



April 08, 2025

**INVITATION TO BID
BL051-25**

The Gwinnett County Board of Commissioners is soliciting competitive sealed bids from qualified suppliers for the **Purchase and Installation Support of Inclined Plate Settlers at the Lanier Filter Plant.**

Bid Submittal Date and Location:

Bids should be typed or submitted in ink and returned in a sealed container marked on the outside with the BL# and Company Name. Bids will be received until **2:50 P.M. local time on May 20, 2025**, at the Gwinnett County Financial Services - Purchasing Division – 2nd Floor, 75 Langley Drive, Lawrenceville, Georgia 30046. Any bid received after this date and time will not be accepted. Bids will be publicly opened and read at 3:00 P.M. Apparent bid results will be available the following business day on our website www.gwinnettcounty.com.

Pre-bid Date and Location:

A Webex Pre-bid Meeting is scheduled for 2:00 P.M. on May 05, 2025. To access, dial 1-408-418-9388, enter Access code 2346 973 3057. All interested parties are urged to attend. The pre-bid conference is to be utilized by contractors and subcontractors to ask any questions in order to submit a bid for this project. Note: Contractors can go by the project area at any time to look at the existing conditions.

Instruction on Submitting Questions:

Questions regarding bids should be directed to Brittany Bryant, CPPB, Purchasing Associate III, at Brittany.Bryant@GwinnettCounty.com or by calling 770-822-7759, **no later than 3:00PM on May 12, 2025**. Bids are legal and binding upon the vendor when submitted. All bids should be submitted in duplicate.

All suppliers must submit with bid, a bid bond, certified check or cashier's check in the amount of five percent (5%) of the total bid. **Failure to submit a bid bond with the proper rating will result in the bid being deemed non-responsive.** Successful supplier will be required to meet insurance requirements, submit a one hundred percent (100%) performance bond and a one hundred percent (100%) payment bond. Insurance and Bonding Company should be licensed to do business by the Georgia Secretary of State, authorized to do business in Georgia by The Georgia Insurance Department, listed in the Department of Treasury's Publication of Companies holding Certificates of Authority as Acceptable Surety on Federal Bonds and as acceptable reinsuring companies. **The bid bond, payment bond, and performance bond must have an A.M. Best rating of A-7 or higher.**

Gwinnett County does not discriminate on the basis of disability in the admission or access to its programs or activities. Any requests for reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County Government should be directed to the ADA Coordinator at the Gwinnett County Justice and Administration Center, 770-822-8165.

The written bid documents supersede any verbal or written prior communications between the parties.

Award will be made to the supplier submitting the lowest responsive and responsible bid. Gwinnett County reserves the right to reject any or all bids to waive technicalities and to make an award deemed in its best interest. Bids may be split or awarded in entirety. Gwinnett County reserves the option to negotiate terms, conditions and pricing with the lowest responsive, responsible vendor(s) at its discretion.

Award notification will be posted after award on the County website, www.gwinnettcounty.com and companies submitting a bid will be notified via email.

We look forward to your bid and appreciate your interest in Gwinnett County.
Brittany Bryant, CPPB
Purchasing Associate III

The following pages should be returned in duplicate as your bid:

**Bid Schedule, Page 5-6
References, Page 7
Code of Ethics, Page 8
Contractor Affidavit, Page 9
Bid Bond, Pages 10-11**

I. INTENT:

The intent of this scope is to procure the replacement of inclined plate settlers for the two (2) existing pre-clarification basins at the Lanier Filter Plant (LFP).

II. BACKGROUND:

The Gwinnett County Department of Water Resources (GCDWR) has assessed the pre-clarification process at LFP and are undertaking rehabilitation of the structure and some of the associated equipment. The inclined plate settlers are nearing the end of their useful life and there are concerns relating to their ongoing reliability. As a result, GCDWR is requiring the removal of the exiting inclined plate settlers and retrofit installation of replacement inclined plate settler system in the two (2) existing pre-clarification basins.

The existing units were supplied by US Filters and installed in 2002. The installation is shown in Figure 1 below.



Figure 1: Existing Inclined Plate Settler Installation

The replacement inclined plate settler equipment and start up services should be procured by GCDWR under this scope. The equipment will be installed by an installation contractor at a future date together with other rehabilitation work.

The location of Lanier Filter Plant (LFP) is 2590 South Water Works Road, Buford, GA 30518.

III. SCOPE:

General

1. GCDWR has no manufacturer preference, other than the replacement units should meet the design criteria and be able to be installed in the existing basin with minimal structural modifications.
2. The intention is to replace the twenty-four (24) inclined plate settler packs with packs that can be installed within the existing basins as shown on US Filter Drawing LFP1-101300. Replacement packs are to be supported using the existing structural steel beam supports, which will be rehabilitated by Others under a separate contract prior to installing the plate packs.
3. Equipment manufacturers should design the plate packs supports and anchoring using the existing steel supports and basin configuration. Shop drawings showing locations and

- details of anchor bolts are to be provided to enable any holes to be predrilled prior to recoating the steel elements and installation of the equipment.
4. The manufacturer should provide confirmation that the existing structural support arrangement has been checked and is adequate for the replacement equipment. All structural calculations should be stamped by a professional engineer in the State of Georgia and made available to the GCDWR if requested.
 5. Equipment manufacturers should provide all structural support/bracing elements and materials necessary for the proper installation, support and performance of the new equipment with exception of any anchor bolts to be drilled into the existing concrete walls and the existing steel supports. Concrete anchor bolts should be supplied and installed by the installation Contractor in accordance with the manufacturer's requirements.
 6. If required, the Owner should facilitate a post bid inspection of one of the existing basins to enable the manufacturer to undertake any onsite measurements necessary for the design and support of the replacement equipment prior to preparing the shop drawings. Note that the basins are considered a confined space and manufacturers will be required to provide appropriate PPE for their staff. Confined space access and monitoring equipment will be provided by the Owner.
 7. Drawings of the basin and shop drawings of the existing inclined plate settlers manufactured by US Filters are provided in Attachment 2 to assist the manufacturer in the design of the replacement equipment.

Bid submittals are requested for the following services:

1. Supply of all information requested on this bid submittal.
2. Complete design of replacement inclined plate settlers supports and any minor modifications to the existing basins.
3. Manufacture and assembly of plate settler system including but not limited to plate packs consisting of plates, frames, effluent troughs and weirs, effluent trough connections/extensions, influent baffles, spaces/stiffeners, gaskets, sealants, lifting attachments, anchoring systems, and all appurtenances necessary for a complete and operating system in accordance with specifications.
4. Submission of specified submittals for approval prior to commencing manufacture.
5. Provide a manufacturing and delivery schedule and provide monthly progress updates.
6. Coordination and delivery to Lanier Filter Plant (LFP), 2590 South Water Works Road, Buford, GA 30518.
7. Site visit to confirm measurements prior to preparation of the shop drawings.
8. Structural assessment of the existing structural support system to confirm it is adequate for their placement equipment. If in the opinion of the manufacturer the existing support system is not considered acceptable, design of any modifications, and provision of materials necessary for the modification.
9. Installation and start up assistance to the installation contractor (not yet appointed). Note that it is intended to undertake the rehabilitation work in two phases. During each phase, one side of the pre-clarification basins (flocculator and associated pre-clarification basins and one (1) sludge conditioning tank) will be isolated and taken off line whilst the other basins will be in operation. Upon completion of Phase one, the basins will be operated for 7 days before work would commence on Phase 2.
10. Provision of Manufacturer's Certificate of Proper Installation.
11. Provision of Manufacturer's Warranty.
12. Provision of two hard copies and one electronic copy (in searchable PDF format) of Operating and Maintenance instructions for all components, including drawings of equipment, preventative maintenance schedule, and troubleshooting information.
13. Supply of specified spare parts and special tools for future maintenance.
14. Training of Owners staff.

Drawings of the existing plate settler locations and engineering data are provided in attached drawings and specifications.

IV. SPECIFICATIONS:

Equipment should comply with the following specifications:

Section 01 43 33 - Manufacturers Field Services

Section 01 78 2 - Operation and Maintenance Data

Section 01 88 15 - Anchorage and Bracing

Section 01 91 14 - Equipment Testing and Facility Startup

Section 05 05 19 - Post-Installed Anchors

Section 05 50 00 - Metal Fabrications

Section 44 44 57 – Inclined Plate Settlers

V. ATTACHMENTS

Attachment 1: LFP 2000 Pre-Clarification Record Drawings (15)

Attachment 2: LFP US Filters Inclined Plate Settler Shop Drawings (11)

Attachment 3: M-1188-80 Inclined Plate Settler Drawings (7)

The following information sheets should be submitted with the bid submittal.

1. Make, model, and weight of each component.
2. Manufacturer's catalog information, descriptive literature, specifications, and materials of construction.
3. Complete description of the inclined plate settler system, including plate pack support frames, plates, inlet baffles and flumes, outlet weirs and flumes, embedded metal wall connectors, fasteners, and other ancillary items.
4. Plan and section views of the basins, anchor bolt location and templates, dimensional tolerances required for installation. Typical details should include dimensions of components and their relationship to other items of supply with respect to the basins and details for sling lifting.
5. A complete listing of materials identifying manufacturer and installation contractor supply.
6. Drawings should include controlling elevations (i.e. V-notch weir, wall openings, bottom equipment, water surface elevations in the basin and along the effluent trough at minimum and maximum flows).
7. Hydraulic calculations including head loss and velocity through the inclined plate system at minimum and maximum flows.
8. Confirmation that the existing structural support system is adequate for the replacement equipment. If in the opinion of the manufacturer the existing support system is not considered acceptable, provide details of any modifications or additional support required.
9. Embedment design details.
10. Manufacturer Certificate of Compliance with materials specifications should be submitted prior to shipment of the equipment. The certificate should certify that materials, manufacture, and final product conform to or exceed specified requirements and intent for which the product will be used. Submit supporting reference data, affidavits, and certificates as appropriate. The certificate may reflect recent or previous test results on material or product, acceptable to the Engineer.

BID SCHEDULE

ITEM #	DESCRIPTION	QTY	MANUF. & NO.	DELIVERY A.R.O.	UNIT PRICE	TOTAL PRICE
1	Inclined Plate Settler System					
1.1	Plate pack settler packs complete with plates, support frames, baffles, weirs, flumes, bracing, connectors, fasteners and ancillary items.	24 EA			\$	\$
1.2	Structural assessment of existing supports and any modifications by Professional Engineer	1 LUMP SUM			\$	\$
1.3	Tools and spare parts	1 LUMP SUM			\$	\$
2	Onsite visit to obtain information necessary for the design of the plate settlers including all travel, accommodation and ancillary expenses etc.	1 LUMP SUM			\$	\$
3	Submittal preparation, shop drawings and submission	1 LUMP SUM			\$	\$
4	Support to Installation Contractor					
4.1	Factory representative to inspect the final installation and supervise a test run of the equipment, including all travel, accommodation and ancillary expenses etc. (Two separate visits of two days each)	4 DAYS			\$	\$
4.2	Cost for separate onsite day visit of 8 hours if requested by the Owner - rate only.	1 DAY			\$	\$
4.3	Factory representative to provide onsite post start up training to the Owner's personnel including all travel, accommodation and ancillary expenses etc. and provision of Manufacturers Certificate of Proper Installation (Two sperate visits of 1 day each)	2 DAYS			\$	\$
4.4	Cost for separate one day training session if requested by the Owner - rate only.	1 DAY			\$	\$
4.5	Provide two hard copies and one electronic copy (in editable PDF) of the operating and training material and operating and maintenance manuals.	1 LUMP SUM			\$	\$
TOTAL						\$

Notes:

1. The unit price **MUST** include ALL charges, including but not limited to delivery and installation, test-run, and start-up assistance to the installation contractor.
2. If submitting an approved equivalent, please submit product cut sheets or information documents.
3. Reminder to include the Manufacturer/Product Number and the Delivery A.R.O (time to receive the product after receiving the purchase order)

COMPANY NAME _____

FAILURE TO RETURN THIS PAGE AS PART OF YOUR BID DOCUMENT MAY RESULT IN REJECTION OF BID.

Certification Of Non-Collusion in Bid Preparation _____
Signature Date

In compliance with the attached specifications and O.C.G.A. §36-91-50, the undersigned acknowledges all requirements outlined in the "Instructions to Vendors" and all documents referred to therein, if this bid is accepted by the Board of Commissioners within sixty (60) days of the date of bid opening, to furnish any or all of the items upon which prices are quoted, at the price set opposite each item, delivered to the designated point(s) within the time specified in the fee schedule. By submission of this bid, I understand that Gwinnett County uses Electronic Payments for remittance of goods and services. Vendors should select their preferred method of electronic payment upon notice of award. For more information on electronic payments, please refer to the [Electronic Payment](#) information in the Instructions to Vendors.

Legal Business Name _____

Address _____

Does your company currently have a location within Gwinnett County? Yes No

Representative Signature _____ Printed Name _____

Telephone Number _____ E-mail address _____

Contact Person (if someone other than the authorized representative listed above) _____

Telephone Number _____ E-mail address _____

FAILURE TO RETURN THIS PAGE AS PART OF YOUR BID DOCUMENT MAY RESULT IN REJECTION OF BID.

REFERENCES

Gwinnett County requests a minimum of three (3) references where work of a similar size and scope has been completed.

Note: References should be customized for each project, rather than submitting the same set of references for every project bid. The references listed should be of similar size and scope of the project being bid on. Do not submit a project list in lieu of this form.

1. Company Name _____

Brief Description of Project _____

Completion Date _____

Contract Amount \$ _____ Start Dates _____

Contact Person _____ Telephone _____

E-Mail Address _____

2. Company Name _____

Brief Description of Project _____

Completion Date _____

Contract Amount \$ _____ Start Date _____

Contact Person _____ Telephone _____

E-Mail Address _____

3. Company Name _____

Brief Description of Project _____

Completion Date _____

Contract Amount \$ _____ Start Date _____

Contact Person _____ Telephone _____

E-Mail Address _____

Company Name _____



Bid # & Description BL051-25, Purchase and Installation Support of Inclined Plate Settlers

CODE OF ETHICS AFFIDAVIT

PLEASE RETURN THIS FORM COMPLETED WITH YOUR SUBMITTAL. SUBMITTED FORMS ARE REQUIRED PRIOR TO EVALUATION.

In accordance with Section 54-33 of the Gwinnett County Code of Ordinances the undersigned bidder/proposer makes the following full and complete disclosure under oath, to the best of their knowledge, of the name(s) of all elected officials whom it employs or who have a direct or indirect pecuniary interest in or with the vendor, its affiliates or its subcontractors:

1. _____
Company Submitting Bid/Proposal

- 2. Please select one of the following:
 - No information to disclose (*complete only section 4 below*)
 - Disclosed information below (*complete section 3 & section 4 below*)

3. If additional space is required, please attach list:

Gwinnett County Elected Official Name

Gwinnett County Elected Official Name

Gwinnett County Elected Official Name

Gwinnett County Elected Official Name

4. BY: _____
Authorized Officer or Agent Signature

Sworn to and subscribed before me this

_____ day of _____, 20____

Printed Name of Authorized Officer or Agent

Notary Public

Title of Authorized Officer or Agent of Contractor

(seal)

Note: See Gwinnett County Code of Ethics Ordinance EO2011, Sec. 54-33. The ordinance will be available to view in its' entirety at **GwinnettCounty.com**



Solicitation Name & No. BL051-25, Purchase and Installation Support of Inclined Plate Settlers

**CONTRACTOR AFFIDAVIT AND AGREEMENT
(THIS FORM SHOULD BE FULLY COMPLETED AND RETURNED WITH YOUR SUBMITTAL)**

By executing this affidavit, the undersigned contractor verifies its compliance with The Illegal Immigration Reform Enhancements for 2013, stating affirmatively that the individual, firm, or corporation which is contracting with the Gwinnett County Board of Commissioners has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security] to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act, in accordance with the applicability provisions and deadlines established therein.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services or the performance of labor pursuant to this contract with the Gwinnett County Board of Commissioners, contractor will secure from such subcontractor(s) similar verification of compliance with the Illegal Immigration Reform and Enforcement Act on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Gwinnett County Board of Commissioners at the time the subcontractor(s) is retained to perform such service.

E-Verify * User Identification Number

Date Registered

Legal Company Name

Street Address

City/State/Zip Code

BY: _____
Authorized Officer or Agent
(Contractor Signature)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 20____

Notary Public
My Commission Expires: _____

For Gwinnett County Use Only:
Document ID # _____
Issue Date: _____
Initials: _____

* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is "E-Verify" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____

(Corporation, Partnership or Individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

a Corporation of the State of _____, and a surety authorized by law to do business in the State of Georgia, hereinafter called Surety, are held and firmly bound unto

Gwinnett County Board of Commissioners
(Name of Obligee)

75 Langley Drive, Lawrenceville, Georgia 30046
(Address of Obligee)

Thereinafter referred to as Obligee: in the penal sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to submit, or has submitted, to Gwinnett County, Georgia, a proposal for furnishing materials, labor, and equipment for:

WHEREAS, the Principal desires to file this Bond in accordance with law in lieu of a certified Bidder's check otherwise required to accompany this Proposal.

NOW, THEREFORE, the conditions of this obligation are such that if the proposal be accepted, the Principal shall within ten days after receipt of notification of the acceptance, execute a Contract in accordance with the Proposal and upon the terms, conditions, and prices set forth in the form and manner required by Gwinnett County, Georgia, and execute a sufficient and satisfactory Performance Bond and Payment Bond payable to Gwinnett County, Georgia, each in the amount of 100% of the total Contract Price, in form and with security satisfactory to said Gwinnett County, Georgia, and otherwise, to be and remain in full force and virtue in law, and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to Gwinnett County, Georgia, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

Gwinnett County, Georgia

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. § 36-91-1 et seq., and is intended to be and shall be constructed as a bond in compliance with the requirements thereof.

Signed, sealed and dated this _____ day of _____, A.D., 20_____.

ATTEST:

(Principal Secretary)
(SEAL)

(Principal)

By: _____

(Address)

(Witness as to Principal)

(Address)

ATTEST:

(Surety)

By: _____
(Attorney-in-Fact)

Resident or Nonresident Agent
(SEAL)

(Address)

(Witness as to Surety)

(Address)

NOTE: If Contractor is Partnership, all partners should execute Bond. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located.

Principal Secretary, Principal and Witness as to Principal signature lines must be signed by three different individuals. Additionally, Resident or Nonresident Agent, Witness as to Surety, and Attorney-in-fact must be signed by three different individuals.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____
(Corporation, Partnership or Individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

a Corporation of the State of _____, and a surety authorized by law to do business in the State of Georgia, hereinafter called Surety, are held and firmly bound unto

Gwinnett County Board of Commissioners

(Name of Obligee)

75 Langley Drive, Lawrenceville, Georgia 30046

(Address of Obligee)

hereinafter called Obligee;

for the use and protection of all subcontractors and all persons supplying labor, services, skill, tools, machinery, materials and/or equipment in the prosecution of the work provided for in the contract hereinafter referred to in the full and just sum of _____

_____ Dollars

(\$ _____) in lawful money of the United States, for the payment of which sum, will and truly to be made, the Principal and Surety bind themselves, their, and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such, as whereas the Principal entered into a certain contract, hereto attached, with the Obligee.

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well, truly, and faithfully perform said Contract according to its terms, covenants, and conditions, and shall promptly pay all persons furnishing labor, materials services, skill, tools, machinery and/or equipment for use in the performance of said Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

ALL persons who have furnished labor, materials, services, skill, tools, machinery and/or equipment for use in the performance of said Contract shall have a direct right of action on this Bond, provided payment has not been made in full within ninety (90) days after the last day on which labor was performed, materials, services, skill, tools, machinery, and equipment furnished or the subcontract completed.

PROVIDED FURTHER, that said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or additions to the terms of the Contract or to the work to be performed thereunder.

PROVIDED, HOWEVER, that no suit or action shall be commenced hereunder by any person furnishing labor, materials, services, skill, tools, machinery, and/or equipment having a direct contractual relationship with a subcontractor, but no contractual relationship express or implied with the Principal:

Unless such person shall have given notice to the Principal within ninety (90) days after such person did, or performed the last of the work or labor, or furnished the last of the materials, services, skill, tools, machinery and/or equipment for which claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials, services, skill, tools, machinery and/or equipment were furnished, or for whom the work or labor was done or performed. Such a notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Principal, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer, and a copy of such notice shall be delivered to the Obligee, to the person and at the address provided for in the Contract, within five (5) days of the mailing of the notice to the Principal.

PROVIDED, FURTHER, that any suit under this bond must be instituted before the expiration of one (1) year after the acceptance of the public works covered by the Contract by the proper authorities.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. § 36-91-1 et seq., and is intended to be and shall be construed as a bond in compliance with the requirements thereof.

[Signatures Next Page]

ATTEST:

(Principal Secretary)

(SEAL)

(Witness as to Principal)

(Address)

ATTEST:

Resident or Nonresident Agent

(SEAL)

(Witness as to Surety)

(Address)

(Principal)

By: _____

(Address)

(Surety)

By: _____
(Attorney-in-Fact)

(Address)

BONDING AGENT CONTACT INFO

Print Name_____

Company Name_____

E-Mail_____

Phone_____

NOTE: If Contractor is Partnership, all partners should execute Bond. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located.

Principal Secretary, Principal and Witness as to Principal signature lines must be signed by three different individuals. Additionally, Resident or Nonresident Agent, Witness as to Surety, and Attorney-in-fact must be signed by three different individuals.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____
(Corporation, Partnership or Individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

a Corporation of the State of _____, and a surety authorized by law to do business in the State of Georgia, hereinafter called Surety, are held and firmly bound unto

Gwinnett County Board of Commissioners
(Name of Obligee)

75 Langley Drive, Lawrenceville, Georgia 30046
(Address of Obligee)

hereinafter referred to as Obligee, are held and firmly bound unto said Obligee and all persons doing work or furnishing skill, tools, machinery, supplies, or material under or for the purpose of the Contract hereinafter referred to, in the penal sum of

_____ Dollars

(\$ _____) in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such, as whereas the Principal entered into a certain contract, hereto attached, with the Obligee.

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well, truly, fully and faithfully perform said contract according to its terms, covenants, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreement of any and all duly authorized modifications of said contract that may hereafter be made, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or additions to the terms of the Contract or to the work to be performed thereunder.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. § 36-91-1 et seq., and is intended to be and shall be construed as a bond in compliance with the requirements thereof.

(Signatures Next Page)

ATTEST:

(Principal Secretary)

(SEAL)

(Witness as to Principal)

(Address)

ATTEST:

Resident or Nonresident Agent

(SEAL)

(Witness as to Surety)

(Address)

(Principal)

By: _____

(Address)

(Surety)

By: _____
(Attorney-in-Fact)

(Address)

BONDING AGENT CONTACT INFO

Print Name _____

Company Name _____

E-Mail _____

Phone _____

NOTE: If Contractor is Partnership, all partners should execute Bond. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located.

Principal Secretary, Principal and Witness as to Principal signature lines must be signed by three different individuals. Additionally, Resident or Nonresident Agent, Witness as to Surety, and Attorney-in-fact must be signed by three different individuals.

GENERAL CONDITIONS
To Service Provider AGREEMENT

Article

- 1 Definitions
- 2 Contract Documents
- 3 Changes and Extra Work
- 4 Personnel and Equipment
- 5 Accuracy of Work
- 6 Findings Confidential
- 7 Termination of Agreement for Cause
- 8 Termination for Convenience of the COUNTY
- 9 SERVICE PROVIDER to Cooperate with other SERVICE PROVIDERS
- 10 Indemnification
- 11 Covenant Against Contingent Fees
- 12 Insurance
- 13 Prohibited Interests
- 14 Subcontracting
- 15 Assignability
- 16 Equal Employment Opportunity
- 17 Anti-Kickback Clause
- 18 Audits and Inspectors
- 19 Ownership, Publication, Reproduction and Use
- 20 Verbal Agreement or Conversation
- 21 Independent Service provider
- 22 Notices

1 DEFINITIONS

Wherever used in this Agreement, whether in the singular or in the plural, the following terms shall have the following meanings:

- 1.1 COUNTY-means Gwinnett County, Georgia, a political subdivision of the State of Georgia.
- 1.2 SUPPLEMENTAL AGREEMENT-means a written order to SERVICE PROVIDER signed by COUNTY and accepted by SERVICE PROVIDER, effecting an addition, deletion or revision in the Work, or an adjustment in the Agreement Price or the Contract Time, issued after execution of this Agreement.
- 1.3 CONTRACT-means the Agreement Documents specifically identified and incorporated herein by reference in Section 2, CONTRACT DOCUMENTS.
- 1.4 AGREEMENT EXECUTION-means the date on which SERVICE PROVIDER executes and enters into an Agreement with the COUNTY to perform the Work.
- 1.5 AGREEMENT PRICE-means the total monies, adjusted in accordance with any provision herein, payable to the SERVICE PROVIDER under this Agreement.
- 1.6 CONTRACT TIME-means the period of time stated in this Agreement for the completion of the Work.
- 1.7 SERVICE PROVIDER-means the party or parties contracting directly with the COUNTY to perform Work pursuant to this Agreement.
- 1.8 DEPARTMENT- means the Director or designee of requesting department(s) named in this solicitation.
- 1.9 DRAWINGS-means collectively, all the drawings, receipt of which is acknowledged by the COUNTY, listed in this Agreement, and also such supplementary drawings as the SERVICE PROVIDER may issue from time to time in order to clarify or explain such drawing or to show details which are not shown thereon.
- 1.10 SPECIFICATIONS-means the written technical provisions including all appendices thereto, both general and specific, which form a part of the Agreement Documents.
- 1.11 SUBSERVICE PROVIDER-means any person, firm, partnership, joint venture, company, corporation, or entity having a contractual agreement with SERVICE PROVIDER or with any of its subservice providers at any tier to provide a part of the Work called for by this Agreement.
- 1.12 WORK-means any and all obligations, duties and responsibilities, including furnishing equipment, engineering, design, workmanship, labor and any other services or things necessary to the successful completion of the Project, assigned to or undertaken by SERVICE PROVIDER under this Agreement.
- 1.13 LIAISON-Representative of the COUNTY who shall act as Liaison between the County and the SERVICE PROVIDER for all matters pertaining to this Agreement, including review of SERVICE PROVIDER'S plans and work.

2 CONTRACT DOCUMENTS

2.1 LIST OF DOCUMENTS

The Agreement, any required bonds, the General Conditions, the Appendices, the Detailed Scope of Work, the Specifications, the Drawings, the Exhibits, and all Agreement Supplemental Agreements shall constitute the Agreement Documents.

2.2 CONFLICT AND PRECEDENCE

2.2.1 The Agreement Documents are complementary, and what is called for by one is as binding as if called for by all. In the event there are any conflicting provisions or requirements in the component parts of this Agreement, the several Agreement Documents shall take precedence in the following order:

1. Supplemental Agreements
2. Agreement
3. General Conditions
4. Detailed Scope of Work
5. Specifications
6. Drawings

3 CHANGES AND EXTRA WORK

The COUNTY may, at any time, request changes in the work to be performed hereunder. All such changes, including any increase or decrease in the amount of the SERVICE PROVIDER'S compensation, which are mutually agreed upon by and between the COUNTY and the SERVICE PROVIDER, shall be incorporated in written Supplemental Agreements to the Agreement.

4 PERSONNEL AND EQUIPMENT

The SERVICE PROVIDER represents that it has secured or will secure, at its own expense, all personnel necessary to complete this Agreement; none of whom shall be employees of, or have any contractual relationship with, the COUNTY. Primary liaison with the COUNTY will be through its designee. All of the services required hereunder will be performed by the SERVICE PROVIDER under its supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under law to perform such services.

