 in. widescreen TFT (Thin Film Transistor) display.
  - b. 4 MB configuration memory.
  - c. PROFINET interface.
  - d. SD card slot.
  - e. NEMA 4X suitable for indirect sunlight.

### E. Motor Starters, Overload Relays and Control Power Transformer:

1. Starters
  - a. IEC, full voltage, and reversing.
  - b. Maximum short circuit protective fault current 100 kA.
2. Overload Relays
  - a. Adjustable and sized to full load amperes (FLA) of the motor.
3. Control Power Transformer

- a. Produce 120-volt AC power from the supply power. Sized and fused in accordance with code to accommodate the control power requirements.
- F. Current Transducers
1. Discrete output type with an adjustable set point from 1-135A with 200ms or faster response time.
- G. Operation:
1. Grinder Control: In accordance with ON-OFF-REMOTE Selector Switch.
    - a. OFF Position (OFF): De-energizes Grinder.
    - b. ON Position: Energizes Grinder
    - c. REMOTE Position: Grinder operates as controlled by a remote start/stop dry contact.
  2. Grinder JAM Condition: In accordance with setting of current transducer.
    - a. Controller will stop and reverse the Grinder motor no more than three times in a 30 second period. OIT displays Grinder Fail to Run and FAIL indicator lamp will illuminate.
    - b. Grinder will stop operation.
  3. Grinder MOTOR OVERLOAD Condition: In accordance with setting of Motor Overload Relay.
    - a. OIT displays Grinder Motor Overload and FAIL indicator lamp will illuminate.
    - b. Grinder will stop operation.
  4. Grinder MOTOR OVER TEMP Condition: In accordance with setting of Motor Thermostat. (Only with applicable motors).
    - a. OIT displays Grinder Motor Overtemp and FAIL indicator lamp will illuminate.
    - b. Grinder will stop operation.
  5. Auger Control: In accordance with ON-OFF-LEVEL Selector Switch.
    - a. OFF Position (OFF): De-energizes Auger.
    - b. ON Position: Energizes Auger
    - c. LEVEL Position: Auger operates based on the water level measured by the system's level sensor(s).
      - 1) Auger Run Cycle will be initiated and will continue until water level difference measured is less than set point. Auger Run Cycle fully programmable from OIT.
      - 2) Auger Accumulated Run Timer initiates the operation of the auger after number of accumulated run cycles has been achieved or if level sensor fails. Accumulated Run Timer fully programmable from OIT.
      - 3) Auger Start Time Interval Setpoint monitors time period from last Auger Run Cycle and initiates a run cycle if time period exceeds the setpoint.
  6. Auger JAM Condition: In accordance with setting of current transducer.
    - a. Controller will stop and reverse the Auger motor no more than two times in a 30 second period. OIT displays Auger Fail to Run and FAIL indicator lamp will illuminate.
    - b. Auger will stop operation.
  7. Auger MOTOR OVERLOAD Condition: In accordance with setting of Motor Overload Relay.
    - a. OIT displays Auger Motor Overload and FAIL indicator lamp will illuminate.
    - b. Auger will stop operation.
  8. Auger MOTOR OVERT EMP Condition: In accordance with setting of Motor Thermostat. (Only with applicable motors).
    - a. OIT displays Auger Motor Overtemp and FAIL indicator lamp will illuminate.

- b. Auger will stop operation.
- 9. Auger Reverse Jog Soft Switch (via OIT)
  - a. Energizes the auger reverse contactor while depressed. Only functional when auger selector switch is ON or LEVEL.
- 10. UPSTREAM or DOWNSTREAM LEVEL PROBE FAILED Condition:
  - a. Initiates continuous run cycles on loss of signal from one or both probes.
- 11. Power Failure:
  - a. While System is Operating: System shall return to normal operation when power is restored.
  - b. While System is in a Fail Condition: System shall return to a fail state when power is restored. The fail state shall not be cleared until reset.
  - c. Reset of Grinder and Auger: Accomplished RESET pushbutton.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Coordinate installation of the equipment in accordance with the manufacturer's installation instructions, approved submittals, and in accordance with OSHA, local, state, and federal codes and regulations.

#### 3.2 FIELD QUALITY CONTROL

##### A. INSPECTION

- 1. The manufacturer is required to provide the services of a factory or manufacturer's representative for a minimum of one day to inspect the equipment for proper installation, apply power for the first time and check for proper motor rotation, oversee the initial introduction of material into the system and confirm the equipment operates as intended.

##### B. TRAINING

- 1. Field training for operations, maintenance, and supervisory staff members is to be provided by a manufacturer or manufacturer's representative. Field instruction shall cover key components of the equipment, operating and maintenance requirements and troubleshooting techniques.

END OF SECTION

## GRINDER, SCREEN, and AUGER APPURTENANCES

2-01            **GENERAL:** Grinder, Screen and Auger Appurtenances shall consist of furnishing and installing rectangular stop gates, structural metal grating and water service in connection with the Grinder-Screen-Auger system to be installed at the East Mississippi Correction Facility.

2-02            **MATERIALS:**

**Stop Gates:**

1. Stop Gates shall be of aluminum construction capable of providing a 16" wide by 4' clear opening (upward) at the Grinder-Screen-Auger system entrance and exit. Frame for the gate shall either be embedded or channel mounted at the contractor's option and when closed be completely water tight.
2. All parts of the gate shall have a minimum thickness of 1/4 inch. The gate frame shall be extruded aluminum. The guide grooves in which the head guide angle travel shall contain ultra high molecular weight polyethylene bearing strips/seals in dovetail slots.
3. The frame configuration shall be of the flush-bottom type and shall allow the replacement of the side seals without removing the gate frame from the wall.
4. The slide shall consist of aluminum plate reinforced with "U" shaped aluminum extrusion welded to the plate to limit its deflection to 1/360 of the gate's span under the design head.
5. The guides and seals shall be of UHMW.
6. The flush bottom resilient neoprene seal shall be mounted to the frame.
7. Dual handles shall be provided for gates over three feet in width.
8. Gate materials shall conform to the following;

Frame Slide -Aluminum 6061-T-6 ASTM B-209, ASTM B-211

Invert seals -Neoprene ASTM D-2000

Side seals, Bearing strips -Ultra High Molecular Weight Polyethylene ASTM D4020

Bottom seal -Neoprene ASTM D-2000

Fasteners -Stainless steel type 304L

9. Aluminum Stop Gates shall be Golden Harvest Model no. MD GH-30 or equal. Other approved manufacturers are Halliday and Hydrogate.

**Structural Metal Grating;**

1. Structural Metal Grating shall be electroforged steel bar type capable of supporting a load of 947 lb. at mid span. Grating shall be located as indicated on the drawings. Grating shall be McNichols, Type GW, with a minimum bearing bar size of 2" x 3/16" or equal.

**Water Service;**

1. Water service required for continuous cleaning of screen shall consist of the following;
  - a. Below ground water line to be 1" dia. Orangeburg Class 250 Polybutylene Plastic.
  - b. Above ground water line inside channel to be 1" dia. type "K" copper. Insulate all above ground piping. Fasten water line to channel with stainless steel brackets.
  - c. Connect pipe to water supply line with appropriate sized service clamp (Dresser Style 194) and 1" dia. brass corporation stop as manufactured by Ford (F-1000)
  - d. 1" brass cut-off valve (Fed Spec WW-V-54, Class 150) shall be installed in standard plastic meter box immediately prior to water line entering into concrete channel.

**2-03 SUBMITTALS:**

1. Contractor shall submit submittals, prior to ordering, on the following items;
  - a. Stop Gate Assembly
  - b. Structural Metal Grating with plan of layout at channel structure. Provide access point to grinder-screen-auger through removal of portion of grating.
  - c. Water Service Line
2. Contractor shall submit four (4) copies of data for ENGINEER'S approval. Data required is as follows;
  - a. Manufacturer's literature on all material.
  - b. Shop drawings on all fabricated items.
  - c. Test reports and manufacturer's certificates on pipe, valves, and water line appurtenances.
  - d. Maintenance data and operating instructions on all material.



2-04 INSTALLATION: Installation shall conform to the following:

1. Install Stop Gates as per manufacturers instruction. Insure that gates are plumb and operate properly.
2. Install Structural Metal Grating as per manufactures instruction. Install supporting brackets and appurtenances as required to provide a neat and workmanlike job. Access point to the grinder-screen-auger shall be the only area in which grating can be removed. All other grating must be fastened securely.
3. Install water line, valves, and above ground piping as per manufacturers instruction. Consult with Utility and Owner prior to commencement of work.

## GRASSING

2-01 SCOPE: Prepare topsoil by top dressing the graded area, fertilize seed, water and perform all work necessary to produce a growing stand of an approved grass.

2-02 SOIL PREPARATION: Spread stockpiled topsoil onto graded surface.

- A. Plow, disc, harrow and pulverize top two to four inches of soil to be seeded.
- B. Produce a smooth, uniform loose, well-broken surface, free of clods, roots, and other objectionable foreign matter.

2-03 LIMING: Use ground or pulverized limestone meeting requirements of Lauderdale County, USDA, ASCS for use on farms in local area.

- A. Use lime at rate on one ton per acre or otherwise as recommended by County Agent or other qualified agronomist.
- B. Spread evenly by means of a mechanical spreader, incorporating lime into top three inches of soil.
- C. Furnish ENGINEER with copy of invoice from lime supplier as a voucher for amount of lime used.

2-04 FERTILIZING: Use mixed, commercial, non-acid forming fertilizer containing stated percentages of nitrogen, phosphoric acid, and potash.

- A. Fertilizer shall be dry, granular, and bagged in manufacturer's original container, which shall be plainly marked as to formula and non-acid reaction.
- B. Spread fertilizer not more than two weeks in advance of seeding.
- C. Rate of fertilizing shall insure 300 pounds each of available nitrogen, phosphoric acid and potash per acre.
- D. Guarantee full rate of application by delivering computed amount of fertilizer to a prescribed area prior to spreading.
- E. Spread evenly and incorporate into top three inches of soil within 24 hours after spreading.

2-05 SEEDING:

A. Seed shall conform to following table:

NAME	PURE SEED	GERMINATION & HARD SEED	% WEED SEED
Bermuda, Cynadom dactylon	97	85	1.00
Rye Grass, Lolium Multiflorum	98	97	0.50

B. Furnish ENGINEER with certification from supplier or seed authority that above requirements are met and that seed were harvested within ten months of date of application.

C. Accomplish seeding by means of power-drawn seed driller, combination, corrugated roller seeder, approved hand operated mechanical seeder, or other approved method to evenly distribute seed according to following rates and dates:

DATES	SEED	RATES IN POUNDS PER ACRE
1 March through 15 August	Hulled Bermuda	6
15 August through 1 March	Bermuda & Rye	
	(1) Unhulled Bermuda	12
	(2) Italian or common Rye Grass	20

D. Cover seed ½" to 1".

1. Avoid seeding when soil is excessively wet or dry.
2. Roll seeded area with cultipacker or pneumatic roller immediately after sowing.
3. Water daily until seeds germinate and commence growth.

2-06: MULCH: A light mulch shall be required if grassing is accomplished during the period 15 September through 1 March.

A. Apply mulch at rate of 1-1/2 tons per acre.

B. A dark bahia hay may be used for mulch.

2-07 MAINTENANCE: Water, tend, and re-seed bare or eroded places to insure a good growth of grass. Continue maintenance until entire project is accepted.