The SERVICE PROVIDER shall employ only persons duly registered in the appropriate category in responsible charge of supervision and design of the work; and further shall employ only qualified surveyors in responsible charge of any survey work.

The SERVICE PROVIDER shall endorse all reports, contract plans, and survey data. Such endorsements shall be made by a person duly registered in the appropriate category by the Georgia State Board of Registration, being in the full employ of the SERVICE PROVIDER and responsible for the work prescribed by this Agreement.

5 ACCURACY OF WORK

The SERVICE PROVIDER shall be responsible for the accuracy of the work and shall promptly correct errors and omissions in its plans and specifications without additional compensations.

Acceptance of the work by the COUNTY will not relieve the SERVICE PROVIDER of the responsibility for subsequent correction of any errors and the clarification of any ambiguities.

6 FINDINGS CONFIDENTIAL

The SERVICE PROVIDER agrees that its conclusions and any reports are for the confidential information of the COUNTY and that it will not disclose its conclusions in whole or in part to any persons whatsoever,

other than to submit its written documentation to the COUNTY, and will only discuss the same with it or its authorized representatives. Upon completion of this Agreement term, all documents, reports, maps, data and studies prepared by the SERVICE PROVIDER pursuant thereto shall become the property of the COUNTY and be delivered to the DEPARTMENT.

Articles, papers, bulletins, reports, or other materials reporting the plans, progress, analyses, or results and findings of the work conducted under this Agreement shall not be presented publicly or published without prior approval in writing of the COUNTY.

It is further agreed that if any information concerning the PROJECT, its conduct, results, or data gathered or processed should be released by the SERVICE PROVIDER without prior approval from the COUNTY, the release of same shall constitute grounds for termination of this Agreement without indemnity to the SERVICE PROVIDER, but should any such information be released by the COUNTY or by the SERVICE PROVIDER with such prior written approval, the same shall be regarded as public information and no longer subject to the restrictions of this Agreement.

7 TERMINATION OF AGREEMENT FOR CAUSE

If through any cause the SERVICE PROVIDER shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the SERVICE PROVIDER shall violate any of the covenants, agreements or stipulations of this Agreement, the COUNTY shall thereupon have the right to terminate this Agreement by giving written notice to the SERVICE PROVIDER of such termination, and specifying the effective date thereof, at least ten (10) days before the effective date of such termination. Failure to maintain the scheduled level of effort as proposed and prescribed, or deviation from the aforesaid scheduler without prior approval of the COUNTY shall constitute cause for termination. In such event, all finished or unfinished documents, maps, data, studies, work papers and reports prepared by the SERVICE PROVIDER under this Agreement shall become the property of the COUNTY, and the SERVICE PROVIDER shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents, as determined by the COUNTY.

8 TERMINATION FOR CONVENIENCE OF THE COUNTY

The COUNTY may terminate this Agreement for its convenience at any time upon 30 days notice in writing to the SERVICE PROVIDER. If the Agreement is terminated by the COUNTY as provided in this Article 8, the SERVICE PROVIDER will be paid compensation for those services actually performed. Partially completed tasks will be compensated for based on a signed statement of completion to be submitted by the SERVICE PROVIDER which shall itemize each task element and briefly state what work has been completed and what work remains to be done.

All such expenses shall be properly documented and submitted to the COUNTY for processing and payment. The County shall be the final authority in the event of any disputes over authorized costs between the COUNTY and the Service Provider.

9 SERVICE PROVIDERS TO COOPERATE WITH OTHER SERVICE PROVIDERS

If the COUNTY undertakes or awards other contracts for additional related work, the SERVICE PROVIDER shall fully cooperate with such other SERVICE PROVIDERS and the COUNTY employees or appointed committee(s), and carefully fit its own work to such additional work as may be directed by the COUNTY. The SERVICE PROVIDER shall not commit or permit any act which will interfere with the performance of work by any other SERVICE PROVIDER or COUNTY employees.

10 INDEMNIFICATION

SERVICE PROVIDER agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents and employees from and against any and all liability, damages, claims, suits, liens, and judgments, for whatever nature, including claims for contribution and/or indemnification,

for injuries to or death of any person or persons, or damage to the property or other rights of any person or persons to the extent arising out of and attributed to the negligent acts, errors or omissions of the SERVICE PROVIDER. SERVICE PROVIDER'S obligation to protect, defend, indemnify, and hold harmless, as set forth herein above shall include any matter arising out of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition disparagement of product or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations.

SERVICE PROVIDER further agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents, and employees from and against any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employee of the SERVICE PROVIDER.

11 COVENANT AGAINST CONTINGENT FEES

The SERVICE PROVIDER warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by SERVICE PROVIDER for the purpose of securing business and that the SERVICE PROVIDER has not received any non-COUNTY fee related to this Agreement without the prior written consent of the COUNTY. For breach or violation of this warranty, the COUNTY shall have the right to annul this Agreement without liability or at its discretion to deduct from the Agreement Price of consideration the full amount of such commission, percentage, brokerage or contingent fee.

12 INSURANCE

The SERVICE PROVIDER shall, at all times that this Agreement is in effect, cause to be maintained in force and effect an insurance policy (s) that will ensure and indemnify both GWINNETT COUNTY and SERVICE PROVIDER against liability or financial loss resulting from injuries occurring to persons or property or occurring as a result of any negligent error, act, or omission of the SERVICE PROVIDER during the term of this Agreement. The liability under such insurance policy shall be not less than as stated in the Bid Proposal.

The SERVICE PROVIDER shall provide, at all times that this Agreement is in effect, Worker's Compensation insurance in accordance with the laws of the State of Georgia.

The SERVICE PROVIDER shall provide, at all times that this Agreement is in effect, Professional Liability Insurance with a limit of not less than that as stated in the Bid Proposal.

Additionally, SERVICE PROVIDER shall provide, at all times that this Agreement is in effect, automobile liability insurance with a limit of not less than that as stated in the Bid Proposal.

The policies shall be written by a responsible company(s), to be approved by the COUNTY, and shall be non-cancelable except on thirty-(30) days' written notice to the COUNTY. Such policies shall name the COUNTY as additional insured, except for worker's compensation and professional liability policies, and a copy of such policy or a certificate of insurance shall be filed with the Director at the time of the execution of this Agreement.

13 PROHIBITED INTERESTS

13.1 Conflict of Interest: The SERVICE PROVIDER agrees that it presently has no interest and shall acquire no interest, direct or indirect, that would conflict in any manner or degree with the performance of its services hereunder.

13.2 Interest of Public Officials: No member, officer, or employee of the COUNTY during his tenure or for one year thereafter, shall have any interest, direct or indirect, in this Agreement

or the proceeds thereof.

14 SUBCONTRACTING

The SERVICE PROVIDER shall not subcontract any part of the work covered by this Agreement or permit subcontracted work to be further subcontracted without the DEPARTMENT's prior written approval of the subservice provider, except as may have been specifically stated in the SERVICE PROVIDER'S response to proposal per Exhibit A. The DEPARTMENT will not approve any subservice provider for work covered by this Agreement that has not been recommended for approval by the Department Director.

All subcontracts in the amount of \$5,000 or more shall include the provisions set forth in this Agreement.

15 ASSIGNABILITY

The SERVICE PROVIDER shall not assign or transfer whether by an assignment or novation, any of its rights, obligations, benefits, liabilities or other interest under this Agreement without the written consent of the COUNTY.

16 EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Agreement, the SERVICE PROVIDER agrees as follows: (1) the SERVICE PROVIDER will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin; (2) the SERVICE PROVIDER will, in all solicitations or advertisements for employees placed by qualified applicants, receive consideration for employment without regard to race, creed, color, sex or national origin; (3) the SERVICE PROVIDER will cause the foregoing provisions to be inserted in all subcontracts for any work covered by the Agreement so that such provision will be binding upon each subservice provider, provided that the foregoing provision shall not apply to contracts or subcontracts for standard commercial supplies of raw materials.

17 ANTI-KICKBACK CLAUSE

Salaries of architects, draftsmen, technical engineers and engineers, and technicians performing work under this Agreement shall be paid unconditionally and not less often than once a month without deduction or rebate on any account except only such payroll deductions as are mandatory by law. The SERVICE PROVIDER hereby promises to comply with all applicable "Anti-kickback" laws, and shall insert appropriate provisions in all subcontracts covering work under this Agreement.

18 AUDITS AND INSPECTORS

At any time during normal business hours and as often as the COUNTY may deem necessary, the CONSULTANT shall make available to the COUNTY for examination all of its records with respect to all matters covered by this Agreement. It shall also permit the COUNTY to audit, examine and make copies, excerpts or transcripts from such records of personnel, conditions of employment and other data relating to all matters covered by this Agreement.

The SERVICE PROVIDER shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred on the Project and used in support of its proposal and shall make such material available at all reasonable times during the period of the Agreement, and for three years from the date of final payment under the Agreement, for inspection by the COUNTY or any reviewing agencies, and copies thereof shall be furnished upon request. The SERVICE PROVIDER agrees that the provisions of this Article shall be included in any Agreements it may make with any subservice provider, assignee, or transferee.

19 OWNERSHIP, PUBLICATION, REPRODUCTION AND USE

All documents and materials prepared pursuant to this Agreement are the property of the COUNTY. The COUNTY shall have the unrestricted authority to publish, disclose, distribute, and otherwise use, in whole or in part, any reports, data, maps, or other materials prepared under this Agreement without according credit

of authorship. The COUNTY shall hold harmless and indemnify the SERVICE PROVIDER against all claims arising out of such use of documents and materials without the SERVICE PROVIDER'S knowledge and consent.

20 VERBAL AGREEMENT OR CONVERSATION

No verbal agreement or conversation with any officer, agent, or employee of the COUNTY, either before, during, or after the execution of this Agreement, shall affect or modify any of the terms or obligations herein contained, nor shall such verbal agreement or conversation entitle the SERVICE PROVIDER to any additional payment whatsoever under the terms for this Agreement. All changes to this Agreement shall be in writing and appended hereto as prescribed in Article 3 above.

21 INDEPENDENT SERVICE PROVIDER

The SERVICE PROVIDER shall perform the services under this Agreement as an independent service provider and nothing contained herein shall be construed to be inconsistent with this relationship or status. Nothing in this Agreement shall be interpreted or construed to constitute the SERVICE PROVIDER or any of its agents or employees to be the agent, employee, or representative of the COUNTY.

22 NOTICES

All notices shall be in writing and delivered in person or transmitted by certified mail, postage prepaid.

Gwinnett County requires that all Contracts between parties be entered into via the following documents. If any exceptions are taken to any part of this document, each must be stated in detail and submitted as part of your bid document. If no exceptions are noted it is assumed that the party fully agrees to the contract in its entirety. Exceptions to the sample contract provided in this request for proposal will be considered in terms of responsiveness when making award.

SAMPLE
ONE-TIME SERVICE PROVIDER CONTRACT
BL051-25

This **CONTRACT** made and entered into by and between Gwinnett County, Georgia (Party of the First Part, hereinafter called the "County"), and, _____(Party of the Second Part, hereinafter called the "Service Provider").

NOW THEREFORE, for and in consideration of the mutual promises and obligations contained herein and under the conditions hereinafter set forth, the parties do hereby agree as follows:

1. TERM:

This contract shall commence _____ and be in effect for _____ consecutive calendar days.

2. ATTACHMENTS:

This Contract shall consist of the Service Provider's bid/proposal and all Invitations to Bid/Proposals including all drawings, specifications, price lists, Instructions to Bidders, General Conditions, Special Provisions, Detailed Specifications, addenda, and change orders issued after execution of the Contract (hereinafter collectively referred to as the "Bid"), which are specifically incorporated herein by reference (Exhibit A). In the event of a conflict between the County's contract documents and the Service Provider's bid/proposal, the County's contract documents shall control.

3. PERFORMANCE:

Service Provider agrees to furnish all skill and labor of every description necessary to carry out and complete in good, firm and substantial, workmanlike manner, the work specified, in strict conformity with the Bid.

4. PRICE:

As full compensation for the performance of this Contract, the County shall pay the Service Provider for the actual quantity of work performed, which shall in no event exceed \$_____. The fees for the work to be performed under this Contract shall be charged to the County in accordance with the rate schedule referenced in the Bid Proposal (Exhibit A). The County agrees to pay the Service Provider following receipt by the County of a detailed invoice, reflecting the actual work performed by the Service Provider.

5. INDEMNIFICATION AND HOLD HARMLESS:

Service Provider agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents and employees from and against any and all liability, damages, claims, suits, liens, and

judgments, for whatever nature, including claims for contribution and/or indemnification, for injuries to or death of any person or persons, or damage to the property or other rights of any person or persons to the extent arising out of and attributed to the negligent acts, errors, or omissions of the Service Provider. Service Provider's obligation to protect, defend, indemnify, and hold harmless, as set forth hereinabove shall include any matter arising out of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition disparagement of product or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations.

Service Provider further agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents, and employees from and against any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employee of the Service Provider.

6. TERMINATION FOR CAUSE:

The County may terminate this Contract for cause upon ten (10) days prior written notice to the Service Provider of the Service Provider's default in the performance of any term of this Contract. Such termination shall be without prejudice to any of the County's rights or remedies provided by law.

7. TERMINATION FOR CONVENIENCE:

The County may terminate this Contract for its convenience at any time upon 30 days written notice to the Service Provider. In the event of the County's termination of this Contract for convenience, the Service Provider will be paid for those services actually performed. Partially completed performance of the Contract will be compensated based upon a signed statement of completion to be submitted by the Service Provider who shall itemize each element of performance.

8. CONTRACT NOT TO DISCRIMINATE:

During the performance of this Contract, the Service Provider will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, or disability which does not preclude the applicant or employee from performing the essential functions of the position. The Service Provider will also, in all solicitations or advertisements for employees placed by qualified applicants, consider the same without regard to race, creed, color, sex, national origin, age, or disability, which does not preclude the applicant from performing the essential functions of the job. The Service Provider will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this Contract so that such provision will be binding upon each subservice provider, providing that the foregoing provisions shall not apply to contracts or subservice providers for standard commercial supplies of raw materials.

9. ASSIGNMENT:

The Service Provider shall not sublet, assign, transfer, pledge, convey, sell or otherwise dispose of the whole or any part of this Contract or his right, title, or interest therein to any person, firm, or corporation without the previous consent of the County in writing.

10. WAIVER:

A waiver by either party of any breach of any provision, term, covenant, or condition of this Contract shall not be deemed a waiver of any subsequent breach of the same or any other provision, term, covenant, or condition.

11. SEVERABILITY:

The parties agree that each of the provisions included in this Contract is separate, distinct and severable from the other and remaining provisions of this Contract, and that the invalidity of any Contract provision shall not affect the validity of any other provision or provisions of this Contract.

12. GOVERNING LAW:

The parties agree that this Contract shall be governed and construed in accordance with the laws of the State of Georgia. This Contract has been signed in Gwinnett County, Georgia.

13. MERGER CLAUSE:

The parties agree that the terms of this Contract include the entire Contract between the parties, and as such, shall exclusively bind the parties. No other representations, either oral or written, may be used to contradict the terms of this Contract.

[Signatures Next Page]

IN WITNESS WHEREOF, the parties hereto, acting through their duly authorized agents, have caused this **CONTRACT** to be signed, sealed and delivered.

WINNEBAGO COUNTY, GEORGIA

By: _____

ATTEST:

APPROVED AS TO FORM:

SERVICE PROVIDER: _____

BY: _____
Signature

Print Name

Title

ATTEST:

Signature

Print Name
Corporate Secretary
(Seal)



Insurance:

Contractor shall provide evidence of insurance for at least the coverage and amounts set forth below. All insurance shall be maintained in the form and with a company (or companies) satisfactory to the Gwinnett County Board of Commissioners. The Contractor and their Subcontractor’s/vendor’s Certificates of Insurance shall require that the County be notified in writing thirty (30) days prior to cancellation, modification, or non-renewal of any insurance policy listed on the certificate(s). Upon request, the County will be provided certified copies of all required insurance policies.

A. Minimum Coverage

Commercial General Liability (Occurrence Form):

General Aggregate (other than Prod/Comp Ops Liability)	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Personal & Advertising Injury Liability	\$1,000,000
Each Occurrence	\$1,000,000

- Gwinnett County Board of Commissioners to be named as Additional Insured
- Additional Insured Endorsement CG 20 10 (edition dates of 07/04, 04/13, 12/19 or a substitute endorsement providing equivalent coverage) and CG 2037 (edition dates of 07/04, 04/13, 12/19 or a substitute endorsement providing equivalent coverage) must be provided with your Certificate of Insurance.
- Primary and Non-Contributory Endorsement to be specified in writing
- Contractual Liability
- Broad Form Property Damage
- Severability of Interest
- Underground, explosion, and collapse coverage
- Personal Injury (deleting both contractual and employee exclusions)
- Incidental Medical Malpractice
- Hostile Fire Pollution Wording
- Include Waiver of Subrogation in favor of Gwinnett County Board of Commissioners
- If project or operations are within 50 ft of a railroad, Contractor is required to name the specific Railroad as an Additional Insured and provide a copy of the Additional Insured Endorsement CG2417 or its equivalent.
- In the event the General Liability insurance required by this Contract is written on a claims-made basis, Contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained, or an extended discovery period will be exercised for a period of five (5) years or applicable statute of limitation period following completion of the work.

Automobile Liability to include:

Combined Single Limit – Each Accident \$1,000,000

- Comprehensive form providing coverage for bodily injury, death of any person, and property

damage arising out of the ownership, maintenance, and use of all owned, non-owned, leased, hired, borrowed vehicles, and any other statutorily required automobile coverage.

- Gwinnett County Board of Commissioners to be named as Additional Insured
- Additional Insured Endorsements must be provided with the Certificate of Insurance
- Coverage to include loading and unloading
- Contractual Liability

Worker’s Compensation & Employer’s Liability Coverage to include:

Workers Compensation	Georgia State Statutory Limits
Employers Liability	
Bodily Injury by Accident – Each Accident	\$ 500,000
Bodily Injury by Disease – Policy Limit	\$ 500,000
Bodily Injury by Disease – Each Employee	\$ 500,000

- Waiver of Subrogation in favor of Gwinnett County Board of Commissioners

Umbrella/Excess Liability Insurance with policy limits as determined by Contract Sums (higher limits may be required depending on the extent of contract):

Contract Sums:

Contracts up to \$999,999	
Each Occurrence and Aggregate Limit	\$1,000,000
Contracts from \$1,000,000 to \$1,999,999 Each	
Occurrence and Aggregate Limit	\$3,000,000
Contracts from \$2,000,000 to \$4,999,999 Each	
Occurrence and Aggregate Limit	\$5,000,000
Contracts Over \$5,000,000	
Each Occurrence and Aggregate Limit	\$10,000,000

- Concurrency of Effective Dates with Primary
- Blanket Contractual Liability
- Drop Down Feature
- Umbrella Policy must be as broad as the primary policy.
- Coverage excess over General Liability, Business Auto Liability, and Employers Liability
- In the event the Umbrella/Excess Liability insurance required by this Contract is written on a claims- made basis, Contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of five (5) years or applicable statute of limitation period following completion of the work.
- Evidence of coverage in the form of a Certificate of Insurance shall be provided to the County prior to start of work.
- Gwinnett County Board of Commissioners shall be Additional Insureds.
- Contractor shall be liable for money, securities, or other property of the County.
- Such coverage shall include an owner coverage endorsement for County and County shall be included as a loss payee.

- Additional Insured Endorsements must be provided with the Certificate of Insurance

Cyber Liability Insurance: Applies if scope of work includes the storage or transfer of any County data or sensitive data (including but not limited to personally identifiable, health, or payment card data) or the related hosting of database(s) or internet site(s):

Limit of Insurance per Claim	\$1,000,000
Aggregate Limit	\$1,000,000

The Contractor shall maintain insurance coverage for network security and privacy risks, including, but not limited to, insurance for data breach or introduction of virus or malicious codes, consumer notification, whether or not required by law, forensic investigation, public relations and crisis management and credit or identity monitoring or similar remediation services, unauthorized access, failure of security information theft, damage to destruction of or alteration of electronic information, breach of privacy perils, wrongful disclosure and release of private information, collection, or other negligence in the handling of confidential information, and including coverage for related regulatory fines, defenses, and penalties allowed by law.

Property Insurance:

The Contractor is fully and solely responsible for any physical loss or damage to all tools, equipment, construction office trailers and their contents, vehicles or any other personal property utilized in the performance of the Contractor's work. Contractor agrees to waive its rights of recovery and cause its insurers, if any, to waive their rights of subrogation against Owner and Company for any such damage or loss, however caused.

Riggers Liability Insurance:

If any work to be performed involves the rigging, lifting, lowering or moving of property or equipment, then those parties performing such work shall carry Rigger's Liability Insurance in an amount adequate to insure against the physical loss or damage to the property or equipment in its care

Aviation Insurance: Applies if scope of work requires the use of aircraft, including helicopters, unmanned aircraft systems (e.g., drones) and/or fixed-wing aircraft:

Maintain (or require aircraft owner or operator to maintain), and Contractor shall furnish proof of, Aircraft Liability insurance with minimum limits of \$10,000,000 per occurrence for bodily injury and property damage of all aircraft.

Unmanned aircraft systems, minimum limits of \$2,000,000 for bodily injury, property damage, and personal injury (including invasion of privacy) for unmanned aircraft systems, and guest voluntary settlement bodily injury coverage (for any aircraft except unmanned aircraft systems)

- Such policy shall include contractual liability covering all owned and non-owned aircraft
 - If the party providing the Aircraft Liability insurance is not Contractor, then Contractor shall require such party to (a) waive any subrogation rights of recovery they and/or their insurance carriers may have against County and any other indemnified parties and (b) name County and such other parties as Additional Insureds
 - The Contractor shall (or shall require aircraft owner or operator) to hire, employ, and utilize pilots certified by the Federal Aviation Administration to operate any such aircraft.
- B. Gwinnett County Board of Commissioners (and any applicable Authority) must be specified in writing as an Additional Insured on General Liability, Auto Liability and Umbrella Liability policies.
- C. Gwinnett County should be provided with a minimum of 30 days advance written notice of cancellation, material change, or non-renewal of policies required by the contract.
- D. Certificate Holder should read:
Gwinnett County Board of Commissioners
75 Langley Drive

Lawrenceville, GA 30046-6935

- E. Insurance Company, except Worker' Compensation carrier, must have an A.M. Best Rating of A-7 or higher. Certain Workers' Comp funds may be accepted subject to the approval of the Gwinnett County Insurance Unit. European markets including those based in London and domestic surplus lines markets that operate on a non-admitted basis are exempt from this requirement provided that the Contractor's broker/agent can provide financial data to establish that a market is equal to or exceeds the financial strengths associated with the A.M. Best's rating of A-7 or better.
- F. Insurance companies providing coverage should be licensed, and authorized to do business by the Office of the Insurance and Safety Fire Commissioner of Georgia ("Insurance Commissioner"), with the exception of non- admitted carriers, in which case the broker placing coverage should be licensed by the Insurance Commissioner. All agents placing coverage should be licensed by the Insurance Commissioner, either as a resident or non- resident.
- G. Certificates of Insurance, and any subsequent renewals, must reference each corresponding bid/contract by project name and project/bid number, if applicable.
- H. The Contractor shall agree to provide complete certified copies of current insurance policy(ies) or a certified letter from the insurance company(ies) if requested by the County to verify compliance with these insurance requirements.
- I. All insurance coverage required to be provided by the Contractor shall state that it is primary over any insurance program carried by the County.
- J. Contractor shall incorporate a copy of the insurance requirements as herein provided in each and every subcontract with each and every subcontractor in any tier and shall require each and every subcontractor of any tier to comply with all such requirements. The Contractor agrees that if for any reason a subcontractor fails to procure and maintain insurance as required, all such required Insurance shall be procured and maintained by Contractor at Contractor's expense.
- K. No Contractor or Subcontractor shall commence any work of any kind under this Contract until all insurance requirements contained in this Contract have been complied with and until evidence of such compliance satisfactory to Gwinnett County as to form and content has been filed with Gwinnett County. The ACORD Certificate of Insurance or a preapproved substitute is the required form in all cases where reference is made to a Certificate of Insurance or an approved substitute.
- L. The Contractor and its insurer(s) shall agree to waive all rights of subrogation against the County, the Board of Commissioners, its officers, officials, employees, and volunteers from losses arising from work performed by the Contractor for the County.
- M. Special Form Contractors' Equipment and Contents Insurance covering owned, used, and leased equipment, tools, supplies, and contents is required to perform the services called for in the Contract. The coverage must be on a replacement cost basis. The County will be included as a Loss Payee in this coverage for County owned equipment, tools, supplies, and contents.
- N. The Contractor shall make available to the County, through its records or the records of its insurer, information regarding any claim related to a County project. Any loss run information relating to a County project will be made available to the County upon its request.
- O. Compliance by the Contractor and Subcontractors with the foregoing insurance requirements shall not relieve the Contractor and Subcontractors of liability under the Contract and any applicable law.
- P. The Contractor and all Subcontractors are to comply with the Occupational Safety and Health Act of 1970, Public Law 91-956, and any other laws that may apply to this Contract.

Q. The Contractor shall at a minimum apply risk management practices accepted by the Contractors' industry.

R. The Contractor shall advise the County if required limits of insurance become eroded or impaired.

Surety Bonds (if required)

All of the surety requirements will stay the same except the Surety Company must have the same rating as set forth in item E above.

**GWINNETT COUNTY
DEPARTMENT OF FINANCIAL SERVICES – PURCHASING DIVISION
GENERAL INSTRUCTIONS FOR VENDORS, TERMS AND CONDITIONS**

*****ATTENTION*****

FAILURE TO RETURN THE FOLLOWING DOCUMENTS MAY RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND AUTOMATIC REJECTION. THE COUNTY SHALL BE THE SOLE DETERMINANT OF TECHNICALITY VS. NON-RESPONSIVE SUBMITTAL:

1. FAILURE TO USE COUNTY FEE SCHEDULE.
2. FAILURE TO RETURN OR ACKNOWLEDGE APPLICABLE COMPLIANCE/SPECIFICATION SHEETS.
3. FAILURE TO RETURN OR ACKNOWLEDGE APPLICABLE ADDENDA.
4. FAILURE TO PROVIDE INFORMATION ON ALTERNATES OR EQUIVALENTS.
5. FAILURE TO PROVIDE BID BOND, WHEN REQUIRED, WILL RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND AUTOMATIC REJECTION. BID BONDS ARE NOT REQUIRED ON ALL SOLICITATIONS. BOND REQUIREMENTS ARE CLEARLY STATED ON THE INVITATION PAGE. IF CLARIFICATION IS NEEDED, CONTACT THE PURCHASING ASSOCIATE LISTED IN THE INVITATION. **IF BONDS ARE REQUIRED, FORMS WILL BE PROVIDED IN THIS SOLICITATION DOCUMENT.**
6. FAILURE TO PROVIDE CONTRACTOR AFFIDAVIT AND AGREEMENT, WHEN REQUIRED, MAY RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND REJECTED. THE CONTRACTOR AFFIDAVIT AND AGREEMENT IS NOT REQUIRED ON ALL SOLICITATIONS. IF CLARIFICATION IS NEEDED, CONTACT THE PURCHASING ASSOCIATE LISTED IN THE INVITATION.
7. FAILURE TO PROVIDE AN ETHICS AFFIDAVIT WHEN REQUIRED, MAY RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND REJECTED. THE ETHICS AFFIDAVIT IS REQUIRED ON ALL FORMAL SOLICITATIONS OVER \$100,000.00. IF CLARIFICATION IS NEEDED, CONTACT THE PURCHASING ASSOCIATE LISTED IN THE INVITATION.