## STRUCTURAL CONCRETE AND REINFORCING STEEL

4-01 SCOPE: Construct reinforcing concrete structures in accordance with the following specifications, unless indicated otherwise.

4-02 CONCRETE: Furnish concrete as follows:

- A. Transmit mixed, according to a regular vendor's job mix formula, using following the component materials:
  - 1. Portland cement
  - 2. Clean sand
  - 3. Potable water
  - 4. Fine aggregate
  - 5. Coarse aggregate, one inch (1") maximum size
- B. Standards are:
  - 1. Slump 2 inches to 4 inches
  - 2. Compressive Strength 4000 psi at 28 days
- C. Note that laboratory testing is at OWNER'S expense, but CONTRACTOR shall make three cylinders per load of concrete and deliver to the ENGINEER for testing.
- D. Construct forms of wood or metal so as to be virtually mortar tight, rigid, and true to prescribed line, grade and dimension.
  - 1. A ½ inch to ¾ inch chamfer is required on all exposed edges and corners.
  - 2. Clean and oil forms prior to pouring of concrete.
  - 3. Securely position all reinforcing steel
  - 4. Obtain ENGINEER'S approval prior to pouring concrete
- E. Mechanically or pneumatically vibrate all pours.
- F. Fill voids and rub finish all exposed concrete surfaces
- G. Spray a liquid curing compound on all exposed surfaces after rubbing has been completed.

4-03 REINFORCING STEEL: Furnish and install in various structures new, deformed steel bars of intermediate grade rail or billet steel and conform to the following requirements:

- A. Submit duplicate bar list and bending diagram to ENGINEER for approval or comment prior to authorization to vendor for fabrication and delivery.
- B. Furnish bars in bundles and marked with metal tags stamped for identification purposes.
- C. Store bars where they will remain clean and free from rust, oil, paint, and dirt.
- D. Use metal chairs, stools, spacers, dividers, and form ties.
- E. Gravel, rubble, wood blocks, and temporary wedges are prohibited in forms.
- F. Reinforcing steel strength to be 60 ksi.

**ELECTRICAL INSTALLATION AND EQUIPMENT****PART 5 - BASIC ELECTRICAL MATERIALS AND METHODS**

**5.01 ELECTRICAL SPECIFICATIONS:** The electric supply at the East Mississippi Correctional Facility Grinder-Screen-Auger equipment will be 480 volts, three phase, 60 Hertz. The Contractor shall contact the power company prior to bidding and include in his bid the cost of labor and material necessary to supply the equipment with electricity, including any cost which may be assessed by the power company for installation of power company furnished material. The Contractor shall coordinate all aspects of the construction concerning the electric service with the power company. The Approval Drawings shall include all details of the power company electric service and all associated equipment (to include all pole types and locations, switches, fuses, wire sizes and types, etc.) anywhere on the Owner's property.

**5.02 TEMPORARY ELECTRIC SERVICE:** Any Temporary Electric Service for construction power shall be furnished, installed, and removed by the electrical contractor. Also, Contractor, shall make all necessary arrangements with the power company for metering and billing and provide for these charges and cost in his bid.

**5.03 TESTING AND INSPECTIONS:** Contractor shall assist in making periodic inspections or tests as required by the Engineer. When required, Contractor shall provide the assistance of foreman and qualified craftsmen for reasonable duration of each test, etc. Cooperate with other Contractors in preventing premature operation of equipment like grinder-screen-auger equipment, etc., which should be first run in presence of personnel responsible for each item.

After wiring is completed, the Contractor shall test for shorts and open circuits, intentional and unintentional grounds. All shorts, open circuits, and unintentional grounds shall be corrected.

**5.04 GUARANTEE:** Workmanship and materials shall be guaranteed for period of one year from date of official acceptance of contract. Be responsible for any adjustments, replacements and corrections necessary to restore project to first-class condition if deficiency is due to faulty workmanship or materials.

**5.05 CONDUIT SYSTEMS:** Use galvanized or sheradized steel conduit in damp locations, exterior walls, exposed out of doors or when subject to mechanical damage after installation. Underground runs, use PVC, schedule 80 per NEMA standards and buried at required depth per NEMA standards. Provide electrical line red warning tape buried six (6) inches above conduit run. Protect conduits against entry of debris; keep ends capped during construction; clear or replace obstructed conduits.

Size and install conduits so that conductors may be installed without damage or excessive strain, using NEC as a minimum standard. For rigid conduit use double lock nut and bushings. For conduits larger than 1", use grounding type insulation bushing. Entire

conduit system shall provide a dependable path to ground. EMT fittings shall be watertight type, T&B 5100 series. Crimped or set screw types are not acceptable.

Ream ends after threading, make bends with an approved bending tool. Replace deformed bends or off-sets. Avoid hot water pipes, stay at least 3" from covering of hot pipes except as crossing, then at least 1".

- 5.06 PULL BOXES AND JUNCTION BOXES:** Pull boxes shall be code gauge and size galvanized steel and shall be installed where accessible and in location shown on the drawings or where required to facilitate the easy pulling of wires. Boxes shall be sized properly for the conduits and wires entering them. In outdoor and process areas use weatherproof and corrosion resistant boxes.
- 5.07 OUTLET BOXES:** On exposed conduit in process areas, use Crouse-Hinds No. FS or FD or other galvanized steel types. All boxes galvanized, or cadmium plated, or better.
- 5.08 CONDUCTORS AND GENERAL WIRING METHODS:** Type THW 600-volt copper wire for general use and types THHN 600-volt copper for High Ambient Temperature; where Contractor sizes conduit based on conductor required, basis is type THW. Approved manufacturers, Triangle, General Cable, Collyer, National Electric Products, or approved equal. Size, type and trade name stamped permanently at regular intervals on all conductors. All wire shall be color coded.

Install wire in conduit after all work which may cause damage is completed. Powdered talc or other approved compound may be used as lubricant where necessary.

Make joints and splices in conductors with approved insulating type compression fittings, T&B, Sta-kon, or Buchanan splice caps. Wire-nuts are not acceptable.

- 5.09 GROUNDING AND BONDING REQUIREMENTS:** In order to provide a safe and reliable system, all structures, piping, equipment and electrical services involved must be properly grounded and bonded to a properly sized and installed grounding electrode system.

All work will comply with every facet of the National Electric Code Article 250, current edition. Particular attention must be given to sections 250.56 and 250.58.

The article 250 requirement for a ground resistance of 25 ohms or less shall be considered as the minimum and a resistance of 4 ohms or less shall be the goal. This resistance will be measured with equipment using a three point resistance measurement and "fall of potential" system.

Other structures will have a grounding system appropriate for the location per the National Electric Code article 250.

Conduit work, motors, panel boards and electrical equipment are to be effectively and permanently grounded. Feeder conduits shall provide a good path to system ground.

The grounding screw on all grounding type receptacles shall be securely grounded to the outlet box with lug and screw, or use self-grounding types.

Verify electrical continuity of all conduit runs and correct any discrepancies.

The Contractor shall be responsible for determining the extent of grounding and bonding requirements for equipment located at the site(s) covered under the contract(s) as listed herein. The Contractor shall provide for these charges, and cost in his bid.

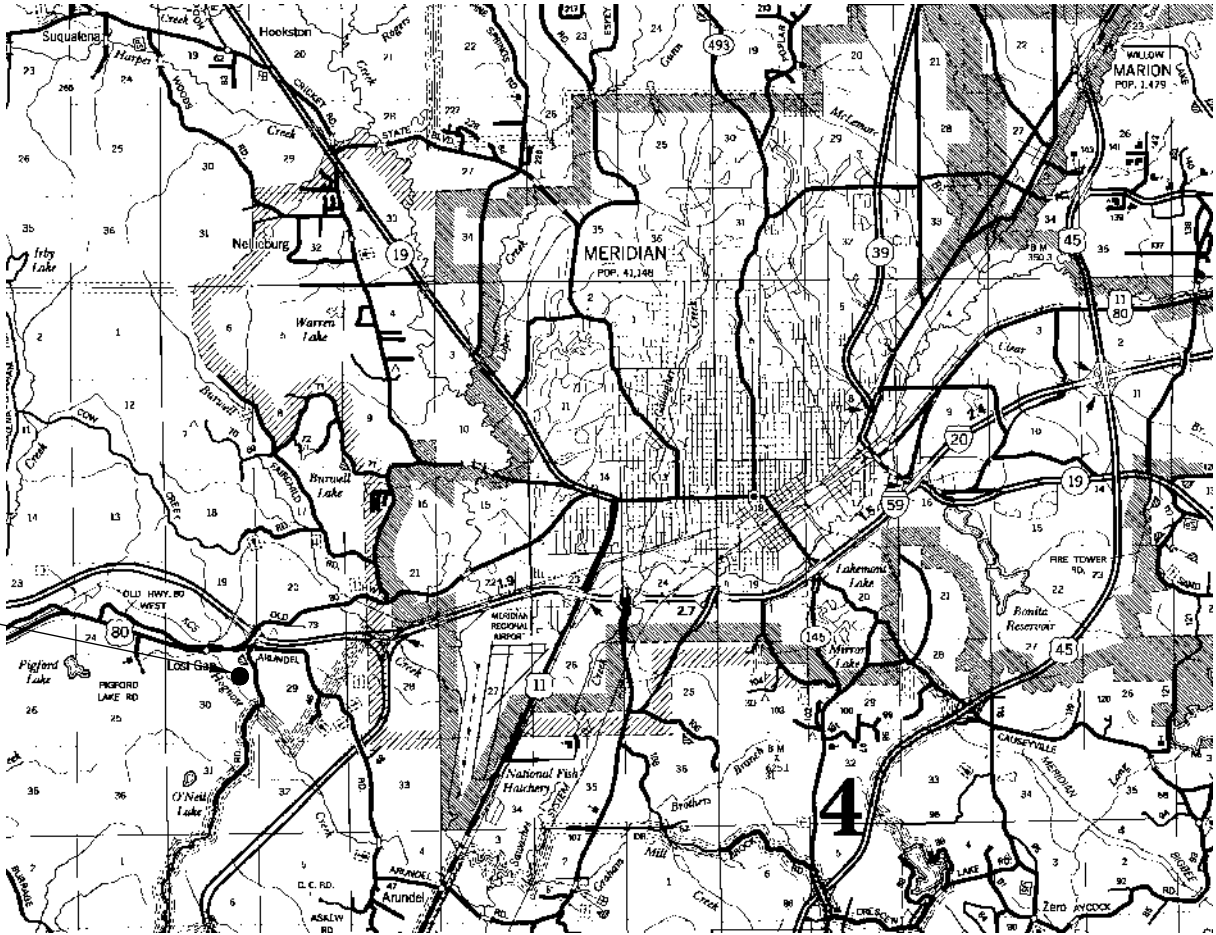
- 5.10 EXCAVATION AND BACKFILLING:** Excavate trenches for underground conduit or cable to required depth and width. After conduit or cable has been installed, inspected, and approved, backfill trench with earth free of trash, rock, brick and debris, and compact as required. Under slab, follow compaction rules for general work on this project. Underground workmanship applies under slab; depth can be reduced, but provide full and complete encasement. Bond conduit to any membrane passed through.
- 5.11 CLEANING:** As required, clean all equipment or exposed material provided or installed under this section. Protect from any normal use of paint, mortar, etc.
- 5.12 WORKMANSHIP:** All work shall be done in a thorough, substantial, and workmanlike manner by competent workmen. Applicable rules of National Electric Code apply as minimum standard for this contract but do not replace or reduce any specific requirement herein.
- 5.13 INTERFERENCES:** The drawings are generally diagrammatic. Cooperate with other trades so that interferences of conduit, equipment, piping, etc., will be avoided. If interference develops, refer promptly to Engineer for decision.