I. PREPARATION OF SUBMITTAL

- A. Each vendor shall examine the drawings, specifications, schedule, and all instructions. Failure to do so will be at the vendor's risk, as the vendor will be held accountable for their submittal.
- B. Each vendor shall furnish all information required by the solicitation form or document. Each vendor shall sign the submittal and print or type his or her name on the fee schedule. The person signing the submittal should initial erasures or other changes. An authorized agent of the vendor must sign the submittal.
- C. Fee schedule pricing should have only two decimal places unless otherwise stated. In the event of a calculation error in total price, the unit pricing prevails.
- D. Except for solicitations for the sale of real property, individuals, firms, and businesses seeking an award of a Gwinnett County contract may not initiate or continue any verbal or written communications regarding a solicitation with any County officer, elected official, employee, or other County representative other than the Purchasing Associate named in the solicitation between the date of the issuance of the solicitation and the date of the final award. The Purchasing Director will review violations. If determined that such communication has compromised the competitive process, the offer submitted by the individual, firm or business may be disqualified from consideration for award. Solicitations for the sale of real property may allow for verbal or written communications with the appropriate Gwinnett County representative.
- E. Sample contracts (if pertinent) are attached. These do NOT have to be filled out with the submittal but are contained for informational purposes only. If awarded, the successful vendor(s) will be required to execute these documents prior to County execution.
- F. Effective July 1, 2013 and in accordance with the Georgia Illegal Immigration Reform Enhancements for 2013, an original signed, notarized and fully completed Contractor Affidavit and Agreement should be included with vendor's submittal, if the solicitation is for the physical performance of services for all labor or service contract(s) that exceed \$2,499.99 (except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia). Failure to provide the Contractor Affidavit and Agreement with your submittal may result in being deemed non-responsive and automatic rejection.

II. DELIVERY

- A. Each vendor should state time of proposed delivery of goods or services.
- B. Words such as "immediate," "as soon as possible," etc. should not be used. The known earliest date or the minimum number of calendar days required after receipt of order (delivery A.R.O.) should be stated. If calendar days are used, include Saturday, Sunday, and holidays in the number.

III. EXPLANATION TO VENDORS

Any explanation desired by a vendor regarding the meaning or interpretation of the solicitation,

drawings, specifications, etc. must be requested by the question cutoff deadline stated in the solicitation for a reply to reach all vendors before the deadline of the solicitation. Any information given to a prospective vendor concerning a solicitation will be furnished to all prospective vendors as an addendum to the solicitation if such information is necessary or if the lack of such information would be prejudicial to uninformed vendors. The written solicitation documents supersede any verbal or written communications between the parties. Receipt of addenda should be acknowledged in the submittal. **It is the vendor's responsibility to ensure they have all applicable addenda prior to their submittal.** This may be accomplished by contacting the assigned Purchasing Associate prior to the submittal or visiting the Gwinnett County website.

IV. SUBMISSION OF FORMAL OFFERS/SUBMITTALS

- A. Formal bid and proposal submittals shall be enclosed in a sealed package or envelope, addressed to the Gwinnett County Purchasing Division with the name of the vendor, the date and hour of opening and the solicitation number on the face of the package or envelope. Facsimile or emailed submittals will not be considered. Any addenda should be enclosed in the sealed envelopes as well.
- B. ADD/DEDUCT: Add or deduct amounts indicated on the outside of the envelope are allowed and will be applied to the lump sum amount. Amount shall be clearly stated and should be initialed by an authorized representative.
- C. Samples of items, when required, must be submitted within the time specified and, unless otherwise specified by the County, at no expense to the County. Unless otherwise specified, samples will be returned at the vendor's request and expense, if items are not destroyed by testing.
- D. Items offered must meet required specifications and must be of a quality that will adequately serve the use and purpose for which intended.
- E. Full identification of each item submitted, including brand name, model, catalog number, etc. must be furnished to identify exactly what the vendor is offering. Manufacturer's literature may be furnished but vendor should not submit excessive marketing material.
- F. The vendor must certify that items to be furnished are new and that the quality has not deteriorated to impair its usefulness.
- G. Unsigned submittals will not be considered except in cases where it is enclosed with other documents that have been signed. The County will determine acceptability in these cases.
- H. Gwinnett County is exempt from federal excise tax and Georgia sales tax regarding goods and services purchased directly by Gwinnett County. Vendors are responsible for federal excise tax and sales tax, including taxes for materials incorporated in county construction projects. Vendors should contact the State of Georgia Sales Tax Division for additional information. Agreements were there is a cost-plus mark-up, mark-up will not be paid on taxes.

- I. Information submitted by a vendor in the solicitation process shall be subject to disclosure after the public opening in accordance with the Georgia Open Records Act.

V. WITHDRAWAL DUE TO ERRORS

Vendors must give Gwinnett County Purchasing Division written notice within two (2) business days of completion of the opening stating that they wish to withdraw their submittal without penalty for an obvious clerical or calculation error. Submittal may be withdrawn from consideration if the price was substantially lower than the other submittals due solely to a mistake therein, provided pricing was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake and was due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the submittal. The unintentional arithmetic error or omission can be clearly proven through inspection of the original work papers, documents, and materials used in preparing the submittal sought to be withdrawn. The vendor's original work papers shall be the sole acceptable evidence of error and mistake if a vendor elects to withdraw their submittal. If a quote or bid submittal is withdrawn under the authority of this provision, the lowest remaining responsive offer shall be deemed to be low bid.

No vendor who is permitted to withdraw their submittal shall, for compensation, supply any material or labor or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid or proposal was submitted.

Vendors who fail to request withdrawal by the required forty-eight (48) hours may automatically forfeit bid bond if a bond was required. Bid may not be withdrawn otherwise.

Withdrawal is not automatically granted and will be allowed solely at Gwinnett County's discretion.

VI. TESTING AND INSPECTION

Since tests may require several days for completion, the County reserves the right to use a portion of any supplies before the results of the tests are determined. Cost of inspections and tests of any item that fails to meet the specifications, shall be borne by the vendor.

VII. F.O.B. POINT

Unless otherwise stated in the request for invitation and any resulting contract, or unless qualified by the vendor, items shall be shipped F.O.B. Destination, Freight Prepaid and Allowed. The seller shall retain title for the risk of transportation, including the filing for loss or damages. The invoice covering the items is not payable until items are delivered and the contract of carriage has been completed. Unless the F.O.B. clause states otherwise, the seller assumes transportation and related charges either by payment or allowance.

VIII. PATENT INDEMNITY

The vendor guarantees to hold the County, its agents, officers, or employees harmless from liability of any nature or kind for use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, articles or appliances furnished or used in the performance of the contract, for

which the vendor is not the patentee, assignee, or licensee.

IX. BID BONDS AND PAYMENT AND PERFORMANCE BONDS (IF REQUIRED, FORMS WILL BE PROVIDED IN THIS DOCUMENT)

A five percent (5%) bid bond, a one hundred percent (100%) performance bond, and a one hundred percent (100%) payment bond must be furnished to Gwinnett County for any solicitation as required in the solicitation package or document. **Failure to submit a bid bond with the proper rating will result in submittal being deemed non-responsive.** Bonding company must be authorized to do business in Georgia by the Georgia Insurance Commission, listed in the Department of the Treasury's publication of companies holding certificates of authority as acceptable surety on Federal bonds and as acceptable reinsuring companies, and have an A.M. Best rating as stated in the insurance requirement of the solicitation. **The bid bond, payment bond, and performance bond must have the proper A.M. Best rating as stated in the solicitation document.**

X. DISCOUNTS

- A. Time payment discounts may be considered in arriving at net prices and in award of solicitations. Offers of discounts for payment within ten (10) days following the end of the month are preferred.
- B. In connection with any discount offered, time will be computed from the date of delivery and acceptance at destination, or from the date correct invoice or voucher is received, whichever is the later date. Payment is deemed to be made for the purpose of earning the discount on the date of the County check.

XI. AWARD

- A. Award will be made to either the highest scoring firm (for proposals) or the lowest responsive and responsible vendor (for quotes/bids). The quality of the articles to be supplied, their conformity with the specifications, their suitability to the requirements of the County, and the delivery terms will be taken into consideration in making the award. The County may make such investigations as it deems necessary to determine the ability of the vendor to perform, and the vendor shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any submittal if the evidence submitted by, or investigation of such vendor fails to satisfy the County that such vendor is properly qualified to carry out the obligations of the contract.
- B. The County reserves the right to reject or accept any or all offers and to waive technicalities, informalities and minor irregularities in the submittals received.
- C. The County reserves the right to make an award as deemed in its best interest, which may include awarding to a single vendor or multiple vendors; or to award the whole solicitation agreement, only part of the agreement, or none of the agreement, based on its sole discretion of its best interest.

- D. In the event of proposal scores rounded to the nearest whole number result in a tie score, the award will be based on lowest cost.
- E. If proposal negotiations with the highest ranked firm are unsuccessful, the County may then negotiate with the second ranked firm and so on until a satisfactory agreement has been reached.

XII. DELIVERY FAILURES

Failure of a vendor to deliver within the time specified or within reasonable time as interpreted by the Purchasing Director, or failure to make replacement of rejected articles/services when so requested, immediately or as directed by the Purchasing Director, shall constitute authority for the Purchasing Director to purchase in the open market articles/services of comparable grade to replace the articles/services rejected or not delivered. On all such purchases, the vendor shall reimburse the County within a reasonable time specified by the Purchasing Director for any expense incurred in excess of the contract prices, or the County shall have the right to deduct such amount from monies owed the defaulting vendor. Alternatively, the County may penalize the vendor one percent (1%) per day for a period of up to ten (10) days for each day that delivery or replacement is late. Should public necessity demand it, the County reserves the right to use or consume articles/services delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.

XIII. COUNTY FURNISHED PROPERTY

No material, labor or facilities will be furnished by the County unless so provided in the solicitation package.

XIV. REJECTION OF SUBMITTALS

Failure to observe any of the instructions or conditions in this solicitation package may constitute grounds for rejection.

XV. CONTRACT

Each submittal is received with the understanding that the acceptance in writing by the County of the offer to furnish any or all the commodities or services described therein shall constitute a contract between the vendor and the County which shall bind the vendor on his part to furnish and deliver the articles quoted at the prices stated in accordance with the conditions of said accepted submittal. The County, on its part, may order from such vendor, except for cause beyond reasonable control, and to pay for, at the agreed prices, all articles specified and delivered.

Upon receipt of a solicitation package containing a Gwinnett County "Sample Contract" as part of the requirements, it is understood that the vendor has reviewed the documents with the understanding that Gwinnett County requires that all agreements between the parties must be entered into via this document. If any exceptions are taken to any part, each must be stated in detail and submitted as part of the vendor's submittal. If no exceptions are stated, it is assumed that the vendor fully agrees to the provisions contained in the "Sample Contract" in its entirety.

Consultant as defined in O.C.G.A. §36-80-28 that is engaged to develop or draft

specifications/requirements or serve in a consultative role during the procurement process for any County procurement method, by entering into such an arrangement or executing a contract, the consultant agrees to abide by the current state law and: 1) Avoid any appearance of impropriety and shall follow all policies and procedures of the County, 2) Disclose to the County any material transaction or relationship pursuant to §36-80-28, that is considered a conflict of interest, any involvement in litigation or other dispute, relationship, or financial interest not disclosed in the ethics affidavit, and 3) Acknowledge that any violation or threatened violation of the agreement may cause irreparable injury to the County, entitling the County to seek injunctive relief in addition to all other legal remedies.

When the vendor has performed in accordance with the provisions of this agreement, Gwinnett County shall pay to the vendor, within thirty (30) days of receipt of any department approved payment request and based upon work completed or service provided pursuant to the contract, the sum so requested, less the retainage stated in this agreement, if any. If Gwinnett County fails to pay the vendor within sixty (60) days of receipt of a pay request based upon work completed or service provided pursuant to the contract, the County shall pay the vendor interest at the rate of ½% per month or pro rata fraction thereof, beginning the sixty-first (61st) day following receipt of pay requests. The vendor's acceptance of progress payments or final payment shall release all claims for interest on said payment.

The parties agree that this Contract shall be governed and construed in accordance with the laws of the State of Georgia.

XVI. NON-COLLUSION

Vendor declares that the submittal is not made in connection with any other vendor's submittal for the same commodity or commodities, and that the submittal is bona fide and is in all respects fair and without collusion or fraud. An affidavit of non-collusion shall be executed by each vendor. Collusion and fraud in submittal preparation shall be reported to the State of Georgia Attorney General and the United States Justice Department.

XVII. DEFAULT

The contract may be canceled or annulled by the Purchasing Director in whole or in part by written notice of default to the vendor upon non-performance or violation of contract terms. An award may be made to the next low responsive and responsible vendor, or the next highest scoring responsive and responsible proposer, or articles specified may be purchased on the open market similar to those so terminated. In either event, the defaulting vendor (or their surety) shall be liable to the County for costs to the County in excess of the defaulted contract prices; provided, however, that the vendor shall continue the performance of this contract to the extent not terminated under the provisions of this clause. Failure of the vendor to deliver materials or services within the time stipulated on their offer, unless extended in writing by the Purchasing Director, shall constitute contract default.

XVIII. TERMINATION FOR CAUSE

The County may terminate this agreement for cause upon ten days prior written notice to the vendor of the vendor's default in the performance of any term of this agreement. Such termination shall be without prejudice to any of the County's rights or remedies by law.

XIX. TERMINATION FOR CONVENIENCE

The County may terminate this agreement for its convenience at any time upon 30 days written notice to the vendor. In the event of the County's termination of this agreement for convenience, the vendor will

be paid for those services actually performed. Partially completed performance of the agreement will be compensated based upon a signed statement of completion to be submitted by the vendor, which shall itemize each element of performance.

XX. SUBSTITUTIONS

Vendors offering substitutions or who are deviating from the attached specifications shall list such deviations on a separate sheet to be submitted with their offer. The absence of such a substitution list shall indicate that the vendor has taken no exception to the specifications contained herein.

XXI. INELIGIBLE VENDORS

The County may choose not to accept the offer by an individual, firm, or business who is in default on the payment of taxes, licenses, or other monies owed to the County. Additionally, vendors or persons placed on an Ineligible Source List for reasons listed in Part 6, Section II of the Gwinnett County Purchasing Ordinance shall not be eligible to provide any commodities or services to the County during the period such person remains on the Ineligible Source List.

XXII. PENDING LITIGATION

An individual, firm, or business that has litigation pending against the County, or anyone representing a firm or business in litigation against the County, not arising out of the procurement process, will be disqualified.

XXIII. OCCUPATION TAX CERTIFICATE

Each successful vendor must have a valid Gwinnett County occupation tax certificate if the vendor maintains an office within the unincorporated area of Gwinnett County. Incorporated, out of County, and out of State vendors are required to have any and all certificates necessary to do business in any town, County or municipality in the State of Georgia, or as otherwise required by County ordinance or resolution. Vendors may be required to provide evidence of valid certificates. Out of State vendors are required to have a certificate in the Georgia jurisdiction where they receive the most revenue.

XXIV. PURCHASING POLICY AND REVIEW COMMITTEE

The Purchasing Policy & Review Committee has been established to review purchasing procedures and make recommendations for changes; resolve problems regarding the purchasing process; make recommendations for standardization of commodities, schedule buying, qualified products list, annual contracts, supplier performance (Ineligible Source List), and other problems or requirements related to purchasing. The Purchasing Policy & Review Committee has authority to place vendors on the Ineligible Source List for reasons listed in Part 6, Section II of the Gwinnett County Purchasing Ordinance, for a period not to exceed three (3) years.

XXV. AMERICANS WITH DISABILITIES ACT

All vendors for Gwinnett County are required to comply with all applicable sections of the Americans with Disabilities Act (ADA) as an equal opportunity employer. In compliance with the Americans with Disabilities Act (ADA), Gwinnett County provides reasonable accommodations to permit a qualified applicant with a disability to enjoy the privileges of employment equal to those employees without disabilities. Disabled individuals must satisfy job requirements for education background, employment experience, and must be able to perform those tasks that are essential to the job with or without

reasonable accommodations. Any requests for the reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County should be directed to the ADA Coordinator, 75 Langley Drive, Lawrenceville, Georgia 30046, 770-822-8165.

XXVI. ALTERATIONS OF SOLICITATION AND ASSOCIATED DOCUMENTS

Alterations of County documents are strictly prohibited and will result in automatic disqualification of the vendor's solicitation response. If there are "exceptions" or comments to any of the solicitation requirements or other language, then the firm may make notes to those areas, but may not materially alter any document language.

XXVII. TAX LIABILITY

Local and state governmental entities must notify vendors of their use tax liability on public works projects. Under Georgia law, private vendors are responsible for paying a use tax equal to the sales tax rate on material and equipment purchased under a governmental exemption that is incorporated into a government construction project: excluding material and equipment provided for the installation, repair, or expansion of a public water, gas, or sewer system when the property is installed for general distribution purposes. To the extent the tangible personal property maintains its character (for example, the installation of a kitchen stove), it remains tax-exempt. However, if the installation incorporates the tangible personal property into realty (for example, the installation of sheetrock), it becomes taxable to the private vendor. See O.C.G.A. §48-8-3(2) and O.C.G.A. §48-8-63.

XXVIII. STATE AND FEDERAL LAW REGARDING WORKER VERIFICATION

Effective July 1, 2013 State Law requires that all who enter into a contract for the physical performance of services for all labor or service contract(s) that exceed \$2,499.99 (except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia) and that all who enter into a contract for public works as defined by O.C.G.A. §36-91-2(12) for the County, must satisfy the Illegal Immigration Reform Enhancements for 2013 in conjunction with the Federal Immigration Reform and Control Act (IRCA) of 1986, in all manner, and such are conditions of the contract.

The Purchasing Division Director with the assistance of the Internal Audit Division shall be authorized to conduct random audits of a vendor's or subcontractors' compliance with the Illegal Immigration Reform Enhancements for 2013 and the rules and regulations of the Georgia Department of Labor. The vendor and subcontractors shall retain all documents and records of its compliance for a period of five (5) years following completion of the contract or shall abide by the current time requirements at the time of the contract. This requirement shall apply to all contracts for all public works, labor or service contracts that exceed \$2,499.99 except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia.

Whenever it appears that a vendor's or subcontractor's records are not sufficient to verify the work eligibility of any individual in the employment of such vendor or subcontractor, the Purchasing Director shall report same to the Department of Homeland Security and may result in termination of the contract if it is determined at any time during the work that the vendor or subcontractor is no longer in compliance with worker verification.

By submitting an offer to the County, vendor agrees that, in the event the vendor employs or contracts with any subcontractor(s) in connection with the covered contract, the vendor will secure from the subcontractor(s) such subcontractor(s)' indication of the employee-number category applicable to the subcontractor, as well as attestation(s) from such subcontractor(s) that they follow the Illegal

Immigration Reform Enhancements for 2013 in conjunction with all federal requirements. Original signed, notarized Subcontractor Affidavits and Agreements must be maintained by the vendor awarded the contract.

A vendor's or subcontractor's failure to participate in the federal work authorization program as defined above shall be subject to termination of the contract. A vendor's failure to follow Gwinnett County's instruction to terminate a subcontractor that is not participating in the federal work authorization program may be subject to termination of the contract.

XXIX. SOLID WASTE ORDINANCE

No individual, partnership, corporation, or other entity shall engage in solid waste handling except in such a manner as to conform to and comply with the current Gwinnett County Solid Waste Ordinance and all other applicable local, state and federal legislation, rules, regulation, and orders.

XXX. GENERAL CONTRACTORS LICENSE

Effective July 1, 2008: **All General Contractors must have a current valid license from the State Licensing Board for Residential and General Contractors, unless specifically exempted from holding such license pursuant to Georgia law (O.C.G.A. §43-41-17).**

XXXI. PRODUCTS MANUFACTURED IN GEORGIA

When contracting for or purchasing supplies, materials, equipment, or agricultural products that exceeds \$100,000.00, excluding beverages for immediate consumption, Gwinnett County shall give preference as far as may be reasonable and practicable to such supplies, materials, equipment, and agricultural products as may be manufactured or produced in this state. Such preference shall not sacrifice quality. Gwinnett County Board of Commissioners shall consider, among other factors, information submitted by the vendor which may include the vendor's estimate of the multiplier effect on gross state domestic product and the effect on public revenues of the state and the effect on public revenues of political subdivisions resulting from acceptance of an offer to sell Georgia manufactured or produced goods as opposed to out-of-state manufactured or produced goods. Any such estimates shall be in writing. **(O.C.G.A. §36-84-1).**

XXXII. INDEMNIFICATION

To the fullest extent permitted by law, the vendor shall, at his sole cost and expense, indemnify, defend, satisfy all judgments, and hold harmless the County, its commissioners, officers, agents, and employees from and against all claims, damages, actions, judgments, costs, penalties, liabilities, losses and expenses, including, but not limited to, attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, action, judgment, cost, penalty, liability, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by the negligent acts, errors by any act or omission of the vendor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless whether such claim is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any of the rights or obligations of indemnity which would otherwise exist as to any party or person described in this agreement. In any and all claims against the County, its commissioners, officers, agents, and employees by any employee of the vendor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation contained herein shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the vendor or any subcontractor under Worker's Compensation Acts, disability benefit acts, or other employee benefit acts.

Vendor shall also indemnify, hold harmless, insure, and defend the County for damages, losses, or expenses to the extent caused by or resulting from the negligence, recklessness, or intentionally wrongful conduct of the vendor or other persons employed or utilized by the vendor in the performance of a contract that utilizes survey services.

XXXIII. CODE OF ETHICS

Vendors shall disclose under oath the name of all elected officials whom it employs or who have a direct or indirect pecuniary interest in the business entity, its affiliates, or its subcontractors. (This shall not apply to informal purchases as defined by the Purchasing Ordinance.) The vendor shall execute a Code of Ethics affidavit. Failure to submit the affidavit during the procurement process shall render the offer non-responsive.

Any business entity holding a contract with Gwinnett County that after execution of the contract or issuance of the purchase order employs, subcontracts with, or transfers a direct or indirect pecuniary interest in the business entity to an elected official shall within five (5) days disclose such fact in writing under oath to the Clerk of the Board of Commissioners. Failure to comply, or vendors submitting false information or omitting material information shall be referred to the Purchasing Policy & Review Committee for action pursuant to the Purchasing Ordinance or to the District Attorney for possible criminal prosecution. Note: See Gwinnett County Code of Ethics Ordinance EO2011, Sec. 54-33. The ordinance is available to view in its entirety at www.gwinnettcounty.com.

XXXIV. ELECTRONIC PAYMENT

Vendors accepting procurements should select one of Gwinnett County's electronic payment options.

- A. A vendor may select ePayables payment process which allows acceptance of Gwinnett County's virtual credit card as payment for outstanding invoices. The authorized vendor representative must send an email to: vendorelectronicpayment@gwinnettcounty.com and indicate the desire to enroll in Gwinnett County's virtual credit card payment process.
- B. A vendor may select Direct Deposit payment process and the payment will be deposited directly into an account at their designated financial institution. To securely enroll in Direct Deposit, either access your online [Vendor Login and Registration](#) on the County's web site and update the requested information on the Direct Deposit tab or mail a [Direct Deposit Authorization Agreement](#) form.

The County will send a Payment Advice notification via email for both payment types. For more information about Electronic Payments, please visit the Gwinnett County Treasury Division page or click here -> [Gwinnett County Electronic Payments](#).

DIRECTIONS TO GJAC BUILDING FROM I-85

Take I-85 to Georgia Highway 316 (Lawrenceville/Athens exit). Exit Highway 120 (Lawrenceville/Duluth exit) and turn right. At seventh traffic light, turn right onto Langley Drive. Cross Highway 29 through the traffic light and proceed through the roundabout. Visitors can either proceed to the front parking area on the left or to the parking deck behind the building. Click [here](#) for additional information about parking. The Purchasing Division is located on the second floor, West Wing.

FAILURE TO RETURN THIS PAGE MAY RESULT IN REMOVAL OF YOUR COMPANY FROM COMMODITY LISTING.

BL051-25

Buyer Initials: BB

IF YOU DESIRE TO SUBMIT A "NO BID" IN RESPONSE TO THIS PACKAGE, PLEASE INDICATE BY CHECKING ONE OR MORE OF THE REASONS LISTED BELOW AND EXPLAIN.

- Do not offer this product or service; remove us from your bidder's list for this item only.
- Specifications too "tight"; geared toward one brand or manufacturer only.
- Specifications are unclear.
- Unable to meet specifications
- Unable to meet bond requirements
- Unable to meet insurance requirements
- Our schedule would not permit us to perform.
- Insufficient time to respond.
- Other

COMPANY NAME _____

AUTHORIZED REPRESENTATIVE _____

SIGNATURE

SPECIFICATIONS:

Section 01 43 33 - Manufacturers Field Services

Section 01 78 23 - Operation and Maintenance Data

Section 01 88 15 - Anchorage and Bracing

Section 01 91 14 - Equipment Testing and Facility Startup

Section 05 05 19 - Post-Installed Anchors

Section 05 50 00 - Metal Fabrications

Section 44 44 57 – Inclined Plate Settlers

LFP PRE-CLARIFICATION BASIN REHABILITATION

SECTION 01 43 33 MANUFACTURERS' FIELD SERVICES

PART 1 GENERAL

1.01 DEFINITIONS

- A. Person-Day: One person for 8 hours within regular Contractor working hours.

1.02 SUBMITTALS

- A. Informational Submittals:
 - 1. Training Schedule: Submit, in accordance with requirements of this Specification, not less than **7** days prior to start of equipment installation and revise as necessary for acceptance.
 - 2. Lesson Plan: Submit, in accordance with requirements of this Specification, proposed lesson plan not less than **7** days prior to scheduled training and revise as necessary for acceptance.

1.03 QUALIFICATION OF MANUFACTURER'S REPRESENTATIVE

- A. Authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of respective equipment, subsystem, or system, with full authority by the equipment manufacturer to issue the certifications required of the manufacturer. Additional qualifications may be specified in the individual specification section.
- B. Representative subject to acceptance by Owner. No substitute representatives will be allowed unless prior written approval by such has been given.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 FULFILLMENT OF SPECIFIED MINIMUM SERVICES

- A. Furnish manufacturers' services, when required by an individual specification section, to meet the requirements of this section.
- B. Where time is necessary in excess of that stated in the Specifications for manufacturers' services, or when a minimum time is not specified, time required to perform specified services shall be considered incidental.
- C. Schedule manufacturer' services to avoid conflict with other onsite testing or other manufacturers' onsite services.
- D. Determine, before scheduling services, that conditions necessary to allow successful testing have been met.

LFP PRE-CLARIFICATION BASIN REHABILITATION

- E. Only those days of service approved by Engineer will be credited to fulfill specified minimum services.
- F. When specified in individual specification sections, manufacturer's onsite services shall include:
 - 1. Assistance during product (system, subsystem, or component) installation to include observation, guidance, instruction of Contractor's assembly, erection, installation or application procedures.
 - 2. Inspection, checking, and adjustment as required for product (system, subsystem, or component) to function as warranted by manufacturer and necessary to furnish Manufacturer's Certificate of Proper Installation.
 - 3. Providing, on a daily basis, copies of manufacturers' representatives field notes and data to Owner.
 - 4. Revisiting the Site as required to correct problems and until installation and operation are acceptable to Engineer.
 - 5. Resolution of assembly or installation problems attributable to or associated with respective manufacturer's products and systems.
 - 6. Assistance during functional and performance testing, and facility startup and evaluation.
 - 7. Training of Owner's personnel in the operation and maintenance of respective product as required.