#### END OF SECTION



SEWERAGE PRETREATMENT SYSTEM  
FOR  
EAST MISSISSIPPI CORRECTIONAL FACILITY  
LAUDERDALE COUNTY, MISSISSIPPI

PROJECT SITE



VICINITY MAP  
SCALE: 1/2" = 1 MILE

INDEX	
SHEET TITLE	SHEET NO.
TITLE SHEET & SITE PLAN	1.0
QUANTITY SHEET	2.0
SITE PLAN	3.0
PROJECT DETAILS - SHEET 1	4.0
PROJECT DETAILS - SHEET 2	5.0



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TITLE SHEET SEWERAGE PRETREATMENT SYSTEM		
FOR:  EAST MISSISSIPPI CORRECTIONAL FACILITY LAUDERDALE COUNTY, MISSISSIPPI		
F.B. Civil 3D Projects\Private Projects\2020\20-202 EMCF Slope Repair and Sewage Pretreatment\Cad\EMCF Sewage Pretreatment_Auger Monster.dwg	P. DATE: 9/14/2021 DRAWN BY: KHM CHECKED BY: KHM JOB NO. 20-202 DRAWING NO. 20-202-001	SHEET       1.0

GENERAL NOTES:

CONTRACTOR SHALL RETURN PROJECT AREA(S) TO AS AS GOOD OR BETTER THAN PRE-PROJECT CONDITIONS UPON COMPLETION OF WORK.

CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS.

CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING.

CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF HIS/HER EMPLOYEES AND COMPLYING WITH ALL LOCAL AND STATE LAWS AND ORDINANCES.

CONTRACTOR IS TO COORDINATE CONNECTION TO EXISTING WATERLINE WITH SOUTHWEST LAUDERDALE WATER ASSOCIATION PRIOR TO COMMENCING WORK. CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE SOUTHWEST LAUDERDALE WATER ASSOCIATION.

PRIOR TO ANY EXCAVATION IT SHALL BE THE CONTRACTOR’S RESPONSIBILITY TO NOTIFY MISSISSIPPI 811 CALL CENTER FOR UTILITY LOCATION.

IT SHALL BE THE CONTRACTOR’S RESPONSIBILITY TO MAINTAIN ANY AND ALL MARKINGS AS NEEDED TO PROTECT EXISTING UTILITIES. DUE TO MULTIPLE UTILITY RE-LOCATIONS THAT MAY BE GOING ON DURING THIS WORK, CONTRACTOR SHALL COORDINATE WITH EACH UTILITY COMPANY ACCORDINGLY. ANY DAMAGE OR INTERRUPTION OF SERVICE CAUSED BY CONTRACTOR’S NEGLIGENCE SHALL BE REPORTED IMMEDIATELY TO THE APPROPRIATE UTILITY COMPANY AND SHALL BE REPAIRED AND SERVICE RESTORED IN FULL COOPERATION WITH THE UTILITY COMPANY AT THE CONTRACTOR’S EXPENSE.

CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE AMOUNT OF ASPHALT ROADWAY DISTURBED DURING CONSTRUCTION. ANY ASPHALT ROADWAY DEMOLISHED DURING CONSTRUCTION SHALL BE REPAIRED UNDER THE PROJECT PAY ITEM.

ALL COSTS FOR PAVEMENT REPAIRS REQUIRED AT ANY DRIVEWAY CROSSINGS ARE TO BE ABSORBED BY THE CONTRACTOR. NOT A SEPARATE PAY ITEM.

EROSION CONTROL NOTES:

CONTRACTOR SHALL LIMIT EXPOSURE OF DISTURBED AREAS TO THE SHORTEST AMOUNT OF TIME PRACTICABLE AND DIVERT SURFACE WATER AROUND DISTURBED AREAS OF SITE WHENEVER POSSIBLE.

CONTRACTOR SHALL REMOVE SEDIMENT FROM STORM WATER BEFORE IT LEAVES THE SITE BY APPROPRIATE METHODS.

CONTRACTOR SHALL NOT LEAVE ANY OPEN TRENCHES OR EXCAVATIONS OVER NIGHT. TRENCHES OR EXCAVATION PITS SHALL BE FILLED IN AT THE END OF EACH WORKING DAY.

CONTRACTOR SHALL IMPLEMENT AND MAINTAIN CONTROLS AS NEEDED TO PREVENT EROSION AND SEDIMENT FROM ADVERSELY AFFECTING DOWNSTREAM PROPERTY THROUGHOUT CONSTRUCTION OF PROJECT. WHEN WORK IS NOT BEING PERFORMED IN A DISTURBED AREA, CONTRACTOR SHALL INSTALL APPROPRIATE TEMPORARY AND/OR VEGETATIVE AND STRUCTURAL PRACTICES TO INSURE THAT EROSION AND SEDIMENT FROM CONSTRUCTION SITE DOES NOT FLOW ONTO ADJOINING PROPERTIES.

CONTROLS AND MANAGEMENT PRACTICES USED TO MITIGATE IMPACTS FROM STORM WATER RUNOFF MAY INCLUDE BUT ARE NOT LIMITED TO SILT FENCING, SEDIMENT TRAPS, BRUSH BARRIERS, AND SWALES. HAY BALES SHALL NOT BE USED.

CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH STATE LAWS REGARDING POLLUTION PREVENTION.

SUMMARY OF QUANTITIES				
PAY ITEM NO.	PAY ITEM	QUANTITY		UNIT
		PLAN	FINAL	
<u>GRINDER-SCREEN-AUGER ITEMS</u>				
1	MOBILIZATION	1		LUMP SUM
2	SITE GRADING AND EXCAVATION	1		LUMP SUM
3	STRUCTURAL CONCRETE (INCL. STEEL REINFORCEMENT)	18		C.Y.
4	16" WIDE ALUMINUM STOP GATE	4		EACH
5	STRUCTURAL METAL GRATING	115		S.F.
6	GRINDER-SCREEN-AUGER EQUIPMENT (INCL. CONTROL PANEL)	1		LUMP SUM
7	ELECTRICAL WORK – INCL. ELECTRICAL SERVICE TO SITE AND SERVICE POLE	1		LUMP SUM
8	SIZE NO. 67 STONE BASE	50		C.Y.
9	TIE TO EXISTING SANITARY SEWER	1		LUMP SUM
10	SILT FENCE, TYPE A (STORMWATER CONTROL)	140		LIN. FT.
11	GRASSING (EROSION & STORMWATER CONTROL MEASURES)	1		LUMP SUM
12	1" HDPE SERVICE TUBING FOR WATER SUPPLY TO SCREEN	900		LIN. FT.
13	8"x1" SADDLE AND CORPORATION STOP	1		EACH
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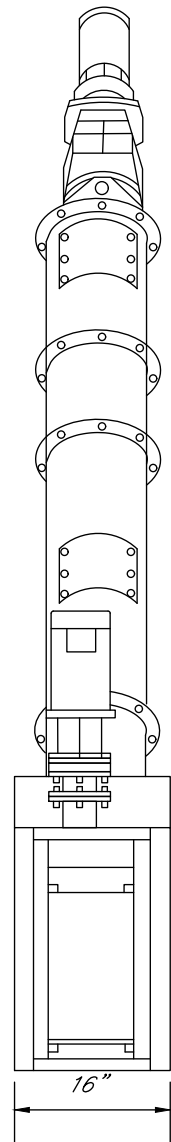
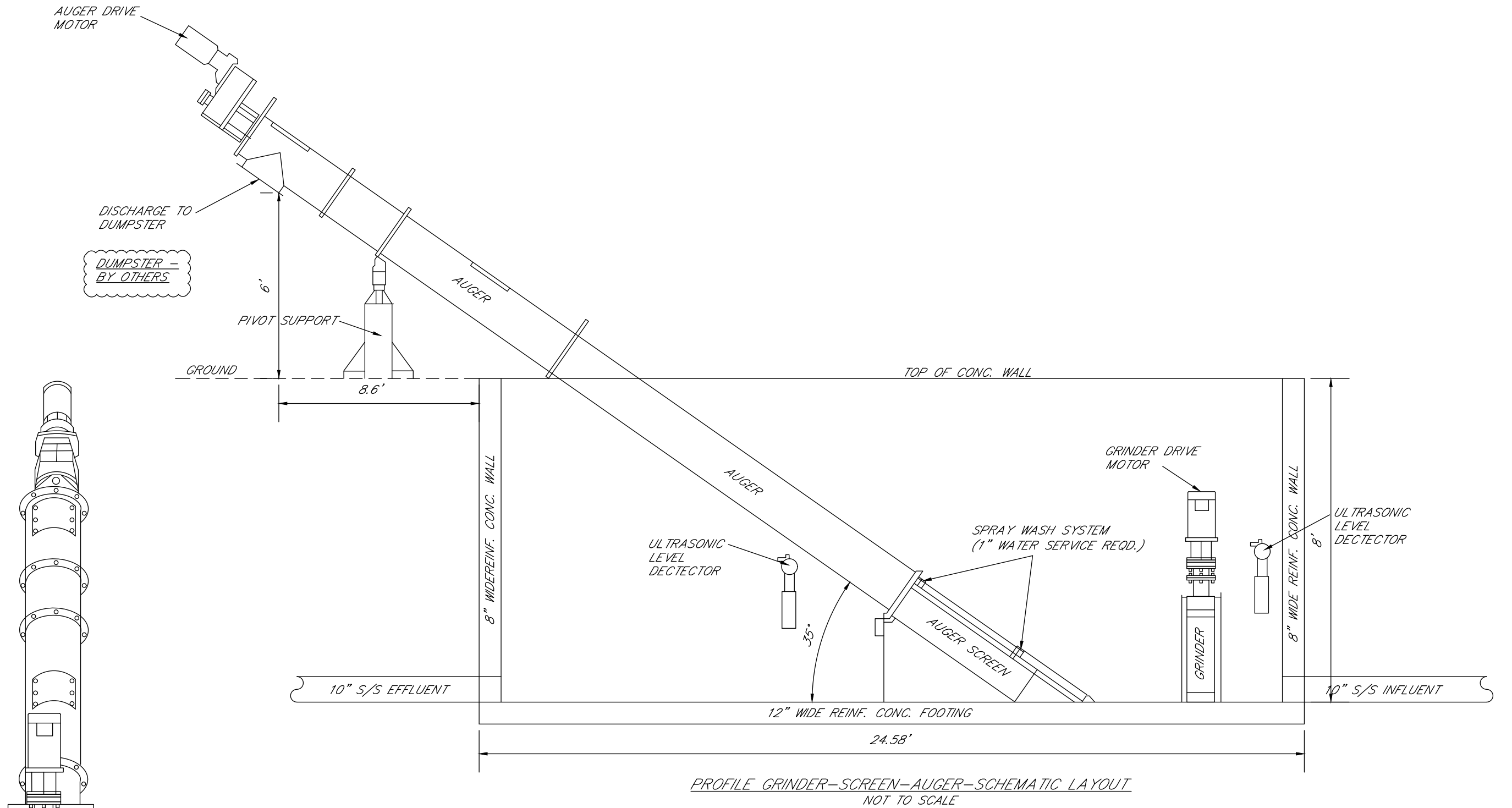
QUANTITY SHEET  
SEWERAGE PRETREATMENT SYSTEM