3.02 MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION

- A. When so specified, a Manufacturer's Certificate of Proper Installation form, a copy of which is attached to this section, shall be completed and signed by equipment manufacturer's representative.
- B. Such form shall certify signing party is a duly authorized representative of manufacturer, is empowered by manufacturer to inspect, approve, and operate their equipment and is authorized to make recommendations required to ensure equipment is complete and operational.

3.03 TRAINING

- A. General:
 - 1. Furnish manufacturers' representatives for detailed classroom and hands-on training to Owner's personnel on operation and maintenance of specified product (system, subsystem, component) and as may be required in applicable Specifications.
 - 2. Furnish trained, articulate personnel to coordinate and expedite training, to be present during training coordination meetings with Owner, and familiar with operation and maintenance manual information.
 - 3. Manufacturer's representative shall be familiar with facility operation and maintenance requirements as well as with specified equipment.
 - 4. Furnish complete training materials, to include operation and maintenance data, to be retained by each trainee.
- B. Training Schedule:

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1. List specified equipment and systems that require training services and show:
 - a. Respective manufacturer.
 - b. Estimated dates for installation completion.
 - c. Estimated training dates.
 2. Adjust schedule to ensure training of appropriate personnel as deemed necessary by Owner, and to allow full participation by manufacturers' representatives. Adjust schedule for interruptions in operability of equipment.
 3. Documentation, and Section 01 91 14, Equipment Testing and Facility Startup.
- C. Lesson Plan: When manufacturer or vendor training of Owner personnel is specified, prepare a lesson plan for each required course containing the following minimum information:
1. Title and objectives.
 2. Recommended attendees (such as, managers, engineers, operators, maintenance).
 3. Course description, outline of course content, and estimated class duration.
 4. Format (such as, lecture, self-study, demonstration, hands-on).
 5. Instruction materials and equipment requirements.
 6. Resumes of instructors providing training.
- D. Prestartup Training:
1. Coordinate training sessions with Owner's operating personnel and manufacturers' representatives and with submission of operation and maintenance manuals.
 2. Complete at least 7 days prior to beginning of facility startup.
- E. Post-startup Training: If required in Specifications, furnish and coordinate training of Owner's operating personnel by respective manufacturer's representatives.

3.04 SUPPLEMENTS

- A. The supplement listed below, following "End of Section," is part of this specification.
1. Manufacturer's Certificate of Proper Installation.

END OF SECTION

MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION

OWNER _____ EQPT SERIAL NO: _____
EQPT TAG NO: _____ EQPT/SYSTEM: _____
PROJECT NO: _____ SPEC. SECTION: _____

I hereby certify that the above-referenced equipment/system has been:

(Check Applicable)

- Installed in accordance with Manufacturer's recommendations.
- Inspected, checked, balanced and adjusted.
- Serviced with proper initial lubricants.
- Electrical and mechanical connections meet quality and safety standards.
- All applicable safety equipment has been properly installed.
- Functional tests.
- System has been performance tested, and meets or exceeds specified performance requirements. (When complete system of one manufacturer)

Note: Attach any performance test documentation from manufacturer.

Comments: _____

I, the undersigned Manufacturer's Representative, hereby certify that I am (i) a duly authorized representative of the manufacturer, (ii) empowered by the manufacturer to inspect, approve, and operate their equipment and (iii) authorized to make recommendations required to ensure equipment furnished by the manufacturer is complete and operational, except as may be otherwise indicated herein. I further certify that all information contained herein is true and accurate.

Date: _____, 20__

Manufacturer: _____

By Manufacturer's Authorized Representative: _____
(Authorized Signature)

Installation Contractor's Authorized Representative: _____
(Authorized Signature)

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Detailed information for the preparation, submission, and Engineer's review of Operations and Maintenance (O&M) Data, as required by individual Specification sections.

1.02 DEFINITIONS

- A. Preliminary Data: Initial and subsequent submissions for Engineer's review.
- B. Final Data: Engineer-accepted data, submitted as specified herein.
- C. Maintenance Operation: As used on Maintenance Summary Form is defined to mean any routine operation required to ensure satisfactory performance and longevity of equipment. Examples of typical maintenance operations are lubrication, belt tensioning, adjustment of pump packing glands, and routine adjustments.

1.03 SEQUENCING AND SCHEDULING

- A. Equipment and System Data:
 - 1. Preliminary Data:
 - a. Do not submit until Shop Drawing for equipment or system has been reviewed and approved by Engineer.
 - b. Submit prior to shipment date.
 - 2. Final Data: Submit Instructional Manual Formatted data not less than 30 days prior to installation of equipment. Submit Compilation Formatted and Electronic Media Formatted data prior to Completion of Project and Final Invoice.
- B. Materials and Finishes Data:
 - 1. Preliminary Data: Submit at least 15 days prior to request for training.
 - 2. Final Data: Submit within 10 days after final inspection.

1.04 DATA FORMAT

- A. Prepare preliminary and final data in the form of an instructional manual. Prepare final data in data compilation format and electronic media.
- B. Instructional Manual Format:
 - 1. Binder: Commercial quality, permanent, three-ring or three-post binders with durable plastic cover.
 - 2. Size: 8-1/2 inches by 11 inches, minimum.

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3. Cover: Identify manual with typed or printed title “OPERATION AND MAINTENANCE DATA” and list:
 - a. Project title.
 - b. Designate applicable system, equipment, material, or finish.
 - c. Identity of separate structure as applicable.
 - d. Identify volume number if more than one volume.
 - e. Identity of equipment number and Specification section.
 4. Spine:
 - a. Project title.
 - b. Identify volume number if more than one volume.
 5. Title Page:
 - a. Contractor name, address, and telephone number.
 - b. Subcontractor, Supplier, installer, or maintenance contractor’s name, address, and telephone number, as appropriate.
 - 1) Identify area of responsibility of each.
 - 2) Provide name and telephone number of local source of supply for parts and replacement.
 6. Table of Contents:
 - a. Neatly typewritten and arranged in systematic order with consecutive page numbers.
 - b. Identify each product by product name and other identifying numbers or symbols as set forth in Contract Documents.
 7. Paper: 20-pound minimum, white for typed pages.
 8. Text: Manufacturer’s printed data, or neatly typewritten.
 9. Three-hole punch data for binding and composition; arrange printing so that punched holes do not obliterate data.
 10. Material shall be suitable for reproduction, with quality equal to original. Photocopying of material will be acceptable, except for material containing photographs.
- C. Electronic Media Format:
1. Portable Document Format (PDF):
 - a. After all preliminary data has been found to be acceptable to Engineer, submit Operation and Maintenance data in PDF format on CD.
 - b. Files to be exact duplicates of Engineer-accepted preliminary data. Arrange by specification number and name.
 - c. Files to be fully functional and viewable in most recent version of Adobe Acrobat.

1.05 SUBMITTALS

- A. Informational:
1. Data Outline: Submit one electronic copy of a detailed outline of proposed organization and contents of Final Data prior to preparation of Preliminary Data.
 2. Preliminary Data:
 - a. Submit two copies for Engineer’s review.
 - b. If data meets conditions of the Contract:
 - 1) One copy will be returned to Contractor.

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- 2) One copy will be retained in Engineer's file.
- c. If data does not meet conditions of the Contract:
 - 1) All copies will be returned to Contractor with Engineer's comments (on separate document) for revision.
 - 2) Engineer's comments will be retained in Engineer's file.
 - 3) Resubmit two copies revised in accordance with Engineer's comments.
3. Final Data: Submit two copies in format specified herein.

1.06 DATA FOR EQUIPMENT AND SYSTEMS

- A. Content For Each Unit (or Common Units) and System:
 1. Product Data:
 - a. Include only those sheets that are pertinent to specific product.
 - b. Clearly annotate each sheet to:
 - 1) Identify specific product or part installed.
 - 2) Identify data applicable to installation.
 - 3) Delete references to inapplicable information.
 - c. Function, normal operating characteristics, and limiting conditions.
 - d. Performance curves, engineering data, nameplate data, and tests.
 - e. Complete nomenclature and commercial number of replaceable parts.
 - f. Original manufacturer's parts list, illustrations, detailed assembly drawings showing each part with part numbers and sequentially numbered parts list, and diagrams required for maintenance.
 - g. Spare parts ordering instructions.
 - h. Where applicable, identify installed spares and other provisions for future work (for example, reserved panel space, unused components, wiring, terminals).
 2. Charts of valve tag numbers, with the location and function of each valve.
 3. Drawings: Supplement product data with Drawings as necessary to clearly illustrate:
 - a. Format:
 - 1) Provide reinforced, punched, binder tab; bind in with text.
 - 2) Reduced to 8-1/2 inches by 11 inches, or 11 inches by 17 inches folded to 8-1/2 inches by 11 inches.
 - 3) Where reduction is impractical, fold and place in 8-1/2-inch by 11-inch envelopes bound in text.
 - 4) Identify Specification section and product on Drawings and envelopes.
 - b. Relations of component parts of equipment and systems.
 - c. Control and flow diagrams.
 - d. Coordinate drawings with Project record documents to assure correct illustration of completed installation.
 4. Instructions and Procedures: Within text, as required to supplement product data.
 - a. Format:
 - 1) Organize in consistent format under separate heading for each different procedure.
 - 2) Provide logical sequence of instructions for each procedure.

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- 3) Provide information sheet for Owner's personnel, including:
 - a) Proper procedures in event of failure.
 - b) Instances that might affect validity of guarantee or Bond.
 - b. Installation Instructions: Including alignment, adjusting, calibrating, and checking.
 - c. Operating Procedures:
 - 1) Startup, break-in, routine, and normal operating instructions.
 - 2) Test procedures and results of factory tests where required.
 - 3) Regulation, control, stopping, and emergency instructions.
 - 4) Description of operation sequence by control manufacturer.
 - 5) Shutdown instructions for both short and extended duration.
 - 6) Summer and winter operating instructions, as applicable.
 - 7) Safety precautions.
 - 8) Special operating instructions.
 - d. Maintenance and Overhaul Procedures:
 - 1) Routine maintenance.
 - 2) Guide to troubleshooting.
 - 3) Disassembly, removal, repair, reinstallation, and re-assembly.
- B. Content for Each Electric or Electronic Item or System:
1. Description of Unit and Component Parts:
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data, nameplate data, and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 - d. Interconnection wiring diagrams, including control and lighting systems.
 2. Electrical service.
 3. Control requirements and interfaces.
 4. Communication requirements and interfaces.
 5. List of electrical relay settings, and control and alarm contact settings.
 6. Electrical interconnection wiring diagram, including as applicable, single-line, three-line, schematic and internal wiring, and external interconnection wiring.
 7. Operating Procedures:
 - a. Routine and normal operating instructions.
 - b. Startup and shutdown sequences, normal and emergency.
 - c. Safety precautions.
 - d. Special operating instructions.
 8. Maintenance Procedures:
 - a. Routine maintenance.
 - b. Guide to troubleshooting.
 - c. Adjustment and checking.
 - d. List of relay settings, control and alarm contact settings.
 9. Manufacturer's printed operating and maintenance instructions.
 10. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
- C. Maintenance Summary:
1. Compile individual Maintenance Summary for each applicable equipment item, respective unit or system, and for components or sub-units.

LFP PRE-CLARIFICATION BASIN REHABILITATION

2. Format:
 - a. Use Maintenance Summary Form bound with this section or electronic facsimile of such.
 - b. Each Maintenance Summary may take as many pages as required.
 - c. Use only 8-1/2-inch by 11-inch size paper.
 - d. Complete using typewriter or electronic printing.
3. Include detailed lubrication instructions and diagrams showing points to be greased or oiled; recommend type, grade, and temperature range of lubricants and frequency of lubrication.
4. Recommended Spare Parts:
 - a. Data to be consistent with manufacturer's Bill of Materials/Parts List furnished in O&M manuals.
 - b. "Unit" is the unit of measure for ordering the part.
 - c. "Quantity" is the number of units recommended.
 - d. "Unit Cost" is the current purchase price.

1.07 DATA FOR MATERIALS AND FINISHES

- A. Content for Architectural Products, Applied Materials, and Finishes:
 1. Manufacturer's data, giving full information on products:
 - a. Catalog number, size, and composition.
 - b. Color and texture designations.
 - c. Information required for reordering special-manufactured products.
 2. Instructions for Care and Maintenance:
 - a. Manufacturer's recommendation for types of cleaning agents and methods.
 - b. Cautions against cleaning agents and methods that are detrimental to product.
 - c. Recommended schedule for cleaning and maintenance.
- B. Content for Moisture Protection and Weather Exposed Products:
 1. Manufacturer's data, giving full information on products:
 - a. Applicable standards.
 - b. Chemical composition.
 - c. Details of installation.
 2. Instructions for inspection, maintenance, and repair.

1.08 SUPPLEMENTS

- A. The supplements listed below, following "End of Section", are part of this Specification.
 1. Forms: Maintenance Summary Form.

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PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

LFP PRE-CLARIFICATION BASIN REHABILITATION

SECTION 01 88 15

ANCHORAGE AND BRACING

PART 1 GENERAL

1.01 SUMMARY

- A. This section covers requirements for anchorage and bracing of equipment, distribution systems, and other nonstructural components required in accordance with the ICC 2012 International Building Code (IBC), for seismic, wind, gravity, soil, and operational loads.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Institute of Steel Construction (AISC) 360, Specification for Structural Steel Buildings.
 - 2. American Society of Civil Engineers (ASCE): ASCE 7, Minimum Design Loads for Buildings and Other Structures.
 - 3. International Code Council (ICC): International Building Code (IBC).

1.03 DEFINITIONS

- A. Authority Having Jurisdiction (AHJ): Permitting building agency; may be a federal, state, local, or other regional department, or individual including building official, fire chief, fire marshal, chief of a fire prevention bureau, labor department, or health department, electrical inspector; or others having statutory authority. AHJ may be Owner when authorized to be self-permitting by governmental permitting agency or when no governmental agency has authority.
- B. Designated Seismic System: Architectural, electrical, and mechanical system or their components for which component importance factor is greater than 1.0.

1.04 DESIGN AND PERFORMANCE REQUIREMENTS

- A. General:
 - 1. Anchorage and bracing systems shall be designed by a qualified professional engineer registered in the State of Georgia.
 - 2. Design anchorage into concrete including embedment in accordance with ACI 318-14; Chapter 17 (or other industry standard approved by Engineer), and Project Specifications.
 - a. Unless otherwise noted, design for cracked concrete condition.
 - 3. Design anchorage and bracing of architectural, mechanical, and electrical components and systems in accordance with this section, unless a design is specifically provided within Contract Documents or where exempted hereinafter.
 - 4. Design attachments, braces, and anchors for equipment, components, and distribution systems to structure for gravity, seismic, wind, and operational loading.

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5. Anchor and brace piping and ductwork, whether exempt or not exempt for this section, so that lateral or vertical displacement does not result in damage or failure to essential architectural, mechanical, or electrical equipment.
6. Architectural Components: Includes, but are not limited to, nonstructural walls and elements, partitions, cladding and veneer, access flooring, signs, cabinets, suspended ceilings, and glass in glazed curtain walls and partitions.
7. Provide supplementary framing where required to transfer anchorage and bracing loads to structure.
8. Adjust equipment pad sizes or provide additional anchorage confinement reinforcing to provide required anchorage capacities.
9. Design anchorage and bracing for:
 - a. Equipment and components that weigh more than 400 pounds and are mounted 4 feet or less above adjacent finished floor.
 - b. Mechanical and electrical components that are not provided with flexible connections between components and associated ductwork, piping, or conduit.
10. For components exempted from design requirements of this section, provide bolted, welded, or otherwise positively fastened attachments to supporting structure.

B. Design Loads:

1. Gravity: Design anchorage and bracing for self-weight and superimposed loads on components and equipment.
2. Wind: Design anchorage and bracing for wind criteria for exposed architectural components and exterior and wind-exposed mechanical and electrical equipment. Alternately, manufacturer certification may be provided for components such as roofing and flashing to verify attachments meet Project.
3. Operational:
 - a. For loading supplied by equipment manufacturer for IBC required load cases.
 - b. Loads may include equipment vibration, torque, thermal effects, effects of internal contents (weight and sloshing), water hammer, and other load-inducing conditions.
 - c. Locate braces to minimize vibration to or movement of structure.
 - d. For vibrating loads, use anchors meeting requirements of Section 05 05 19, Post-Installed Anchors, for anchors with designated capacities for vibratory loading per manufacturer's ICC-ES report.
 - e. In accordance with 2012 IBC, Section 1613, and Chapter 13 of ASCE 7.
 - f. Design forces for anchors in concrete or masonry shall be in accordance with ASCE 7, Section 13.4 as applicable for Project Seismic Design Category.

C. Seismic Design Requirements:

1. Analyze local region of body of nonstructural component for load transfer of anchorage attachment if component $I_p = 1.5$.
2. Provide support drawings and calculations for electrical distribution components if any of the following conditions apply:
 - a. Conduit diameter is greater than 2.5-inch trade size.

LFP PRE-CLARIFICATION BASIN REHABILITATION

- b. Total weight of bus duct, cable tray, or conduit supported by trapeze assemblies exceeds 10 pounds per foot.
3. Other seismic design and detailing information identified in ASCE 7, Chapter 13, is required to be provided for new architectural, mechanical and electrical components, systems, or equipment.

1.05 SUBMITTALS

A. Action Submittals:

1. Shop Drawings:
 - a. List of architectural, mechanical, and electrical equipment requiring Contractor-designed anchorage and bracing, unless specifically exempted.
 - b. Manufacturers' engineered seismic and non-seismic hardware product data.
 - c. Attachment assemblies' drawings including seismic attachments; include connection hardware, braces, and anchors or anchor bolts for nonexempt components, equipment, and systems.
 - d. Submittal will be rejected if proposed anchorage method would create excessive stress to supporting member. Revise anchorages and strengthen structural support to eliminate overstressed condition.

B. Informational Submittals:

1. Anchorage and Bracing Calculations: For attachments, braces, and anchorages, include IBC and any Project-specific criteria, in addition to manufacturer's specific criteria used for design; sealed by a civil or structural engineer registered in the State of Georgia
2. Manufacturer's hardware installation requirements.

1.06 SOURCE QUALITY CONTROL

- A. Contractor and supplier responsibilities to accommodate Owner-furnished shop fabrication related special inspections and testing are provided in Section 01 91 14 Equipment Testing and Facility Startup.

PART 2 PRODUCTS

2.01 GENERAL

- A. Design and construct attachments and supports transferring seismic and non-seismic loads to structure of materials and products suitable for application and in accordance with design criteria shown on Drawings and nationally recognized standards.
- B. Provide post-installed concrete and masonry anchors for anchorage of equipment to concrete or masonry in accordance with Section 05 05 19B, Post-Installed Anchors. Provide post-installed anchors of the size, minimum embedment, and spacing designated in calculations submitted by Contractor and accepted by Engineer.
- C. Do not use powder-actuated fasteners or sleeve anchors for seismic attachments and anchorage where resistance to tension loads is required. Do not use expansion

LFP PRE-CLARIFICATION BASIN REHABILITATION

anchors, other than undercut anchors, for nonvibration isolated mechanical equipment rated over 10 horsepower.

PART 3 EXECUTION

3.01 GENERAL

- A. Make attachments, bracing, and anchorage in such a manner that component lateral force is transferred to lateral force resisting system of structure through a complete load path.
- B. Design, provide, and install overall seismic anchorage system to provide restraint in all directions, including vertical, for each component or system so anchored.
- C. Provide snubbers in each horizontal direction and vertical restraints for components mounted on vibration isolation systems where required to resist.
- D. Provide piping anchorage that maintains design flexibility and expansion capabilities at flexible connections and expansion joints.
 - 1. Piping and ductwork suspended more than 12 inches below supporting structure shall be braced for seismic effects to avoid significant bending of hangers and their attachments.
- E. Anchor tall and narrow equipment such as motor control centers and telemetry equipment at base and within 12 inches from top of equipment, unless approved otherwise by Engineer.
- F. Do not attach architectural, mechanical, or electrical components to more than one element of a building structure at a single restraint location where such elements may respond differently during a seismic event. Do not make such attachments across building expansion and contraction joints.

3.02 INSTALLATION

- A. Do not install components or their anchorages or restraints prior to review and acceptance by Engineer and AHJ.
- B. Notify Engineer upon completion of installation of seismic restraints.

3.03 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

- A. In accordance with Section 05 05 19B, Post-Installed Anchors.
- B. Owner-Furnished Quality Assurance, in accordance with IBC Chapter 17 requirements, is provided in Section 01 91 14 Equipment Testing and Facility Startup.

END OF SECTION

MAINTENANCE SUMMARY FORM

PROJECT: _____ CONTRACT NO.: _____

1. EQUIPMENT ITEM _____
2. MANUFACTURER _____
3. EQUIPMENT/TAG NUMBER(S) _____
4. WEIGHT OF INDIVIDUAL COMPONENTS (OVER 100 POUNDS) _____
5. NAMEPLATE DATA (hp, voltage, speed, etc.) _____
6. MANUFACTURER'S LOCAL REPRESENTATIVE _____
 - a. Name _____ Telephone No. _____
 - b. Address _____

7. MAINTENANCE REQUIREMENTS

Maintenance Operation Comments	Frequency	Lubricant (If Applicable)
List briefly each maintenance operation required and refer to specific information in manufacturer's standard maintenance manual, if applicable. (Reference to manufacturer's catalog or sales literature is not acceptable.)	List required frequency of each maintenance operation.	Refer by symbol to lubricant required.

SECTION 01 91 14
EQUIPMENT TESTING AND FACILITY STARTUP

PART 1 GENERAL

1.1 DEFINITIONS

- A. Facility: Entire Project, or an agreed-upon portion, including all of its unit processes.
- B. Functional Test: Test or tests in presence of Engineer and Owner to demonstrate that installed equipment meets manufacturer's installation, calibration, and adjustment requirements and other requirements as specified.
- C. Performance Test: Test or tests performed after any required functional test in presence of Engineer and Owner to demonstrate and confirm individual equipment meets performance requirements specified in individual sections.
- D. Unit Process: As used in this section, a unit process is the Inclined Plate Settler System.

1.2 SUBMITTALS

- A. Informational Submittals:
 - 1. Facility Startup and Performance Demonstration Plan.
 - 2. Functional and Performance test results.
 - 3. Completed Unit Process Startup Form for each unit process.

1.3 FACILITY STARTUP AND PERFORMANCE DEMONSTRATION PLAN

- A. Develop a written plan, in conjunction with installation Contractor and Owner's operations personnel; to include the following:
 - 1. Step-by-step instructions for startup of each unit process and the complete facility.
 - 2. Unit Process Startup Form (sample attached), to minimally include the following:
 - a. Description of the unit process, including equipment numbers/nomenclature of each item of equipment and all included devices.
 - b. Detailed procedure for startup of the unit process, including valves to be opened/closed, order of equipment startup, etc.
 - c. Startup requirements for each unit process, including water, power, chemicals, etc.
 - d. Space for evaluation comments.
 - 3. Facility Performance Demonstration/Certification Form (sample attached), to minimally include the following:
 - a. Description of unit processes included in the facility startup.
 - b. Sequence of unit process startup to achieve facility startup.
 - c. Description of computerized operations, if any, included in the facility.
 - d. Contractor certification facility is capable of performing its intended function(s), including fully automatic operation.
 - e. Signature spaces for Contractor and Engineer.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL

- A. Facility Startup Meetings: Schedule to discuss test schedule, test methods, materials, chemicals and liquids required, facilities operations interface, and Owner involvement.
- B. Contractor's Testing and Startup Representative:
 - 1. Designate and furnish one or more personnel to coordinate and expedite testing and facility startup.
 - 2. Representative(s) shall be present during startup meetings and shall be available at all times during testing and startup.
- C. Provide temporary valves, gauges, piping, test equipment and other materials and equipment required for testing and startup.
- D. Provide Subcontractor and equipment manufacturers' staff adequate to prevent delays. Schedule any ongoing work so as not to interfere with or delay testing and startup.
- E. Owner will:
 - 1. Provide water, power, chemicals, and other items as required for startup, unless otherwise indicated.
 - 2. Operate process units and facility with support of the installation Contractor.
 - 3. Provide labor and materials as required for laboratory analyses if required.
 - 4. Make available spare parts, special tools, and operation and maintenance information for Owner-furnished products.

3.2 EQUIPMENT TESTING

- A. Preparation:
 - 1. Complete installation before testing.
 - 2. Furnish qualified manufacturers' representatives, when required by individual Specification sections.
 - 3. Obtain and submit from equipment manufacturer's representative Manufacturer's Certificate of Proper Installation Form, in accordance with Section 01 43 33B, Manufacturers' Field Services, when required by individual Specification sections.
 - 4. Equipment Test Report Form: Provide written test report for each item of equipment to be tested, to include the minimum information:
 - a. Owner/Project Name.
 - b. Equipment or item tested.
 - c. Date and time of test.
 - d. Type of test performed (Functional or Performance).
 - e. Test method.
 - f. Test conditions.
 - g. Test results.
 - h. Signature spaces for Contractor and Engineer as witness.

5. Cleaning and Checking: Prior to beginning functional testing:
 - a. Calibrate testing equipment in accordance with manufacturer's instructions.
 - b. Inspect and clean equipment, devices, connected equipment, and structures to ensure they are free of foreign material.
 - c. Lubricate equipment in accordance with manufacturer's instructions.
 - d. Turn rotating equipment by hand when possible to confirm that equipment is not bound.
 - e. Check power supply to electric-powered equipment for correct voltage.
 - f. Adjust clearances and torque settings.
6. Ready-to-test determination will be by Owner based at least on the following:
 - a. Acceptable Operation and Maintenance Data.
 - b. Notification by installation Contractor of equipment readiness for testing.
 - c. Receipt of Manufacturer's Certificate of Proper Installation, if so specified.
 - d. Adequate completion of work adjacent to, or interfacing with, equipment to be tested [, including items to be furnished by Owner].
 - e. Availability and acceptability of manufacturer's representative, when specified, to assist in testing of respective equipment.
 - f. Satisfactory fulfillment of other specified manufacturer's responsibilities.
 - g. Equipment and electrical tagging complete.
 - h. Delivery of all spare parts and special tools.

B. Functional Testing:

1. Conduct as specified in individual Specification sections.
2. Notify Owner in writing at least 10 days prior to scheduled date of testing.
3. Prepare Equipment Test Report summarizing test method and results.
4. When, in Engineer's opinion, equipment meets functional requirements specified, such equipment will be accepted for purposes of advancing to performance testing phase, if so required by individual Specification sections. Such acceptance will be evidenced by Engineer/Owner's signature as witness on Equipment Test Report.

C. Performance Testing:

1. Conduct as specified in individual Specification sections.
2. Notify Engineer and Owner in writing at least 10 days prior to scheduled date of test.
3. Performance testing shall not commence until equipment has been accepted by Engineer as having satisfied functional test requirements specified.
4. Type of fluid, gas, or solid for testing shall be as specified.
5. Unless otherwise indicated, furnish labor, materials, and supplies for conducting the test and taking samples (if required) and performance measurements.
6. Prepare Equipment Test Report summarizing test method and results.
7. When, in Owner's opinion, equipment meets performance requirements specified, such equipment will be accepted as conforming to Contract requirements. Such acceptance will be evidenced by Engineer's signature on Equipment Test Report.

3.3 STARTUP OF UNIT PROCESSES

- A. Prior to unit process startup, equipment within unit process shall be accepted by Owner as having met functional and performance testing requirements specified.

- B. Startup sequencing of unit processes shall be as chosen by Contractor to meet schedule requirements.
- C. Make adjustments, repairs, and corrections necessary to complete unit process startup.
- D. Startup shall be considered complete when, in opinion of Owner, unit process has operated in manner intended for 5 continuous days without significant interruption. This period is in addition to functional or performance test periods specified elsewhere.
- E. Significant Interruption: May include any of the following events:
 - 1. Failure of Contractor to provide and maintain qualified onsite startup personnel as scheduled.
 - 2. Failure to meet specified functional operation for more than 2 consecutive hours.
 - 3. Failure of any critical equipment or unit process that is not satisfactorily corrected within 5 hours after failure.
 - 4. Failure of any noncritical equipment or unit process that is not satisfactorily corrected within 8 hours after failure.
 - 5. As determined by Owner.
- F. A significant interruption will require startup then in progress to be stopped. After corrections are made, startup test period to start from beginning again.

3.4 FACILITY PERFORMANCE DEMONSTRATION

- A. When, in the opinion of Owner, startup of all unit processes has been achieved, sequence each unit process to the point that facility is operational.
- B. Demonstrate proper operation of required interfaces within and between individual unit processes.
- C. After facility is operating, complete performance testing of equipment and systems not previously tested.
- D. Document, as defined in Facility Startup and Performance Demonstration Plan, the performance of the facility including its computer system until all unit processes are operable and under control of computer system.
- E. Certify, on the Facility Performance Demonstration/Certification Form, that facility is capable of performing its intended function(s), including fully automatic and computerized operation.

3.5 SUPPLEMENTS

- A. Supplements listed below, following “End of Section,” are a part of this Specification:
 - 1. Unit Process Startup Form.
 - 2. Facility Performance Demonstration/Certification Form.

END OF SECTION

UNIT PROCESS STARTUP FORM

OWNER: _____ **PROJECT:** _____

Unit Process Description: (Include description and equipment number of all equipment and devices): _____

Startup Procedure (Describe procedure for sequential startup and evaluation, including valves to be opened/closed, order of equipment startup, etc.): _____

Startup Requirements (Water, power, chemicals, etc.): _____

Evaluation Comments: _____

FACILITY PERFORMANCE DEMONSTRATION/CERTIFICATION FORM

OWNER: _____ **PROJECT:** _____

Unit Processes Description (List unit processes involved in facility startup): _____

Unit Processes Startup Sequence (Describe sequence for startup, including computerized operations, if any): _____

Contractor Certification that Facility is capable of performing its intended function(s), including fully automatic operation:

Contractor: _____ Date: _____, 20_____

Engineer: _____ Date: _____, 20_____

(Authorized Signature)

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SECTION 05 05 19

POST-INSTALLED ANCHORS

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
1. American Concrete Institute (ACI):
 - a. 318, Building Code Requirements for Structural Concrete.
 - b. 355.2, Qualification of Post-Installed Mechanical Anchors in Concrete.
 - c. 355.4, Qualification of Post-Installed Adhesive Anchors in Concrete.
 2. American Iron and Steel Institute (AISI): Stainless Steel Type 316.
 3. American National Standards Institute (ANSI).
 4. ASTM International (ASTM):
 - a. A123/A123M, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - b. A143, Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement.
 - c. A153/A153M, Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - d. A193/A193M, Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service.
 - e. A194/A194M, Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure or High-Temperature Service, or Both.
 - f. A380, Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems.
 - g. A385, Practice for Providing High-Quality Zinc Coatings (Hot-Dip).
 - h. A563, Specification for Carbon and Alloy Steel Nuts.
 - i. A780, Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
 - j. A967, Specification for Chemical Passivation Treatments for Stainless Steel Parts.
 - k. E488, Standard Test Methods for Strength of Anchors in Concrete Elements.
 - l. F436, Specification for Hardened Steel Washers.
 - m. F468, Specification for Nonferrous Bolts, Hex Cap Screws, and Studs for General Use.
 - n. F568M, Specification for Carbon and Alloy Steel Externally Threaded Metric Fasteners.
 - o. F593, Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
 - p. F594, Specification for Stainless Steel Nuts.
 - q. F1554, Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
 5. International Association of Plumbing and Mechanical Officials Uniform ES (IAPMO-UES): Evaluation Reports for Concrete and Masonry Anchors.
 6. International Code Council Evaluation Service (ICC-ES):

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- a. Evaluation Reports for Concrete and Masonry Anchors.
 - b. AC01, Acceptance Criteria for Expansion Anchors in Masonry Elements.
 - c. AC70, Acceptance Criteria for Fasteners Power-driven into Concrete, Steel and Masonry Elements.
 - d. AC106, Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry Elements.
 - e. AC193, Acceptance Criteria for Mechanical Anchors in Concrete Elements.
 - f. AC308, Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements. Evaluation Reports for Concrete and Masonry Anchors.
7. NSF International (NSF): 61, Drinking Water System Components - Health Effects.
 8. Specialty Steel Industry of North America (SSINA):
 - a. Specifications for Stainless Steel.
 - b. Design Guidelines for the Selection and Use of Stainless Steel.
 - c. Stainless Steel Fabrication.

1.02 DEFINITIONS

- A. Corrosive Area: Containment area or area exposed to delivery, storage, transfer, or use of chemicals.
- B. Exterior Area: Location not protected from weather by a building or other enclosed structure to include buried roof structures.
- C. Interior Dry Area: Location inside building or structure where floor is not subject to liquid spills or wash down, and where wall or roof slab is not common to a water-holding or earth-retaining structure.
- D. Interior Wet Area: Location inside building or structure where floor is sloped to floor drains or gutters and is subject to liquid spills or wash down, or where wall, floor, or roof slab is common to a water-holding or earth-retaining structure.
- E. Submerged: Location at or below top of wall of open water-holding structure, such as a basin or channel, or wall, ceiling, or floor surface inside a covered water-holding structure, or exterior below grade wall or roof surface of water-holding structure, open or covered.

1.03 SUBMITTALS

- A. Action Submittals:
 1. Shop Drawings: Specific instructions for concrete anchor installation, including drilled hole size and depth, preparation, placement, procedures, and instructions for safe handling of anchoring systems.
- B. Informational Submittals:
 1. Concrete Anchors:
 - a. Manufacturer's product description and installation instructions.

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- b. Current ICC-ES or IAPMO-UES Report for each type of post-installed anchor to be used.
2. Passivation method for stainless steel members.

1.04 QUALITY ASSURANCE

A. Qualifications:

1. Installers of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Installer Certification Program or equivalent.
2. Galvanized Coating Applicator: Company specializing in hot-dip galvanizing after fabrication and following procedures of Quality Assurance Manual of the American Galvanizers Association.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Package stainless steel items in a manner to provide protection from carbon impregnation.
- B. Protect hot-dip galvanized finishes from damage as a result of metal banding and rough handling.

PART 2 PRODUCTS

2.01 GENERAL

- A. Unless otherwise indicated, meet the following requirements:

Item	ASTM Reference
Stainless Steel:	
Threaded Rods	F593, AISI Type 316, Condition CW
Nuts*	F594, AISI Type 316, Condition CW
Carbon Steel:	
Threaded Rods	F1554, Grade 36 or F568M Class 5.8
Flat and Beveled Washers (Hardened)	F436
Nuts*	A194/A194M, Grade 2H
Galvanized Steel:	
All	A153/A153M
*Nuts of other grades and styles having specified proof load stresses greater than specified grade and style are also suitable. Nuts must have specified proof load stresses equal to or greater than minimum tensile strength of specified threaded rod.	

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- B. Bolts, Washers, and Nuts: Use stainless steel material types.

2.02 POST-INSTALLED CONCRETE ANCHORS

A. General:

1. AISI Type 316 stainless steel.
2. Post-installed anchor systems used in concrete shall be approved by ICC Evaluation Services Report or equivalent for use in cracked concrete and for short-term and long-term loads including wind and earthquake.
3. Mechanical Anchors: Comply with the requirements of ICC-ES AC193 or ACI 355.2.
4. Adhesive Anchors: Comply with the requirements of ICC-ES AC308 or ACI 355.4.
5. Acceptable for use in potable water structures by EPA and local health agencies or NSF 61.

B. Adhesive Anchors:

1. Threaded Rod:
 - a. Diameter as shown on Drawings.
 - b. Length as required to provide minimum depth of embedment indicated and thread projection required.
 - c. Clean and free of grease, oil, or other deleterious material.
2. Adhesive:
 - a. Two-component, insensitive to moisture, designed to be used in adverse freeze/thaw environments.
 - b. Cure Temperature, Pot Life, and Workability: Compatible for intended use and anticipated environmental conditions.
3. Packaging and Storage:
 - a. Disposable, self-contained system capable of dispensing both components in proper mixing ratio and fitting into a manually or pneumatically operated caulking gun.
 - b. Store adhesive on pallets or shelving in a covered storage area.
 - c. Package Markings: Include manufacturer's name, product name, batch number, product expiration date, ANSI hazard classification, and appropriate ANSI handling precautions.
 - d. Dispose of When:
 - 1) Shelf life has expired.
 - 2) Stored other than in accordance with manufacturer's instructions.
4. Manufacturers and Products:
 - a. Hilti, Inc., Tulsa, OK; HIT Doweling Anchor System, HIT-HY 200 V3 Safe Set System with HIT-Z ROD (ESR-4868), HIT RE 500 V3 Safe Set System with HAS threaded rod (ESR-3814), or HIT-RE 500 V3 Safe Set System with Hilti Roughening Tool (HIT RT) with HAS threaded rod (ESR-3814) for diamond cored holes.
 - b. Simpson Strong-Tie Co., Inc., Pleasanton, CA; SET-3G Epoxy Adhesive Anchors. (ESR-4057).
 - c. DeWalt/Powers Fasteners, Brewster NY; Pure 220+ Epoxy adhesive anchor system with Dust X+ System (ESR-5144).

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- C. Adhesive Threaded Inserts:
 - 1. Type 316 stainless steel, internally threaded inserts.
 - 2. Manufacturer and Product: Hilti, Inc., Tulsa, OK; HIS-RN Insert with HIT-RE 500-V3 or HIT-HY 200 adhesive.

PART 3 EXECUTION

3.01 CONCRETE ANCHORS

- A. Begin installation only after concrete to receive anchors has attained design strength.
- B. Locate existing reinforcing with Ground Penetrating Radar or other method approved by Engineer prior to drilling. Coordinate with Engineer to adjust anchor locations where installation would result in hitting reinforcing.
- C. Install in accordance with written manufacturer's instructions.
- D. Provide minimum embedment, edge distance, and spacing as indicated on Drawings.
- E. Use only drill type and bit type and diameter recommended by anchor manufacturer.
- F. Clean hole of debris and dust per manufacturer's requirements.
- G. When unidentified embedded steel, rebar, or other obstruction is encountered in drill path, slant drill to clear obstruction. If drill must be slanted more than indicated in manufacturer's installation instructions to clear obstruction, notify Engineer for direction on how to proceed.
- H. Adhesive Anchors:
 - 1. Unless otherwise approved by Engineer and adhesive manufacturer:
 - a. Do not install adhesive anchors when temperature of concrete is below 40 degrees F or above 100 degrees F.
 - b. Do not install prior to concrete attaining an age of 21 days.
 - c. Remove any standing water from hole with oil-free compressed air. Inside surface of hole shall be dry.
 - d. Do not disturb anchor during recommended curing time.
 - e. Do not exceed maximum torque as specified in manufacturer's instructions.

3.02 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

- A. Owner-Furnished Quality Assurance, in accordance with IBC Chapter 17 requirements, is provided in Section 01 91 14.

3.03 MANUFACTURER'S SERVICES

- A. Adhesive and Mechanical Anchors: Conduct Site training of installation personnel for proper installation, handling, and storage of adhesive anchor system. Notify Engineer of time and place for sessions.

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3.04 FASTENER SCHEDULE

A. Unless indicated otherwise on Drawings, provide fasteners as follows:

Service Use and Location	Product	Remarks
1. Post-Installed Anchors for Metal Components to Cast-in-Place Concrete (such as, Ladders, Handrail Posts, Electrical Panels, Platforms, and Equipment)		
Submerged, Exterior, Interior Wet, and Corrosive Areas	Stainless steel adhesive anchors	Verify product acceptability and manufacturer's requirements if anchor installation will occur in an overhead application
4. All Others		
All service uses and locations	Stainless steel fasteners	

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B. Antiseizing Lubricant: Use on all stainless steel threads.

C. Do not use adhesive anchors to support fire-resistive construction or where ambient temperature will exceed 120 degrees F.

END OF SECTION

SECTION 05 50 00
METAL FABRICATIONS

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
1. The Aluminum Association, Inc. (AA): The Aluminum Design Manual.
 2. American Institute of Steel Construction (AISC):
 - a. 201, AISC Certification Program for Structural Steel Fabricators – Standard for Steel Building Structures.
 - b. 206, AISC Certification Program for Structural Steel Erectors – Standard for Structural Steel Erectors.
 - c. 325, AISC Steel Construction Manual.
 - d. 326, Detailing for Steel Construction.
 3. American Iron and Steel Institute (AISI): Stainless Steel Types.
 4. American Welding Society (AWS):
 - a. D1.6/D1.6M, Structural Welding Code - Stainless Steel.
 5. ASTM International (ASTM):
 - a. A193/A193M, Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications.
 - b. A276, Standard Specification for Stainless Steel Bars and Shapes.
 - c. A380, Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems.
 - d. A967, Standard Specification for Chemical Passivation Treatments for Stainless Steel Parts.
 - e. A992/A992M, Standard Specification for Structural Steel Shapes.
 - f. F593, Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
 - g. F594, Standard Specification for Stainless Steel Nuts.
 6. NSF International (NSF): 61, Drinking Water System Components—Health Effects.
 7. Specialty Steel Industry of North America (SSINA):
 - a. Specifications for Stainless Steel.
 - b. Design Guidelines for the Selection and Use of Stainless Steel.
 - c. Stainless Steel Fabrication.
 - d. Stainless Steel Fasteners.

1.02 DEFINITIONS

- A. Anchor Bolt: Cast-in-place anchor; concrete or masonry.

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- B. Corrosive Area: Containment area or area exposed to delivery, storage, transfer, or use of chemicals.
- C. Exterior Area: Location not protected from weather by building or other enclosed structure.
- D. Interior Dry Area: Location inside building or structure where floor is not subject to liquid spills or washdown, nor where wall or roof slab is common to a water-holding or earth-retaining structure.
- E. Interior Wet Area: Location inside building or structure where floor is sloped to floor drains or gutters and is subject to liquid spills or washdown, or where wall, floor, or roof slab is common to a water-holding or earth-retaining structure.
- F. Submerged: Location at or below top of wall of open water-holding structure, such as basin or channel, or wall, ceiling or floor surface inside a covered water-holding structure, or exterior belowgrade wall or roof surface of water-holding structure, open or covered.

1.03 SUBMITTALS

- A. Action Submittals:
 - 1. Shop Drawings: Metal fabrications, including welding and fastener information.
- B. Informational Submittals:
 - 1. U-Channel Concrete Inserts:
 - a. Manufacturer's product description.
 - b. Allowable load tables.
 - 2. Passivation method for members.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Insofar as practical, factory assemble specified items. Package assemblies, which have to be shipped unassembled to protect materials from damage and tag to facilitate identification and field assembly.
- B. Package stainless steel items to provide protection from carbon impregnation.
- C. Protect painted coatings and hot-dip galvanized finishes from damage as a result of metal banding and rough handling. Use padded slings and straps.
- D. Store fabricated items in dry area, not in direct contact with ground.

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PART 2 PRODUCTS

2.01 GENERAL

A. Unless otherwise indicated, meet the following requirements:

Item	ASTM Reference
Stainless Steel – Plates and Shapes:	
Angles and Bars	A276, AISI Type 316 (316L for welded connections), 30 kips per square inch minimum yield stress
Plate, Sheet, and Strip	A240/A240M, AISI Type 316 (316L for welded connections), 30 kips per square inch minimum yield stress
Shapes – Rolled	A276, AISI Type 304 (304L for welded connections), 30 kips per square inch minimum yield stress A1069 (Laser-fused process), 30 kips per square inch minimum yield stress
Shapes – Built-up	A276, AISI Type 304 (304L for welded connections), 30 kips per square inch minimum yield stress A1069 (Laser-fused process)
Stainless Steel – Anchors and Fasteners:	
Anchor Bolts and Rods	F593, AISI Type 316, Group 2 Condition CW
Bolts	F593, AISI Type 316, Group 2 Condition CW
Nuts	F594, AISI Type 316, Condition CW
Threaded Rods	F593, AISI Type 316, Group 2 Condition CW
Washers	
Welded Anchor Studs	F593, AISI Type 316, Group 2 Condition CW
Steel – Plates and Shapes:	
Hollow Structural Sections (HSS) – Round	A500/A500M, Grade C
Hollow Structural Sections (HSS) – Square and Rectangular	A500/A500M, Grade C
Pipe which is Part of Structure	A500/A500M, Grade C
Plates and Other Shapes	A36/A36M or A572/A572M, Grade 50 or A992/A992M for other steel shapes

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Item	ASTM Reference
Wide Flange Shapes	A992/992M
Steel – Anchors and Fasteners:	
Anchor Bolts and Rods	F1554, Grade 36
Bolts	A307
High-Strength Bolts	F3125, Type 1
Eyebolts	A489
Flat Washers (Unhardened)	F844
Flat and Beveled Washers (Hardened)	F436
Nuts	A563
Threaded Rods	A36/A36M
Welded Anchor Studs	A108, Grades C-1010 through C-1020

- B. Bolts, Washers, and Nuts: Use stainless steel as indicated in Fastener Schedule at end of this section.

2.02 POST-INSTALLED CONCRETE AND MASONRY ANCHORS

- A. See Section 05 05 19, Post-Installed Anchors.

2.03 ACCESSORIES

- A. Antiseizing Lubricant for Stainless Steel Threaded Connections:

1. Suitable for potable water supply.
2. Resists washout.
3. Manufacturers and Products:
 - a. Bostik, Middleton, MA; Neverseez.
 - b. Saf-T-Eze Div., STL Corp., Lombard, IL; Anti-Seize.

- B. Neoprene Gasket:

1. ASTM D1056, 2C1, soft, closed-cell neoprene gasket material, suitable for exposure to sewage and sewage gases, unless otherwise shown on Drawings.
2. Thickness: Minimum 1/4 inch.
3. Furnish without skin coat.
4. Manufacturer and Product: Monmouth Rubber and Plastics Corporation, Long Branch, NJ; Durafoam DK1111LD.

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2.04 FABRICATION

A. General:

1. Finish exposed surfaces smooth, sharp, and to well-defined lines.
2. Furnish necessary rabbets, lugs, and brackets so work can be assembled in neat, substantial manner.
3. Conceal fastenings where practical; where exposed, flush countersink.
4. Drill metalwork and countersink holes as required for attaching hardware or other materials.
5. Grind cut edges smooth and straight. Round sharp edges to small uniform radius. Grind burrs, jagged edges, and surface defects smooth.
6. Fit and assemble in largest practical sections for delivery to Site.

B. Materials:

1. Stainless Steel Built-up Shapes: Fabricate built-up shapes in accordance with ASTM A1069/A1069M.

C. Welding:

1. Weld connections and grind exposed welds smooth. When required to be watertight, make welds continuous.
2. Welded fabrications shall be free from twisting or distortion caused by improper welding techniques.
3. Stainless Steel: Meet requirements of AWS D1.6/D1.6M.
4. Welded Anchor Studs: Prepare surface to be welded and weld with stud welding gun in accordance with AWS D1.1/D1.1M, Section 7, and manufacturer's instructions.
5. Complete welding before applying finish.

D. Watertight Seal: Where required or shown, furnish neoprene gasket of a type that is satisfactory for use in basins. Cover full bearing surfaces.

E. Fitting: Where movement of fabrications is required or shown, cut, fit, and align items for smooth operation. Make corners square and opposite sides parallel.

F. Accessories: Furnish as required for a complete installation. Fasten by welding or with stainless steel bolts or screws.

2.05 SOURCE QUALITY CONTROL

A. Visually inspect all fabrication welds and correct deficiencies.

1. Stainless Steel: AWS D1.6/D1.6M.

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PART 3 EXECUTION

3.01 INSTALLATION OF METAL FABRICATIONS

A. General:

1. Install metal fabrications plumb and level, accurately fitted, free from distortion or defects.
2. Install rigid, substantial, and neat in appearance.
3. Install manufactured products in accordance with manufacturer's recommendations.
4. Obtain Engineer approval prior to field cutting steel members or making adjustments not scheduled.
5. Do not remove mill markings from concealed surfaces.
6. Remove inked or painted identification marks on exposed surfaces not otherwise coated after installed material has been inspected and approved.
7. Snug-tighten bolts, unless otherwise specified.

B. Stainless Steel:

1. Fabrication, erection, connections, bolted and welded construction shall be in accordance with AWS D1.6 and the following SSINA standards:
 - a. Specifications for Stainless Steel.
 - b. Stainless Steel Fabrication.
 - c. Stainless Steel Fasteners.
2. Do not field weld unless approved by Engineer in writing.

C. Weirs: Install weir plates such that weir crest is level with a maximum variation of 1/16-inch from the specified crest elevation, throughout its entire length.

D. Stainless Steel:

1. During handling and installation, take necessary precautions to prevent carbon impregnation of stainless steel members.
2. After installation, visually inspect stainless steel surfaces for evidence of iron rust, oil, paint, and other forms of contamination.
3. Remove contamination using cleaning and passivation methods in accordance with requirements of ASTM A380 and ASTM A967.
4. Brushes used to remove foreign substances shall utilize only stainless steel or nonmetallic bristles.
5. After treatment, visually inspect surfaces for compliance.

3.02 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

A. Contractor-Furnished Quality Control:

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1. Inspection and testing required in Sections 01 43 33B and 01 91 14.

3.03 FASTENER SCHEDULE

- A. Unless indicated otherwise on Drawings, provide fasteners as follows:

Service Use and Location	Product	Remarks
3. Post-Installed Anchors: See Section 05 05 19, Post-Installed Anchors		
8. All Others		
Exterior and Interior Wet and Dry Areas	Stainless steel fasteners	

- B. Antiseizing Lubricant: Use on stainless steel threads.

END OF SECTION

**SECTION 44 44 57
INCLINED PLATE SETTLER SYSTEM**

GENERAL

1.01 SECTION INCLUDES

- A. This section covers the design, manufacture, delivery, site storage, installation, testing and placement into operation of inclined plate settling equipment.
- B. The inclined plate settler system includes but is not limited to plate packs consisting of plates, frames, effluent troughs and weirs, effluent trough connections/extensions, influent baffles, spacers/stiffeners, gaskets, lifting attachments, anchoring systems, and all appurtenances necessary for a complete and operating system.
- C. Conform to other related work specified elsewhere.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. NSF International (NSF):
 - a. NSF/ANSI 61, Drinking Water System Components – Health Effects.
 - b. NSF/ANSI 372, Drinking Water System Components – Lead Content.]

1.03 GENERAL

- A. The inclined plate settler equipment manufacturer shall furnish an engineered system suitable for clarification of coagulated and flocculated water.
- B. Details such as sizing of openings from distribution inlet flumes into space between plates, size and spacing of outlet orifices or weirs from plates into the settled water collection flumes, etc., shall be defined by and be responsibility of Contractor and shall be consistent with all requirements imposed in this section.
- C. The manufacturer of the inclined plate settler system shall utilize a fabrication facility regularly engaged in the manufacturing of inclined plate clarification equipment.
- D. The Contractor will, at his expense, remove any equipment requiring repairs, replacements, and/or refurbishment necessitated by defects in materials or workmanship, or caused by long-term exposure to the environment (process water or atmosphere) within the warranty period. The Contractor shall be

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responsible for all transportation associated with removal and replacement of equipment or materials for repair, replacement, or refurbishment of this equipment.

1.04 SUBMITTALS

A. Action Submittals:

1. Complete description of the inclined plate settler system, including plate pack support frames, plates, inlet baffles and flumes, outlet weirs and flumes, embedded metal wall connectors, fasteners, and other ancillary items.
2. Shop drawings: Plan and section views of the basins, anchor bolt location and templates, dimensional tolerances required for installation. Typical details shall include dimensions of components and their relationship to other items of supply and with respect to the basins and details for sling lifting.
3. A complete listing of materials.
4. Drawings shall include controlling elevations (i.e., V-notch weir, wall openings, bottom of equipment, water surface elevations in the basin and along the effluent trough at minimum and maximum flows).
5. Hydraulic calculations including headloss and velocity through the inclined plate system at minimum and maximum flows.
6. Embedment design details.
7. The manufacturer shall submit equipment structural support requirements. All structural calculations shall be stamped by a professional engineer registered in the State of Georgia.
8. Proof of NSF International (NSF) Standard 61 Certification For Use in Potable Water.

B. Informational Submittals:

1. Installation List: The manufacturer shall submit a list of inclined plate settler systems installed within the last 5 years.
2. Manufacturer's Certificate of Compliance with materials specifications shall be submitted prior to shipment of the equipment. The certificate shall certify that materials, manufacture, and final product conforms to or exceeds specified requirements and intent for which product will be used. Submit supporting reference data, affidavits, and certificates as appropriate. The certificate may reflect recent or previous test results on material or product, acceptable to the Engineer.
3. Operation and Maintenance Data: As specified in Section 01 78 23B, Operation and Maintenance Data.
4. Manufacturer's Warranty.
5. Certificate of Proper Installation.

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- C. Administrative Submittal: The manufacturer shall provide the following patent warranty and authorization:
1. Provide a warranty that the proposed use of the inclined plate settler process and equipment is the use for which the system has been expressly designed and sold by the manufacturer. The warranty shall further state that the use will not infringe on any U.S. or foreign patents, and that the necessary licenses have been obtained and are included in the bid price.
 2. Provide written authorization granting the right to use this process and equipment in perpetuity to Owner, and its assigned heirs. This right shall not be subject to any licensing fees, franchising fees, or any other conceivable charge, presented at this time or in the future, that are not included in Contractor's bid price as stated in Bid. Declare in writing that in the event manufacturer ceases to do business under its current registered name, or in the event the manufacturer ceases to be the sole direct licensor of this process and equipment, or in the event this equipment is not available by any reasonable means, Owner, and its assigned heirs have the right and authorization to use the process and equipment for unspecified future expansions at the Water Treatment Plant site, but not at any other location, without prejudice or claim as regards applicable patents or licenses.

1.05 SPECIAL GUARANTEE

- A. Warranty: The manufacturer shall furnish a 5-year warranty protecting the Owner against equipment failure. The warranty period shall commence from the date of substantial completion of the Project.

PART 2 PRODUCTS

2.01 GENERAL

- A. Components and Materials in Contact with Water for Human Consumption: Comply with the requirements of the Safe Drinking Water Act and other applicable federal, state, and local requirements. Provide certification by manufacturer or an accredited certification organization recognized by the Authority Having Jurisdiction that components and materials comply with the maximum lead content standard in accordance with NSF/ANSI 61 and NSF/ANSI 372.
1. Use or reuse of components and materials without a traceable certification is prohibited.
 2. All grease, lubricants, or oils shall be food grade.
- B. Contractor shall provide products required to complete the work under this section. Such products include, but are not limited to, inserts, anchor bolts, hangers and supports, specialties, and expendable materials, all as necessary

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to provide a complete and properly functioning system and to fit within the existing Pre-Clarification Basins.

- C. Manufacturers:
1. Parkson Co.; Lamella Gravity Settler.
 2. U.S. Filter; Zimpro.
 3. Jim Myers & Sons, Inc (JMS).
 4. Or approved equal.

2.02 OPERATIONAL DESCRIPTION

- A. The feed to the basin is admitted from the flocculation basin through openings in the basin wall. Opening sizes and locations to be verified by the Contractor and considered in the design of the replacement units. Changes to the existing openings through the walls are prohibited.
- B. The feed enters the inclined settler plates through specially sized baffle openings in the sides of the plate packs. The flow, together with suspended matter, travels up the plates with solids settling out and sliding down the surface of the plates. The flow passes out of the space between the plates, over weirs and into the settled water collection channels.
- C. The settled water exits the channels and flows into a common channel at the outlet end of the Pre-Clarification Basins.