FOR:

EAST MISSISSIPPI CORRECTIONAL FACILITY  
LAUDERDALE COUNTY, MISSISSIPPI

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GRINDER-SCREEN-AUGER NOTE:

GRINDER-SCREEN-AUGER TO BE INSTALLED IN 16\"/>

SECTION GRINDER-SCREEN-AUGER-SCHEMATIC LAYOUT  
NOT TO SCALE

PROFILE GRINDER-SCREEN-AUGER-SCHEMATIC LAYOUT  
NOT TO SCALE



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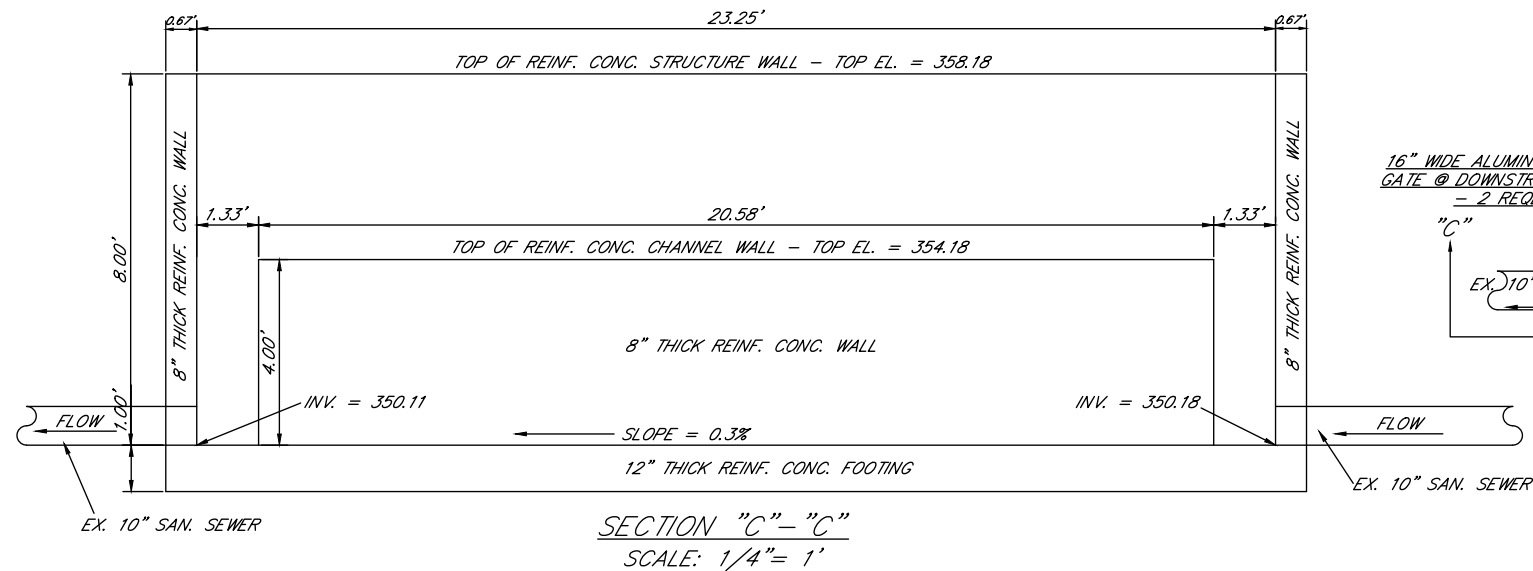
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DETAIL SHEET NO. 1  
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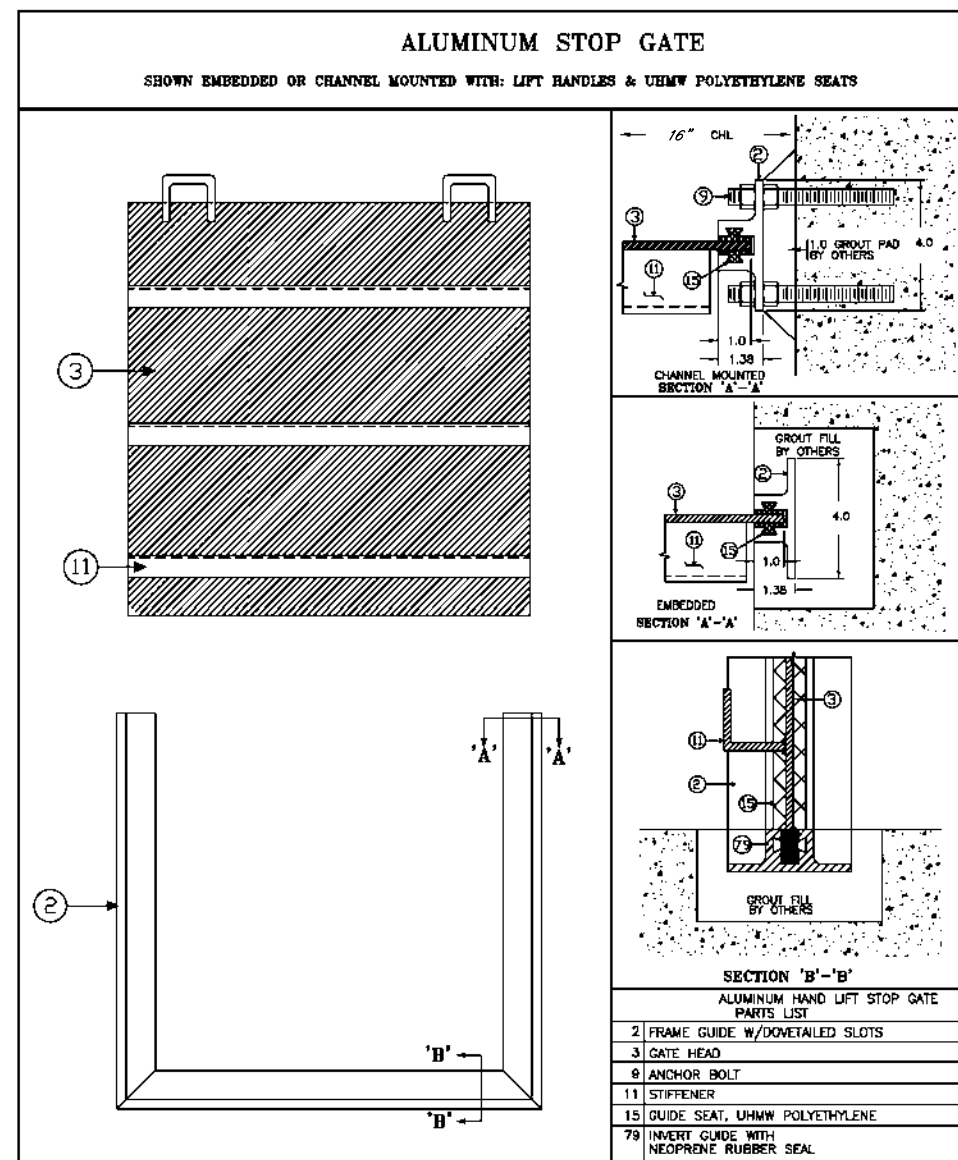
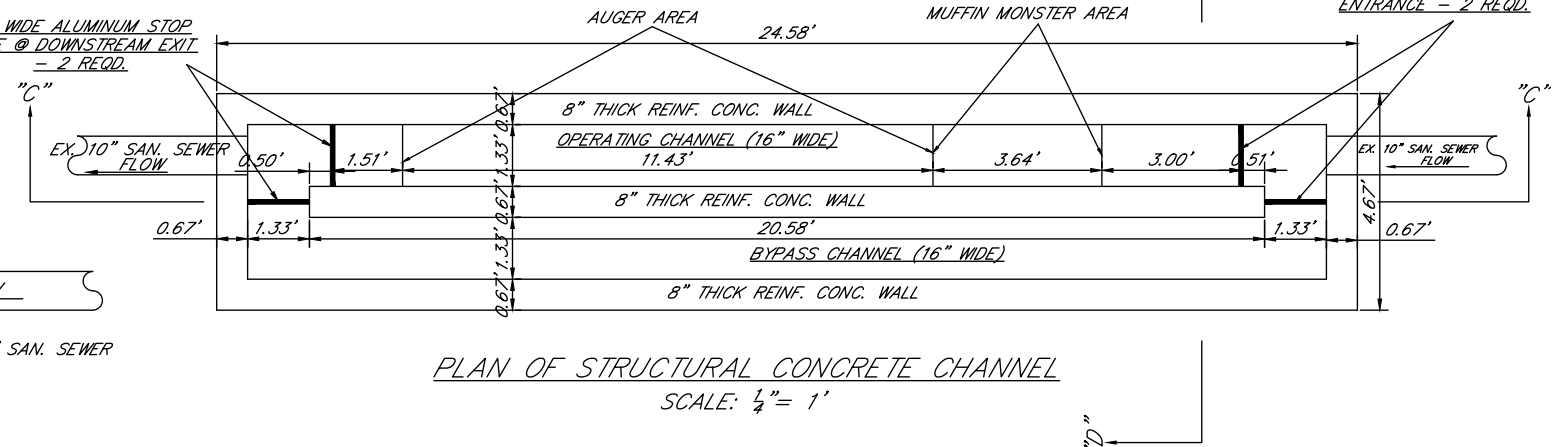
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16" WIDE ALUMINUM STOP GATE @ DOWNSTREAM EXIT - 2 REQD.