2.03 DESIGN REQUIREMENTS

- A. Number of Basins: A plate settler system for two basin(s) shall be provided. Refer to Drawings for basin dimensions and existing settler installation. Each basin is 40 ft long, by 40 ft deep with a side water depth to the top of the support steel of 13.5 ft.
- B. Flow Rates:
1. Design: 8 million gallons per day (mgd) per basin (5,550 gpm).
 2. Minimum: 1 million gallons per day (mgd) per basin (700 gpm).
 3. Weir loading rate at design flow : 12,500 gpd/ft.
- C. Hydraulic Loading Rate:
1. Maximum: 0.12 gallons per minute per square foot plate area.
 2. Minimum: 0.03 gallons per minute per square foot plate area.
- D. Design Loads: The structural members shall be designed to withstand hydrostatic loading, appurtenance loads, and seismic zone conditions. The design shall withstand all loads in submerged and non-submerged conditions.

LFP PRE-CLARIFICATION BASIN REHABILITATION

The frames shall be designed with a 50 psf live load and the plates shall be capable of withstanding a 50 psf live load with a 4 feet by 8 feet plywood board laid on top of the trough.

- E. Plate Angle: 55 degrees from horizontal.
- F. Plate Spacing: The perpendicular distance between inclined plates shall not be less than 2 inches.
- G. Plate Width: Maximum 5 ft.
- H. Plate Length: Maximum 10 ft.

2.04 EQUIPMENT DESCRIPTION

A. Plate Pack Frames:

1. Plate pack frames shall be constructed of Type 316L stainless steel. Structural members shall be suitable for long-term service with continuous immersion in the process water.
2. The plate pack frames shall be designed with anchorage baseplates at each end of the plate pack frame modules. The anchorage at one end of the frame shall be designed for fixed end conditions, and the other anchorage shall provide for movement that may result from contraction/expansion of the plate pack frame and/or the concrete structure housing the inclined plate settlers. Frames shall be designed to span end to end without intermediate support.
3. Each frame shall be factory fabricated and shall be delivered to the Site in one piece. No field fabrication of frames will be permitted. The Contractor shall also furnish all accessories required for mounting of frames on concrete walls.
4. The frames shall be structurally designed to span between the concrete supporting walls of the existing structure as indicated on the Drawings and shall support all of the weight of the plates, and water and sludge loads expected. Frame deflection shall be limited to 1/360th of the span. The frames shall be designed to withstand hydrostatic uplift created when filling the Pre-Clarification basins and shall support live loads of 50 psf.

B. Inlet Feed Baffles:

1. Inlet feed baffles and flumes shall be constructed of Type 316L stainless steel suitable for long-term service with continuous immersion in the process water and exposure to the atmosphere.
2. The inlet shall be hydraulically designed to equally distribute the influent to all of the plates. Properly sized openings in the side walls of

LFP PRE-CLARIFICATION BASIN REHABILITATION

the plates shall introduce the flocculated water near the bottom of the plates from both sides, and minimize floc destruction.

C. Inclined Plates:

1. The inclined plate assemblies shall be fabricated from Type 316L stainless steel at least 0.028 inch thick, stiffened at top and bottom with structural bend and crimp..
2. The inclined plate assemblies shall be secured in the plate pack frames in accordance with the manufacturer's standards.
3. Inclined plates shall be easily removable.

D. Outlet Weirs/Flumes:

1. Outlet weirs and flumes shall be straight-edged weirs constructed of Type 316L stainless steel.
2. V-notch weir plate shall be factory preassembled onto the top of each outlet flume side. The weirs shall be designed to allow adjustment in the field to level all weirs to the same elevation. The tops of the V-notch weirs shall be flattened to remove sharp edges that pose a safety hazard.
3. Outlet flumes shall be sized for a flow velocity of 2 fps at maximum design flow.
4. Provide a means of effluent flow balancing to ensure even flow distribution through the plates.

2.05 MATERIALS OF CONSTRUCTION

A. Fasteners:

1. Shall conform to ASTM A193 and ASTM A194, Type 304 B8MN, B8m2, or B8m3. Fasteners shall be threaded in accordance with ANSI B1.1 for screw threads, coarse-thread series. Stainless steel fasteners lubricant (antiseizing) shall be applied to the threads prior to making up the connections.

B. Welding:

1. All welding shall be done in accordance with the recommendations of the American Welding Society.
2. All welding shall be done by a process suitable for the materials to be welded.
3. Welds shall be free of porosity, cracks, holes, and flux.
4. All welds shall be ground smooth and shall have a uniform appearance.
5. Field welds where approved by the Engineer shall be passivated prior to equipment being placed in service.

LFP PRE-CLARIFICATION BASIN REHABILITATION

C. Passivation:

1. All fabricated stainless steel components shall be passivated using a nitric acid passivation solution.
2. Each component shall be placed in a solution of 10 to 15 percent nitric acid at 150 degrees F for a period of approximately 30 minutes followed by a thorough water washing.
3. If field passivation is required, a 15 percent solution of nitric acid at 65 degrees F to 80 degrees F shall be applied for a period of up to 90 minutes. The area shall be thoroughly rinsed with water after the passivating treatment.

D. Stainless Steel:

1. Swedish Steel Institute SS 2343 is equal to AISI 316L stainless steel.

2.06 MISCELLANEOUS PRODUCTS

A. General:

1. Furnish incidental products, such as gaskets, supports, bolts, and lubricants, as required for proper operation of equipment installed under this section.
2. Products shall conform to applicable sections of these Specifications for the intended service.

B. Anchor Bolts:

1. Unless stated herein, anchor bolts shall comply with Section 05 05 19 - Post-Installed Anchors
2. Furnish anchor bolts, fasteners, washers, etc., needed for installation.
3. Verify the number and size of anchor bolts required by the manufacturer's equipment and furnish all necessary anchor bolts.
4. Locate anchor bolts in accordance with manufacturer's shop drawings and installation instructions.
5. Anchor bolts, fasteners, washers, etc., shall be Type 316 stainless steel to match connecting component. Fasteners shall be threaded in accordance with ANSI B1.1 for screw threads, coarse-thread series. Stainless steel fasteners lubricant (anti-seizing) shall be applied to the threads prior to making up the connections.

PART 3 EXECUTION

3.01 PREPARATION FOR SHIPMENT

- A. Insofar as is practical, the plate pack modules shall be shipped assembled, ready for installation at the Site. Parts and assemblies that are, of necessity,

LFP PRE-CLARIFICATION BASIN REHABILITATION

shipped unassembled shall be trial assembled at the factory and marked in a manner to facilitate final assembly in the field. The equipment and materials shall be packaged in a manner that will protect the equipment from damage during shipment and onsite exterior storage with exposed to the elements for up to 6 months. Manufacturer shall provide any special instructions for storage of the equipment.

- B. Owner shall receive and unload the equipment at the Job Site. The equipment shall be stored on site for installation by a Contractor at a future date.
- C. Prior to installation, the Contractor shall inspect all equipment and materials for condition and damage upon arrival at the Job Site. Damaged or otherwise unacceptable equipment and materials will be removed from the Job Site and replaced with new equipment and materials.

3.02 INSTALLATION OF INCLINED PLATE SETTLERS- TO BE UNDERTAKEN BY OWNER APPOINTED CONTRACTOR

- A. Contractor and plate settling equipment manufacturer shall determine Site access during installation during the Bid phase.
- B. A detailed description of the various items of work and precaution in handling the plate settling units shall be provided by the manufacturer to Contractor prior upon delivery and prior to installation.
- C. Manufacturer shall provide a specially fabricated sling for use with individual plate settling units with delivery of the equipment . The sling shall be used by the installation contractor and shall become the property of Owner at the end of the installation time, for plant maintenance usage.
- D. Installation work shall conform to manufacturer's recommended procedures, instructions, and shop drawings.
- E. Contractor shall Inspect, transport equipment to its place of installation, store, handle, and protect equipment.
- F. Contractor to provide supervision, labor, tools, construction equipment, incidental materials, and necessary services required in install equipment.
- G. Support structure columns, beams, walls or slabs shall not be used to move the equipment into position.

3.03 MANUFACTURERS' SERVICES

- A. A manufacturer's technical representative for the equipment specified herein shall be present at the Job Site and/or classroom designated by Owner for the minimum person-days listed for the services hereinafter, travel time excluded:

LFP PRE-CLARIFICATION BASIN REHABILITATION

1. 4 person-days for inspection, certification of the installation, and instructing the installing contractor on proper installation procedures.
2. 2 person-day for functional testing.
3. 2 person-day for prestartup classroom or Job Site training.

Note: The manufacturer's representative shall be present at the Job Site for whatever duration is necessary to assure proper assembly, installation, testing, startup and certification of the equipment specified herein.

- B. Startup and assistance services shall be at such times as requested by Owner. Owner will schedule such services in advance with the manufacturer. In the event of unforeseen installation difficulty or problems, the manufacturer shall provide a qualified technical representative to the Job Site within 48 hours of notification that such a situation exists.
- C. Training services for Owner's personnel shall be at such times as requested by the Owner.

3.04 FUNCTIONAL TESTING

- A. Functional Test: Prior to plant startup, all equipment described in this Specification shall be inspected for proper alignment and connection and satisfactory performance by means of a functional test as performed by Contractor.

3.05 SPARE PARTS

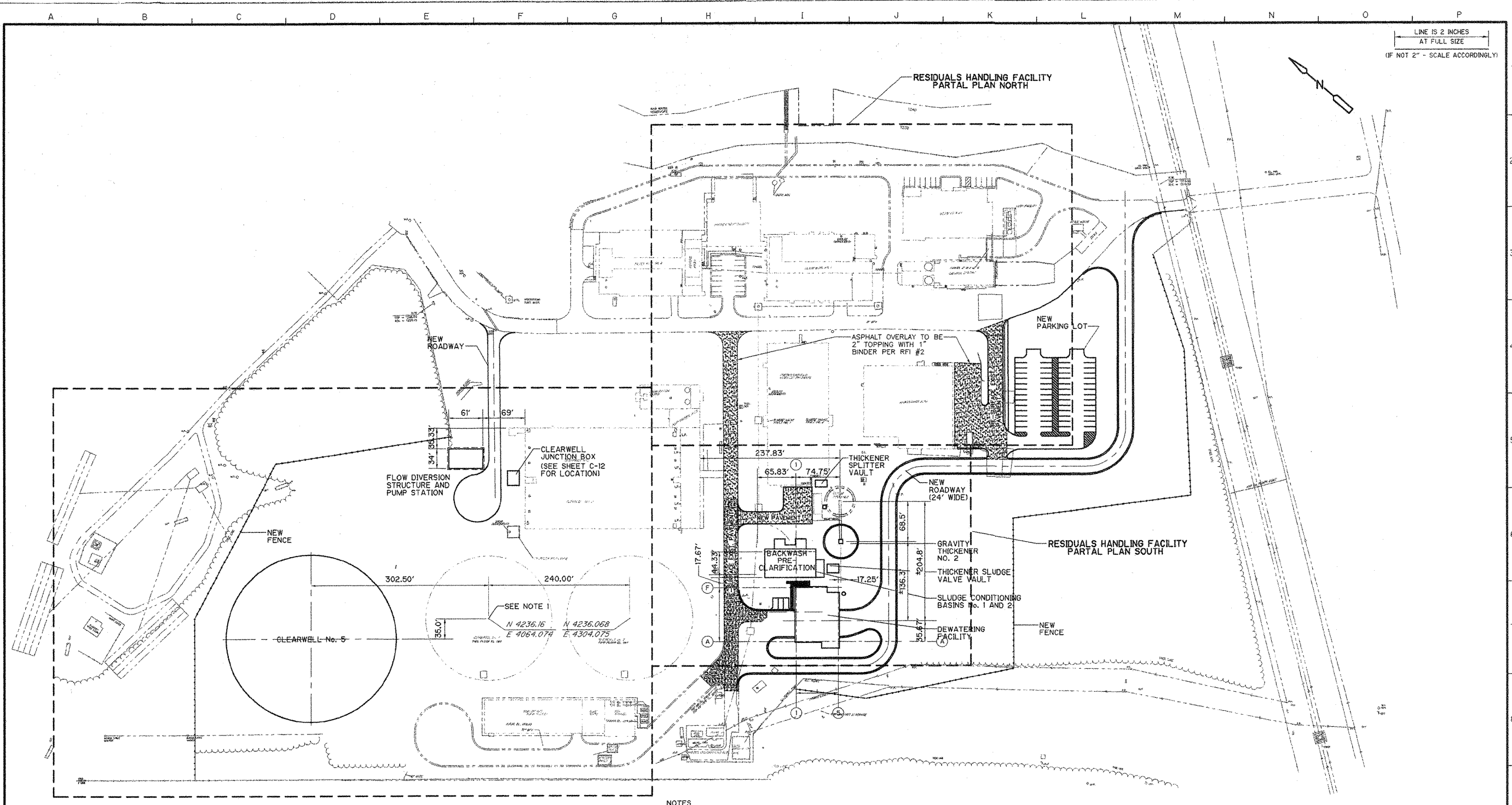
- A. Furnish a minimum of two extra plates for every five plate packs.
- B. Furnish ten additional fasteners of each type.

3.06 MANUFACTURER'S CERTIFICATE

- A. The following certificates shall be provided:
 1. Certification of Proper Installation.
 2. Certification of Materials Compliance.

END OF SECTION

ATTACHMENT 1: LFP 2000 Pre-Clarification Record Drawings (15#)



LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

CLEARWELL PARTIAL PLAN

PROPOSED SITE PLAN
PLAN
1" = 80'

NOTES

- NORTHING AND EASTING COORDINATES ARE BASED ON AS-BUILT COORDINATES FOR CENTER OF CLEARWELLS PROVIDED FROM 1995 EXPANSION AND ARE REFERENCING PLAN NORTH NOT TRUE NORTH. COORDINATES ARE PROVIDED FOR REFERENCE ONLY. CONSTRUCT NEW FACILITIES BASED ON OFFSET DISTANCES SHOWN FROM EXISTING STRUCTURES.
- AFTER COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE ESTABLISHED NORTHING AND EASTING COORDINATES BASED UPON TRUE NORTH FOR FUTURE REFERENCE ONLY.
- THE CLOSEST DISTANCE BETWEEN THE NEW DEWATERING BUILDING AND ANY EXISTING BUILDING IS 119.22 FEET BETWEEN THE DEWATERING BUILDING AND THE SLUDGE TRANSFER STATION LOCATED TO THE EAST. THE DEWATERING BUILDING IS 243.17 FEET FROM THE PROPERTY LINE TO THE WEST AND 697.59 FEET FROM THE PROPERTY LINE TO THE SOUTH.
- THE DEWATERING BUILDING IS A TWO STORY STRUCTURE WITH A GROSS SQUARE FOOTAGE OF 8,600 SF ON THE FIRST FLOOR AND 8,600 SF ON THE SECOND FLOOR. THE TOTAL BUILDING HEIGHT IS 55 FT.

RECORD DRAWING
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY CDM INC. THEREFOR, THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION. TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
BY: *[Signature]* DATE: *[Date]*
CDM

REV. NO.	DATE	DRWN	CHKD	REMARKS
08/02	JMJ	FAM		ADDENDUM NO. 2 - REISSUED DRAWING
8/10/00	TMM	FAM		CONFORMED DRAWINGS
8/10/00	TMM	FAM		GCP&D PERMIT REQUIREMENT MODIFICATION
7/29/00	TMM	KKC		ADDENDUM NO. 2 - REISSUED DRAWING

DESIGNED BY: K. COMSTOCK
DRAWN BY: T. MORGAN
SHEET CHK'D BY: E. MILLER
CROSS CHK'D BY: L. THURN
APPROVED BY: D. FRANZ
DATE: AUGUST 2000

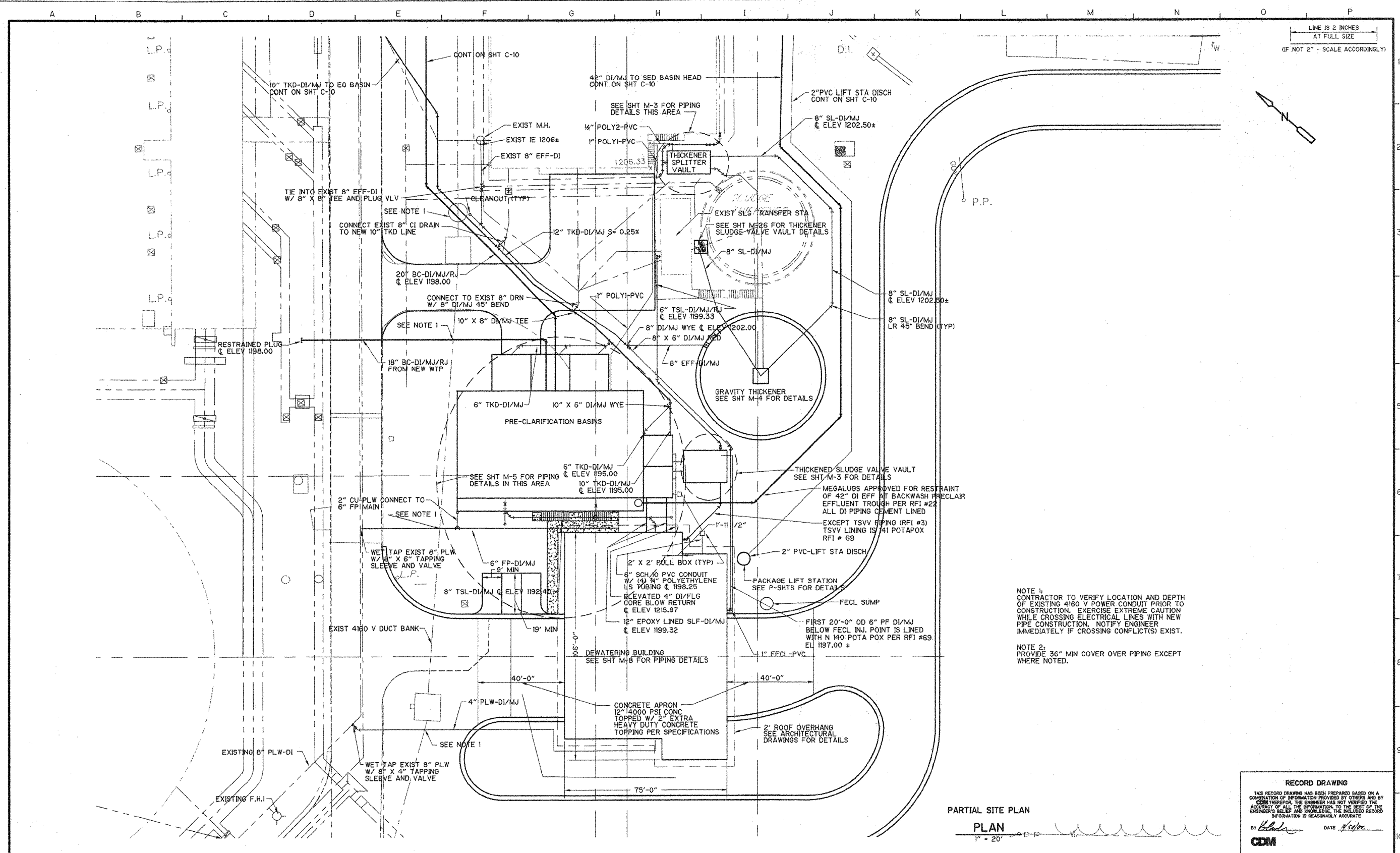
CDM Camp Dresser & McKee Inc.
consulting
engineering
construction
operations

WINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
**LANIER FILTER PLANT RESIDUALS HANDLING FACILITY,
CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS**

OVERALL PROPOSED SITE PLAN

PROJECT NO. 6150-27098
FILE NAME: 27908003.dwg
SHEET NO. **C-3**

S:\USBRPROJ\RESIDUALS HANDLING FACILITY\ACTIVITY\27908002.dwg



LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)



NOTE 1:
CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING 4160 V POWER CONDUIT PRIOR TO CONSTRUCTION. EXERCISE EXTREME CAUTION WHILE CROSSING ELECTRICAL LINES WITH NEW PIPE CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF CROSSING CONFLICT(S) EXIST.

NOTE 2:
PROVIDE 36" MIN COVER OVER PIPING EXCEPT WHERE NOTED.

PARTIAL SITE PLAN
PLAN
1" = 20'

RECORD DRAWING
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BY: *[Signature]* DATE: *4/2/08*
CDM

08/02	JAJ	FAM	RECORD DRAWING
8/10/00	TMM	FAM	CONFORMED DRAWINGS
8/10/00	TMM	FAM	GCP&D PERMIT REQUIREMENT MODIFICATION
7/8/00	TMM	FAM	ADDENDUM NO. 1
REV. NO.	DATE	DRWN	CHKD
			REMARKS

DESIGNED BY: F. MILLER
DRAWN BY: T. MORGAN
SHEET CHK'D BY: S. HARDY
CROSS CHK'D BY: K. COMSTOCK
APPROVED BY: D. FRANZ
DATE: AUGUST 2000

CDM Camp Dresser & McKee Inc.

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY,
CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

PROJECT NO. 6150-27098
FILE NAME: 27098RSD0.dwg
SHEET NO.
C-11

3:43:50 PM 8/2/2008 27098.dwg CIVIL/2008/08/02
 08/23/00 15:06:16
 08/02/07

DESIGN CRITERIA CODES:

- 1994 STANDARD BUILDING CODE - WITH 2000 GEORGIA AMENDMENTS
- SANITARY STRUCTURES: ACI 350R "CONCRETE SANITARY ENGINEERING STRUCTURES"
- OTHER STRUCTURES: ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
- AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION
- FACTORY MUTUAL STANDARDS DESIGN LIVE LOADS:
- PROCESS RELATED STRUCTURES:

STARWAYS	100 PSF
WALKWAYS	100 PSF
ELEVATED SLABS	200 PSF
PROCESS SLABS ON GRADE	200 PSF
- SUPERIMPOSED DEAD LOADS
 - ROOFS AS NOTED
 - FLOORS AS NOTED
- WIND LOADS
 - BASIC WIND SPEED (FASTEST MILE) 100 MPH
 - USE FACTOR 1.15
- EARTHQUAKE (UNLESS NOTED OTHERWISE ON DWGS)

PEAK VELOCITY RELATED ACCELERATION	$A_v = 0.10$
PEAK ACCELERATION	$A_p = 0.10$
SEISMIC HAZARD EXPOSURE GROUP	GROUP II
SEISMIC PERFORMANCE CATEGORY	B
SOIL PROFILE TYPE	S1, COEFF = 1.0
- CONCRETE 28-DAY STRENGTH
 - COLUMNS, BEAMS, SLABS, WALLS, FOOTINGS 4000 PSI
 - MASONRY FILLED CELL GROUT 2500 PSI
 - PRESTRESSED ELEMENTS 5000 PSI
- RESULTS OF ALL COMPRESIVE STRENGTH TESTS SHALL BE AVAILABLE ON THE JOB SITE FOR REVIEW BY THE INSPECTOR.
- REINFORCING STEEL
 - ALL BARS ASTM A615, GRADE 60
 - WELDED WIRE FABRIC ASTM A185
- STRUCTURAL STEEL
 - ALL STRUCTURAL AND MISC. STEEL UNLESS NOTED: A36
 - SHOP AND FIELD WELD: E70XX ELECTRODES
- FOUNDATIONS
 - ALLOWABLE BEARING PRESSURE FOR SPREAD FOOTINGS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE REPORT OF SUBSURFACE EXPLORATION.
 - CONTRACTOR TO VERIFY SOIL BEARING CAPACITY PRIOR TO FOUNDATION PLACEMENT
- GENERAL CONDITIONS

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, CIVIL, ELECTRICAL, AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HEATING, AND VENTILATION DRAWINGS FOR TYPE, SIZE, LOCATIONS, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION, AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURERS REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

STANDARD DETAILS (SHOWN ON SD-1, SD-2 AND SD-3) APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

GENERAL NOTES

CONCRETE

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

REINFORCING STEEL

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH 3"
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER 2"
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:
 - SLABS AND WALLS 2"
 - BEAMS AND COLUMNS 1 1/2"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

MASONRY DESIGN CRITERIA:

- DESIGN COMPRESSIVE STRENGTH OF MASONRY AT 28 DAYS $f'_m = 1500$ PSI
- ALLOWABLE STEEL STRESS $f_s = 24,000$ PSI

CONTINUOUS INSPECTION IS REQUIRED FOR ALL MASONRY WORK

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS AND:

- THE NATIONAL CONCRETE MASONRY ASSOCIATION "SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF LOAD BEARING STRUCTURES."
- ACI 531 "BUILDING CODE REQUIREMENTS FOR REINFORCED MASONRY STRUCTURES."

MATERIALS:

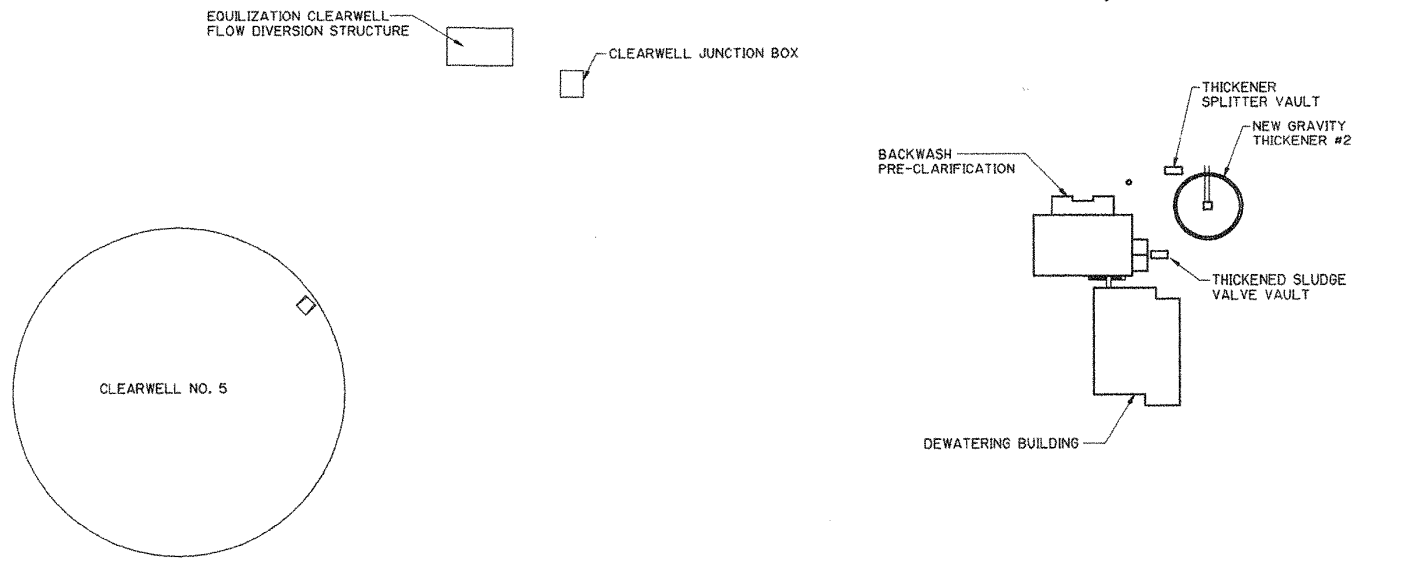
- BLOCK: CONFORM TO ASTM C90 - GRADE N, TYPE II TWO-CELL, 8"x8"x16", 12"x8"x16"
- MORTAR: CONFORM TO ASTM C270, TYPE S. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS - 1800 PSI UTILIZE TYPE II CEMENT AND TYPE S LIME. MASONRY CEMENT WILL NOT BE CONSIDERED.
- GROUT: CONFORM TO C476, COARSE GROUT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS - 2500 PSI
- STEEL: DUR-O-WAL OR EQUAL JOINT REINFORCEMENT AT 16" OC, BOND BEAM AND FILLED CELL REINFORCEMENT AS PER DRAWINGS (ASTM A615, GRADE 60).

CONSTRUCTION:

- ALL FILLED CELLS AND COLUMNS SHALL BE POURED AT LEAST TWO (2) HOURS PRIOR TO POURING LINTEL BLOCK OR TIE BEAMS.
- MAX. CONSTRUCTION HEIGHT OF MASONRY WALLS WITHOUT FILLED CELL OR COLUMN POURS IS TO BE 8'-0". THE CONCRETE FOR FILLED CELLS SHALL BE RODDED OR PUDDLED DURING PLACEMENT TO INSURE COMPLETE FILLING TO THE BLOCK CORE.
- SEE STANDARD DETAILS AND ARCHITECTURAL DRAWINGS FOR LINTEL REQUIREMENTS OVER OPENINGS.
- PROVIDE CLEAN OUT AND INSPECTION BLOCK OUTS IN CELLS CONTAINING REINF.

GEOTECHNICAL REPORT:

- REPORT OF SUBSURFACE EXPLORATION, DATED FEBRUARY 25, 2000, BY ORE PROPERTY SCIENCES.



LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

KEY PLAN

ALLOWABLE SOIL BEARING PRESSURE UTILIZED IN THE DESIGN OF FOUNDATION ARE AS FOLLOWS:

MAT FOUNDATION DEWATERING BUILDING	1500 PSF
MAT FOUNDATION OTHER STRUCTURES	2,000 PSF
SPREAD FOOTING/COLUMN FOOTING	3,000 PSF

ENGINEERED SHOP DRAWINGS FOR STAIRS AND HANDRAIL/GUARDRAIL SYSTEMS SHALL BE BY A REGISTERED ENGINEER AND SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.

STRUCTURAL INDEX LIST

S-1	GENERAL NOTES, KEY PLAN AND STRUCTURAL INDEX LIST	S-15	DEWATERING BUILDING PLAN AT EL 1221.00'
S-2	BACKWASH PRE-CLEARIFICATION FOUNDATION PLAN	S-16	DEWATERING BUILDING PLAN AT EL 1246.00', SECTIONS & DETAILS
S-3	BACKWASH PRE-CLEARIFICATION PLANS	S-17	DEWATERING BUILDING ROOF FRAMING PLAN
S-4	BACKWASH PRE-CLEARIFICATION SECTIONS	S-18	DEWATERING BUILDING ELEVATIONS
S-5	BACKWASH PRE-CLEARIFICATION SECTIONS & DETAILS	S-19	DEWATERING BUILDING DETAILS I
S-6	EQUALIZATION CLEAR WELL FLOW DIVERSION STRUCTURE AND PUMP STATION PLANS AND SECTIONS	S-20	DEWATERING BUILDING DETAILS II
S-7	NEW GRAVITY THICKENER NO. 2 PLAN	S-21	DEWATERING BUILDING DETAILS III
S-8	NEW GRAVITY THICKENER NO. 2 SECTIONS	S-22	DEWATERING BUILDING BEAM & SLAB SCHEDULE
S-9	THICKENER SPLITTER VAULT PLANS AND SECTION	SD-1	STRUCTURAL DETAILS
S-10	THICKENED SLUDGE VALVE VAULT PLANS AND SECTION	SD-2	STRUCTURAL DETAILS
S-11	CLEARWELL JUNCTION BOX PLANS, SECTIONS & DETAIL	SD-3	STRUCTURAL DETAILS
S-12	NEW CHLORINATION FACILITIES CHLORINE SCRUBBER SYSTEM PLAN AND SECTIONS		
S-13	CLEARWELL NO. 5 PLAN, SECTIONS & DETAILS		
S-14	DEWATERING BUILDING PLAN AT EL 1203.67'		

STRUCTURAL LEGEND & SYMBOLS

	STEEL
	ALUMINUM
	CHECKED PLATE
	GRAVEL
	GROUT
	EARTH FILL
	UNDISTURBED EARTH
	CONCRETE
	PRE CAST CONCRETE
	CONCRETE MASONRY
	SOLID FILLED CONCRETE MASONRY

RECORD DRAWING

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BY: *[Signature]* DATE: 10/29/02

CDM

DESIGNED BY: _____	DATE: MAY 2002
DRAWN BY: _____	
SHEET CHK'D BY: _____	
CROSS CHK'D BY: _____	
APPROVED BY: _____	

CDM Camp Dresser & McKee Inc.

CONSULTING ENGINEERING ARCHITECTURE CONSTRUCTION OPERATORS

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES

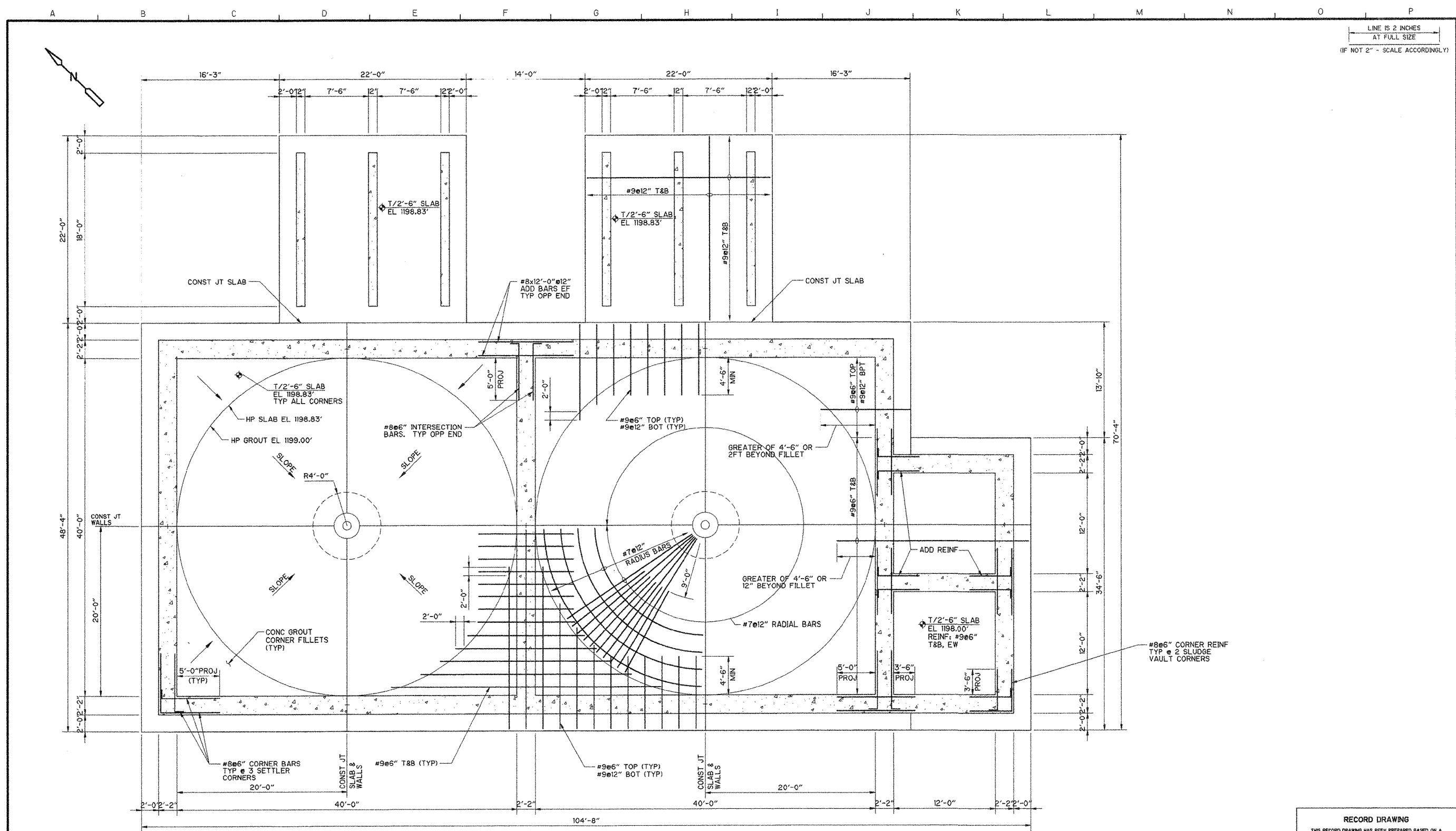
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

GENERAL NOTES, KEY PLAN AND STRUCTURAL INDEX LIST

SHEET NO. **S-1**

PROJECT NO. 6150-27908
FILE NAME: SGN6101
SHEET NO. S-1

0.650.27908\06\51\A

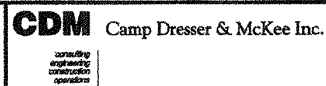


PLAN
3/16" = 1'-0"

RECORD DRAWING
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 BY: *[Signature]* DATE: *5/10/02*
CDM

REV. NO.	DATE	DRWN	CHKD	REMARKS
05/02	JMJ	FAM		RECORD DRAWING
8/00	KM			CONFORMED DRAWING

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: MAY 2000

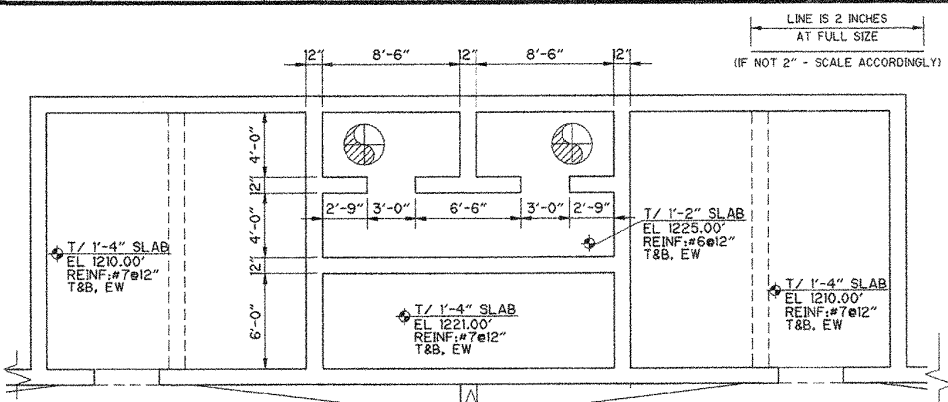
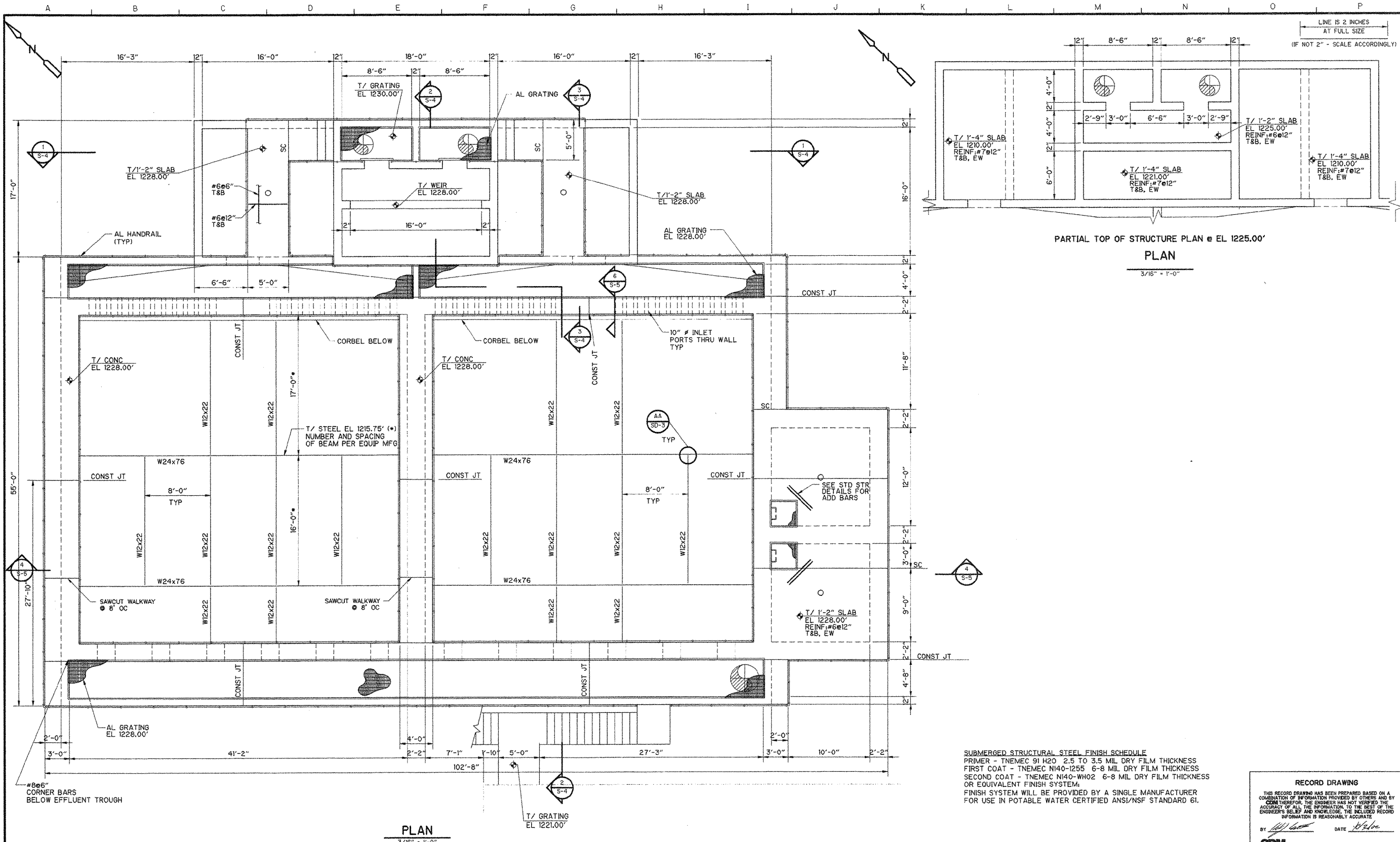


GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

BACKWASH PRE-CLARIFICATION FOUNDATION PLAN

PROJECT NO. 6150-27908
 FILE NAME: SBWPL102
 SHEET NO. **S-2**

0:\GIS\0_27908\uniform\317a.dwg
 Sheet#102
 06/24/00 14:23:37
 15:39:00
 Mapview



PARTIAL TOP OF STRUCTURE PLAN @ EL 1225.00'
PLAN
 3/16" = 1'-0"

SUBMERGED STRUCTURAL STEEL FINISH SCHEDULE
 PRIMER - TNE MEC 91 H2O 2.5 TO 3.5 MIL DRY FILM THICKNESS
 FIRST COAT - TNE MEC N140-1255 6-8 MIL DRY FILM THICKNESS
 SECOND COAT - TNE MEC N140-WH02 6-8 MIL DRY FILM THICKNESS
 OR EQUIVALENT FINISH SYSTEM
 FINISH SYSTEM WILL BE PROVIDED BY A SINGLE MANUFACTURER
 FOR USE IN POTABLE WATER CERTIFIED ANSI/NSF STANDARD 61.

RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY CDM THEREFOR. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION. TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
 BY: *[Signature]* DATE: 10/24/00
CDM

01-6550-2790A-100P-31111
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 05/17/00 14:51:38
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 Remorse

REV. NO.	DATE	DRWN	CHKD	REMARKS
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8/00	KM	KM		CONFORMED DRAWING
8/00	WRM	KM		ADDENDUM NO. 2

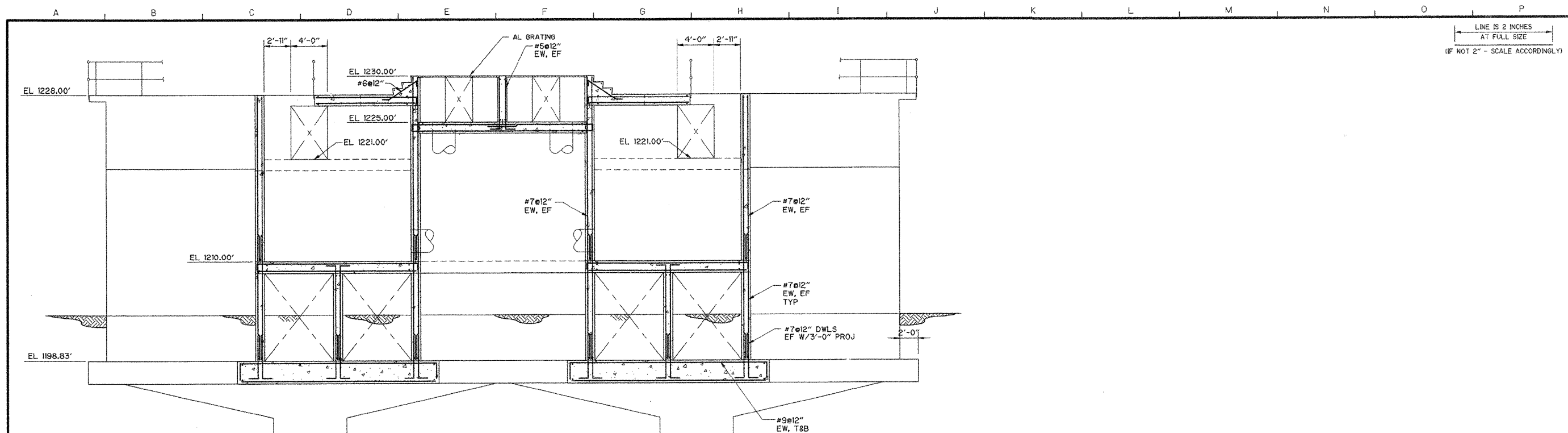
DESIGNED BY: W.MAPLES
 DRAWN BY: B.CURTIS
 SHEET CHK'D BY: K.MOTIWALA
 CROSS CHK'D BY: W.MAPLES
 APPROVED BY: T.VERWEY
 DATE: MAY 2000

CDM Camp Dresser & McKee Inc.
consulting engineering construction

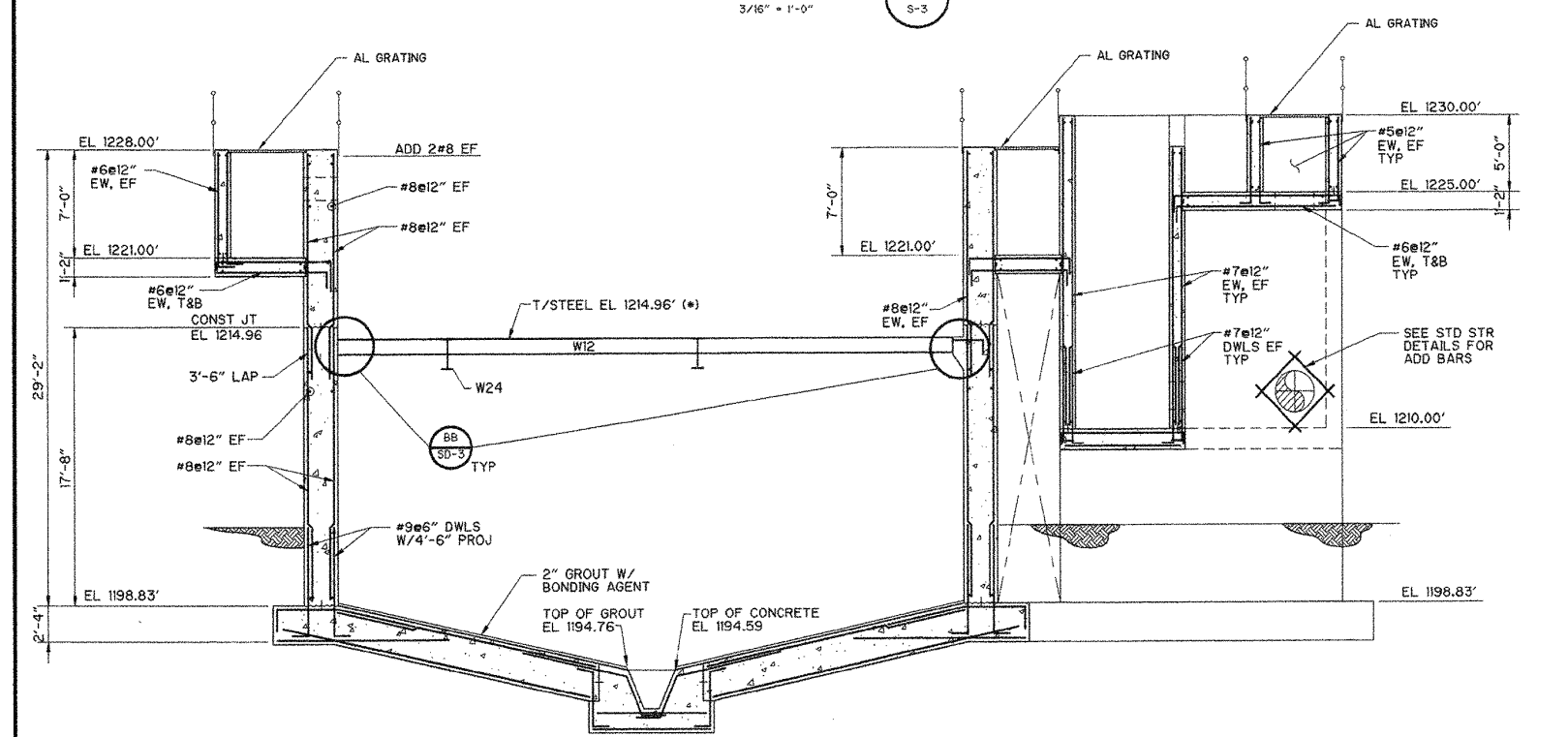
GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

BACKWASH PRE-CLARIFICATION PLANS, SECTIONS & DETAILS

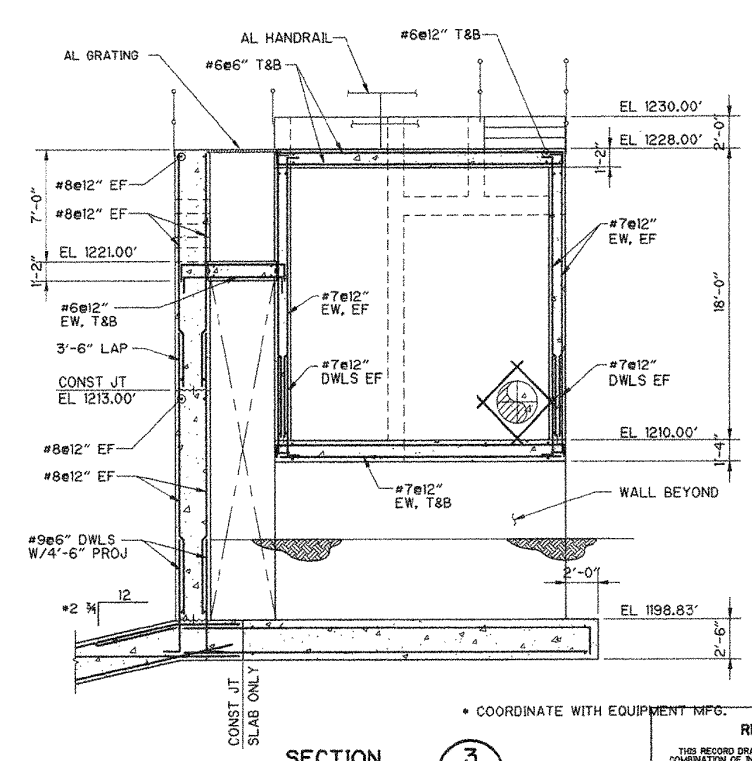
PROJECT NO. 6150-2790B
 FILE NAME: SBWPL103
 SHEET NO. **S-3**



INFLUENT CHAMBER
SECTION 1
3/16" = 1'-0"
S-3



SECTION 2
3/16" = 1'-0"
S-3



SECTION 3
3/16" = 1'-0"
S-3

RECORD DRAWING
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BY: [Signature] DATE: [Date]
CDM

DESIGNED BY:	
DRAWN BY:	
SHEET CHK'D BY:	
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	MAY 2000