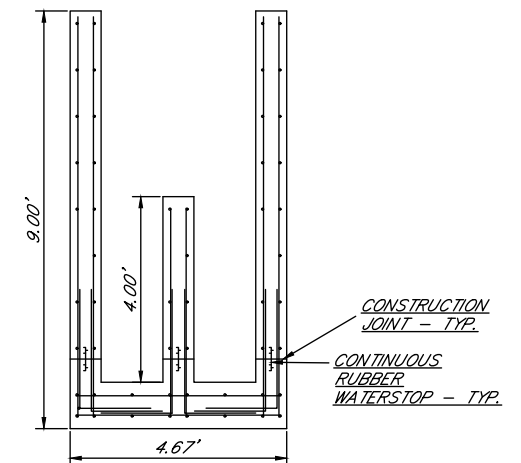
STOP GATE DETAIL  
NOT TO SCALE

#### REINFORCED CONCRETE REQUIREMENTS:

1. CONCRETE STRENGTH TO BE 4000 PSI @ 28 DAYS
2. STEEL REINFORCEMENT TO BE 60 KSI

#### STEEL REINFORCEMENT REQUIREMENTS:

1. 8" THICK EXTERIOR VERTICAL CONCRETE WALLS;  
#4 BARS 12" O.C., EACH WAY, BOTH FACES, 1-1/2" COVER.
2. 8" THICK INTERIOR VERTICAL CONCRETE WALL;  
#4 BARS 12" O.C., EACH WAY, BOTH FACES, 1-1/2" COVER.
3. 12" THICK FOOTING;  
#4 BARS 12" O.C., EACH WAY, TOP & BOTTOM, 3" COVER.
4. LAP ALL BARS 18", WATERSTOP REQUIRED



#### STOP GATE NOTE:

ALUMINUM STOP GATES TO BE DESIGNED TO FIT INTO 16" WIDE CHANNEL WITH EITHER EMBEDDED OR CHANNEL MOUNTED FRAME. GOLDEN HARVEST MODEL NO. MD GH-30 OR EQUAL.



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#### DETAIL SHEET NO. 2 SEWERAGE PRETREATMENT SYSTEM

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