CDM Camp Dresser & McKee Inc.
consulting engineering construction operations

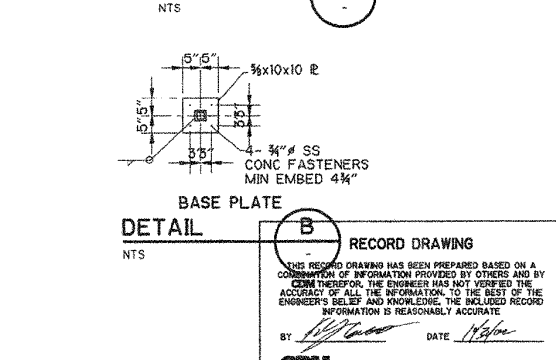
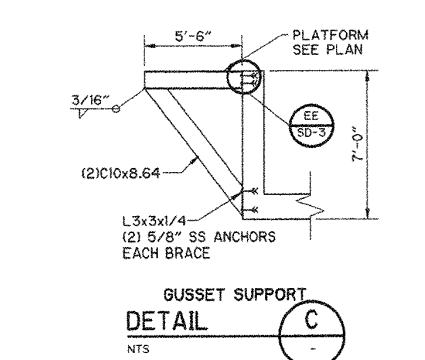
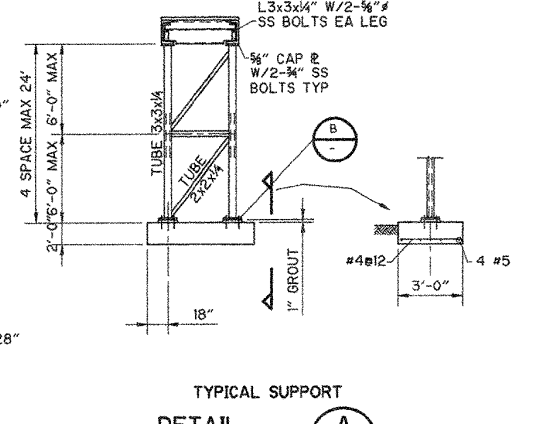
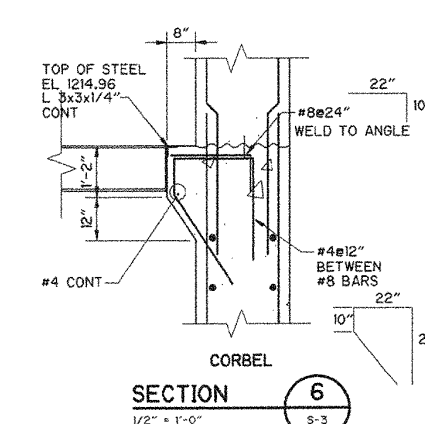
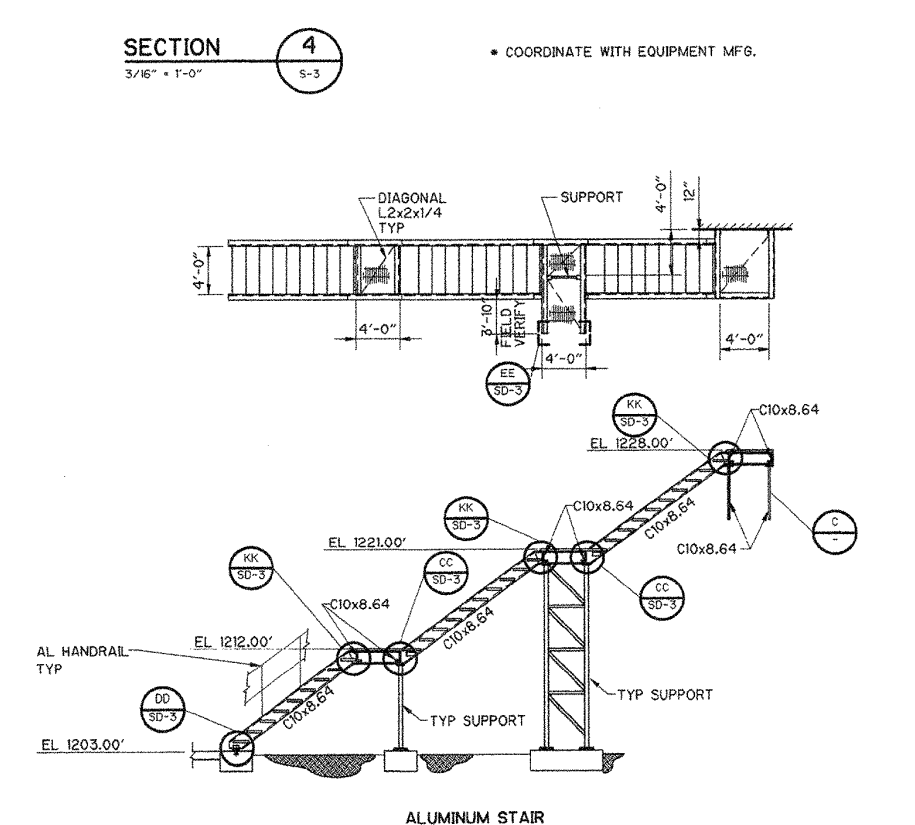
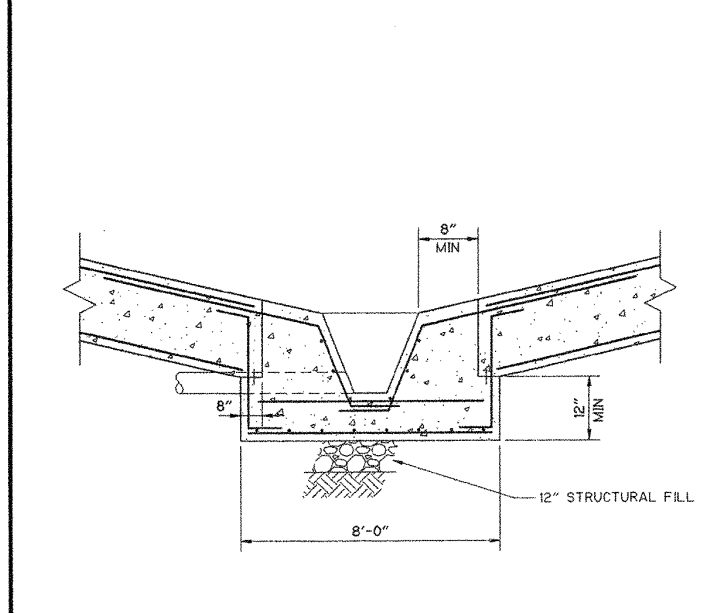
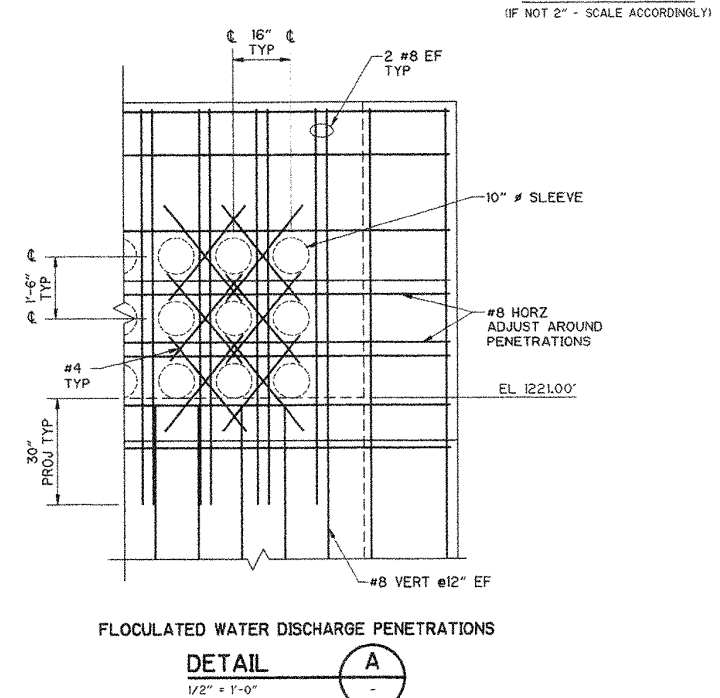
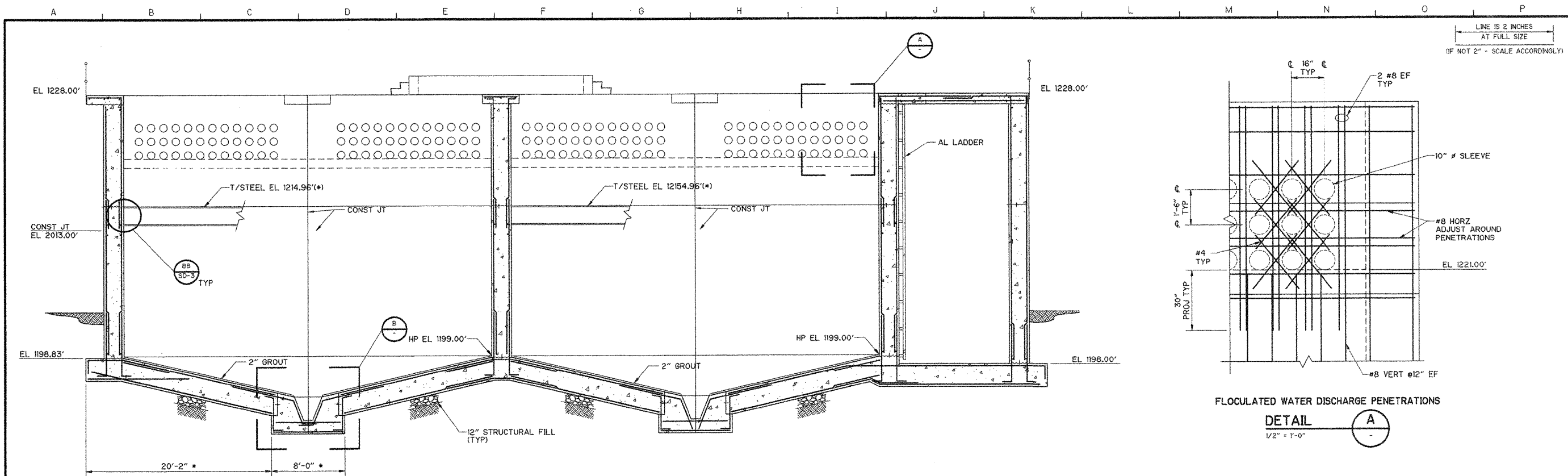
GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY,
CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

BACKWASH PRE-CLARIFICATION
SECTIONS

PROJECT NO.	6150-27908
FILE NAME:	SBWSC104
SHEET NO.	S-4

REV. NO.	DATE	DRWN	CHKD	REMARKS
06/02	JMJ	FAM		RECORD DRAWING
8/00		KM		CONFORMED DRAWING

06/24/00 11:27:35
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 88M3C104
 06/24/00 11:27:35
 76311
 88M3C104



RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY CDM THEREFOR. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION. THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
 BY: [Signature] DATE: 11/20/00
CDM

REV. NO.	DATE	DRWN	CHKD	REMARKS
08/02	JMJ	FAM		RECORD DRAWING
8/00		KM		CONFORMED DRAWING
8/00	WRM	KM		GCP&D PERMIT REQUIREMENT MODIFICATION
8/00	WRM	KM		ADDENDUM NO. 2

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: MAY 2000

CDM Camp Dresser & McKee Inc.

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

BACKWASH PRE-CLARIFICATION SECTIONS & DETAILS

PROJECT NO. 6150-27908
 FILE NAME: SBWSC205
 SHEET NO. **S-5**

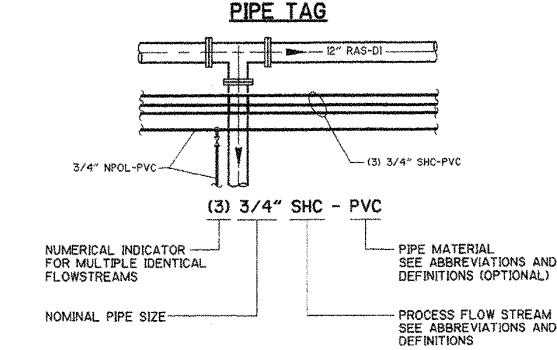
04.650_27908.dwg
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LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

PIPING SYMBOLS

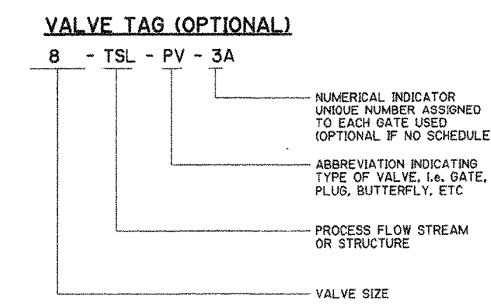
DOUBLE LINE SYMBOL	SINGLE LINE SYMBOL	FEATURE
		PLAIN END x PLAIN END PIPE COUPLING
		PLAIN END x PLAIN END PIPE COUPLING RESTRAINED
		FLANGE x PLAIN END PIPE COUPLING
		FLEXIBLE COUPLING OR EXPANSION JOINT (SLEEVE TYPE)
		FLEXIBLE COUPLING OR EXPANSION JOINT (BELLOW TYPE)
		COUPLING FOR GROOVED END JOINTS, (F) FLEXIBLE (R) RIGID
		FLANGE GUARD
		FLANGE FILLER
		UNION
		QUICK CONNECT COUPLING
		HOSE COUPLING
		WELDED JOINT
		FLANGED JOINT SIMPLIFIED REPRESENTATION
		FLANGED JOINT COMPLEX REPRESENTATION
		MECHANICAL JOINT SIMPLIFIED REPRESENTATION
		MECHANICAL JOINT COMPLEX REPRESENTATION
		MECHANICAL JOINT RESTRAINED
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT SIMPLIFIED REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT COMPLEX REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT RESTRAINED
		BALL JOINT
		DIRECTION OF FLOW

- #### PIPE AND FITTING SYMBOL NOTES
- SIMPLIFIED JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR AND EXTERIOR PIPING DRAWINGS.
 - BOTH SIMPLIFIED AND COMPLEX JOINT REPRESENTATIONS MAY BE SHOWN ON THE DRAWINGS.
 - UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS PIPE AND FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS.



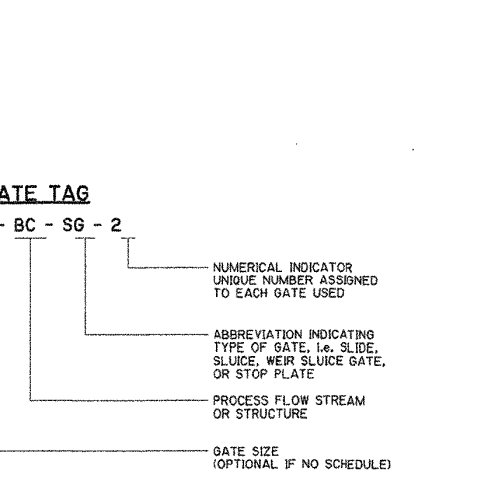
VALVE SYMBOLS

SYMBOL	FEATURE
	UNCLASSIFIED, TYPE AS SHOWN ON THE DRAWINGS ADJACENT TO SYMBOL
	FLOW METER
	TELESCOPING VALVE
	VALVE WITH HOSE END
	GATE VALVE
	KNIFE GATE VALVE
	GLOBE VALVE
	BALL VALVE
	3-WAY BALL VALVE
	4-WAY BALL VALVE
	CONE VALVE
	NEEDLE VALVE
	PINCH VALVE
	DIAPHRAGM VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	3-WAY PLUG VALVE
	4-WAY PLUG VALVE
	CHECK VALVE, GENERAL SYMBOL
	BALL CHECK VALVE
	DOUBLE DOOR CHECK VALVE
	ANGLE VALVE
	SOLENOID VALVE
	THREE WAY SOLENOID VALVE
	THREE WAY SOLENOID VALVE
	MOTOR OPERATED VALVE
	FLAP VALVE
	SHEAR GATE
	MUD VALVE
	FLOOR DRAIN
	ECCENTRIC REDUCER OR REDUCING BUSHING
	CONCENTRIC REDUCER OR REDUCING BUSHING
	Y-STRAINER
	CALIBRATION CYLINDER
	AIR RELEASE VALVE



GATE SYMBOLS

PLAN	FEATURE
	SLUICE GATE (SG)
	SLIDE GATE (SLG)
	WEIR SLIDE GATE (WSLG)
	STOP PLATE (SP)
	SLUICE GATE (SG)
	SLIDE GATE (SLG)
	WEIR SLIDE GATE (WSLG)



ABBREVIATIONS

PIPE NOMENCLATURE	PIPE MATERIALS
BF BLIND FLANGE	AL ALUMINUM
BSP BLACK STEEL PIPE	BRZ BRASS
CIP CAST IRON PIPE	BRZ BRASS
CUP COPPER PIPE	CI CAST IRON
DJ DUCTILE IRON PIPE	CM CORRUGATED METAL
FPT FEMALE PIPE THREAD	CPVC CHLORINATED POLYVINYLCHLORIDE PIPE
FLG FLANGED	CJ COPPER
GALVSP GALVANIZED STEEL PIPE	DI DUCTILE IRON
POLYP POLYPROPYLENE	EY EPOXY
RCCP REINFORCED CONCRETE CYLINDER PIPE	FRR FIBERGLASS REINFORCED PLASTIC
RCP REINFORCED CONCRETE PIPE	FRR FIBERGLASS RUBBER(ton)
SS STAINLESS STEEL PIPE	FALVS GALVANIZED STEEL
TRRP THERMOPLASTIC REINFORCED PIPE	HDPE HIGH DENSITY POLYETHYLENE
	PE POLYETHYLENE
	PCCP PRESSURE CONCRETE CYLINDER PIPE
	PTFE POLYTETRAFLUOROETHYLENE
	PVC POLYVINYL CHLORIDE
	RC REINFORCED CONCRETE
	RH RUBBER HOSE
	SS STAINLESS STEEL
	STL STEEL

VALVE NOMENCLATURE	PIPE MATERIALS
ARV AIR RELEASE VALVE	MJ MECHANICAL JOINT
BCV BALL CHECK VALVE	MV MUD VALVE
BFV BUTTERFLY VALVE	PBAV PLASTIC BALL VALVE
BPRV BACK PRESSURE REGULATING VALVE	PCV PRESSURE CONTROL VALVE
BV BALL VALVE	PE PLAIN END
COMP JT COMPRESSION JOINT	POJ PUSH ON JOINT
CV-A CHECK VALVE (AIR CUSHION)	PRV PRESSURE RELIEF VALVE
CV-H CHECK VALVE (HYDRAULIC CUSHION)	PV PLUG VALVE
DV DIAPHRAGM VALVE	RJ RESTRAINED JOINT
EVA ELECTRICAL GEAR ACTUATOR	SCV SILENT CHECK VALVE
EXP JT EXPANSION JOINT	SJ SOLDERED JOINT
FAC FLANGED ADAPTER COUPLING	SLV SOLENOID VALVE
FB FLOOR BOX (BUSHING TYPE)	THD THREADED
FN FIRE HYDRANT	TS TELESCOPING VALVE
FS FLOOR STAND	TUBY TRUE UNION BALL VALVE
GOV GLOBE VALVE	UNION UNION
GV GATE VALVE	VB VALVE BOX
HFAC HARNESSSED FLANGED ADAPTER COUPLING	VC VICTALIC COUPLING (SHOULDERED ENDS)
HVA HYDRAULIC VALVE ACTUATOR	WAP WALL PIPE
INSTR INSTRUMENT (STATION)	WJ WELDED JOINT
	WP WELDED PIPE
	WSV WALL SLEEVE

EQUIPMENT NOMENCLATURE	PIPE MATERIALS
CCS CHLORINE CYLINDER SCALE	PFU POLYMER FEED UNIT
CHL CHLORINATOR	PTP POLYMER TRANSFER PUMP
FDU FLOCCULATOR DRIVE UNIT	PWM POTABLE WATER METER
FP FILTER PRESS	ROT ROTAMETER
IFM INFLUENT FLOW METERS	SCDU SLUDGE CONDITIONER DRIVE UNIT
MSG MOTORIZED SLUICE GATES	SCT SLUDGE CONDITIONING TANK
OPER OPERATOR	SFP SLUDGE FEED PUMP
PAC PLANT AIR COMPRESSOR	SMP SUMP PUMPS
PAW PRESS ACID WASH	STP SLUDGE TRANSFER PUMP
	TDU THICKENER DRIVE UNIT

PROCESS FLOW STREAM ABBREVIATIONS	PIPE MATERIALS
BC BACKWASH CLARIFICATION	PFU POLYMER FEED UNIT
CCS CHLORINE CYLINDER SCALE	PF PRESS FILTRATE
CG CHLORINE GAS	POLY1 POLYMER 1
CHL CHLORINATOR	POLY2 POLYMER 2
CSL CHLORINE SOLUTION LINE	PTP POLYMER TRANSFER PUMP
D DRAIN	PWM POTABLE WATER METER
DS DIAPHRAGM SQUEEZE	PW PLANT WATER
FECL FERRIC CHLORIDE	ROT ROTAMETER
LS LIME SLURRY	SLD SLUDGE
MSG MOTORIZED SLUICE GATE	SFF SLUDGE FEED
OPER OPERATOR	SFP SLUDGE FEED PUMP
PAC PLANT AIR COMPRESSOR	SMP SUMP PUMPS
PAW PRESS ACID WASH	TKD TANK DRAIN
	TSL THICKENED SLUDGE

24429m01.dwg 4600 74520

REV. NO.	DATE	DRWN	CHKD	REMARKS
08/02	JMJ	FAM		RECORD DRAWING
8/19/02	TMM	FAM		CONFORMED DRAWINGS

DESIGNED BY: F. MILLER
DRAWN BY: T. MORGAN
SHEET CHK'D BY: L. THURN
CROSS CHK'D BY: K. COMSTOCK
APPROVED BY: K. COMSTOCK
DATE: AUGUST 2000

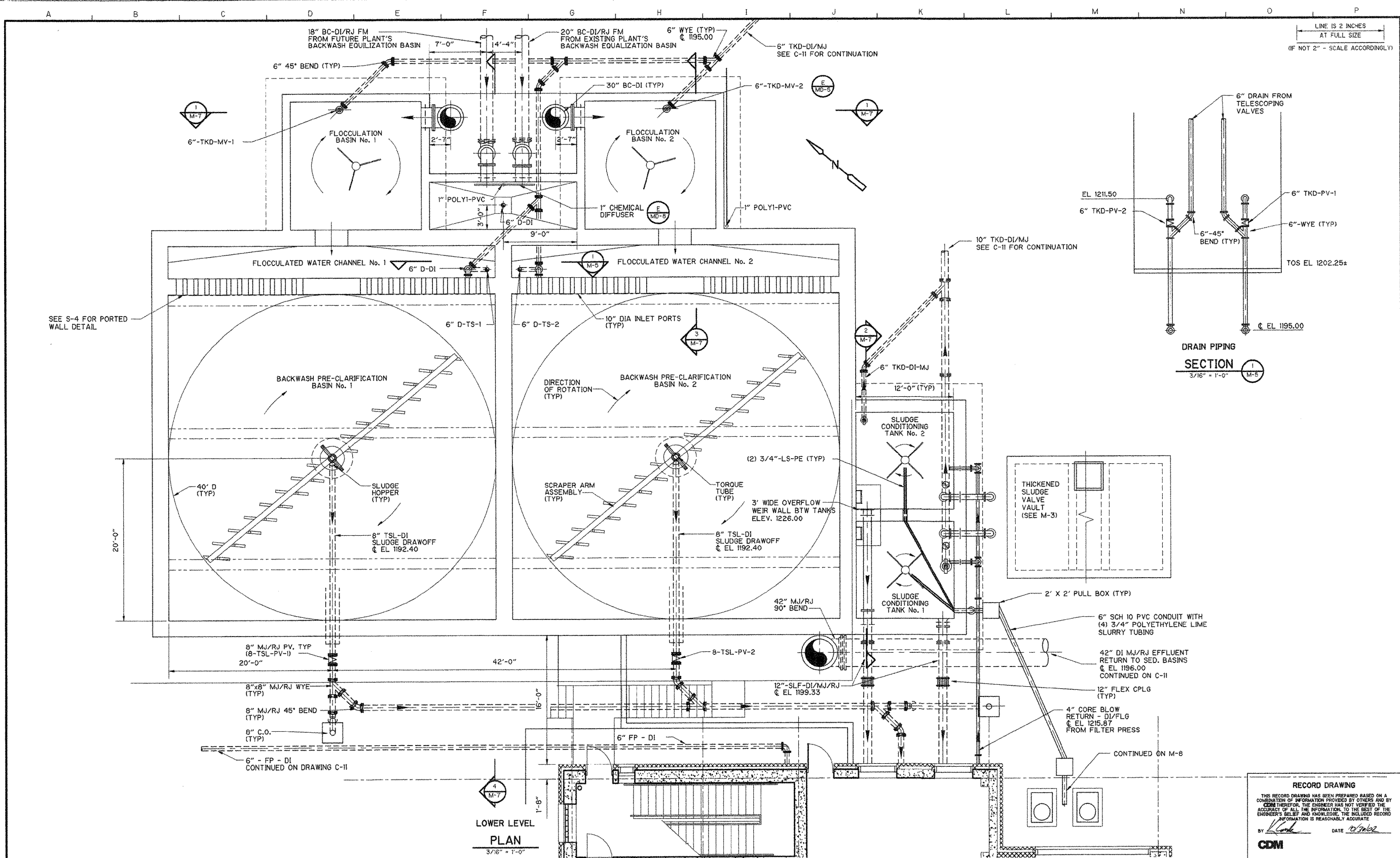
CDM Camp Dresser & McKee Inc.

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY,
CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

MECHANICAL LEGEND

PROJECT NO. 6150-2790	FILE NAME: 2790m01.dwg
SHEET NO. M-1	

RECORD DRAWING
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BY: [Signature] DATE: 8/20/00
CDM



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 BY: *[Signature]* DATE: 12/20/02
CDM

REV. NO.	DATE	DRWN	CHKD	REMARKS
08/02	JMJ	FAM		RECORD DRAWING
8/10/00	TMM	FAM		CONFORMED DRAWINGS
7/21/00	TMM	FAM		ADDENDUM NO. 2
7/6/00	TMM	FAM		ADDENDUM NO. 1

DESIGNED BY: S. HARDY
 DRAWN BY: MJM/TMM
 SHEET CHK'D BY: S. HARDY
 CROSS CHK'D BY: K. COMSTOCK
 APPROVED BY: K. COMSTOCK
 DATE: AUGUST 2000

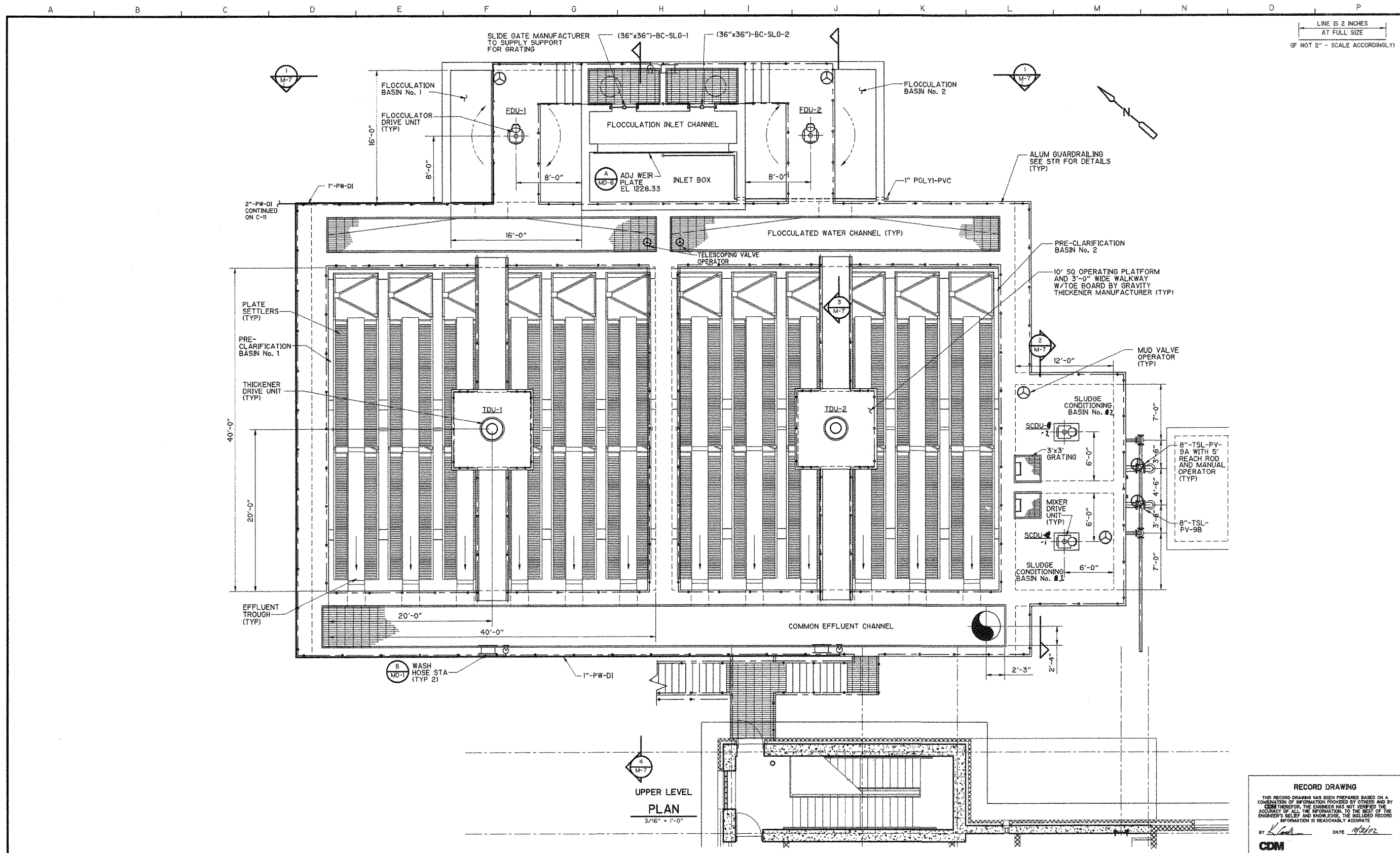
CDM Camp Dresser & McKee Inc.

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

BACKWASH PRE-CLARIFICATION LOWER LEVEL PLAN

PROJECT NO. 6150-27908
 FILE NAME: 27908M05.dwg
 SHEET NO. **M-5**

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REV. NO.	DATE	DRWN	CHKD	REMARKS
08/02	JMJ	FAM		RECORD DRAWING
8/10/00	TMM	FAM		CONFORMED DRAWINGS

DESIGNED BY: S. HARDY
 DRAWN BY: T. MORGAN
 SHEET CHK'D BY: S. HARDY
 CROSS CHK'D BY: K. COMSTOCK
 APPROVED BY: K. COMSTOCK
 DATE: AUGUST 2000

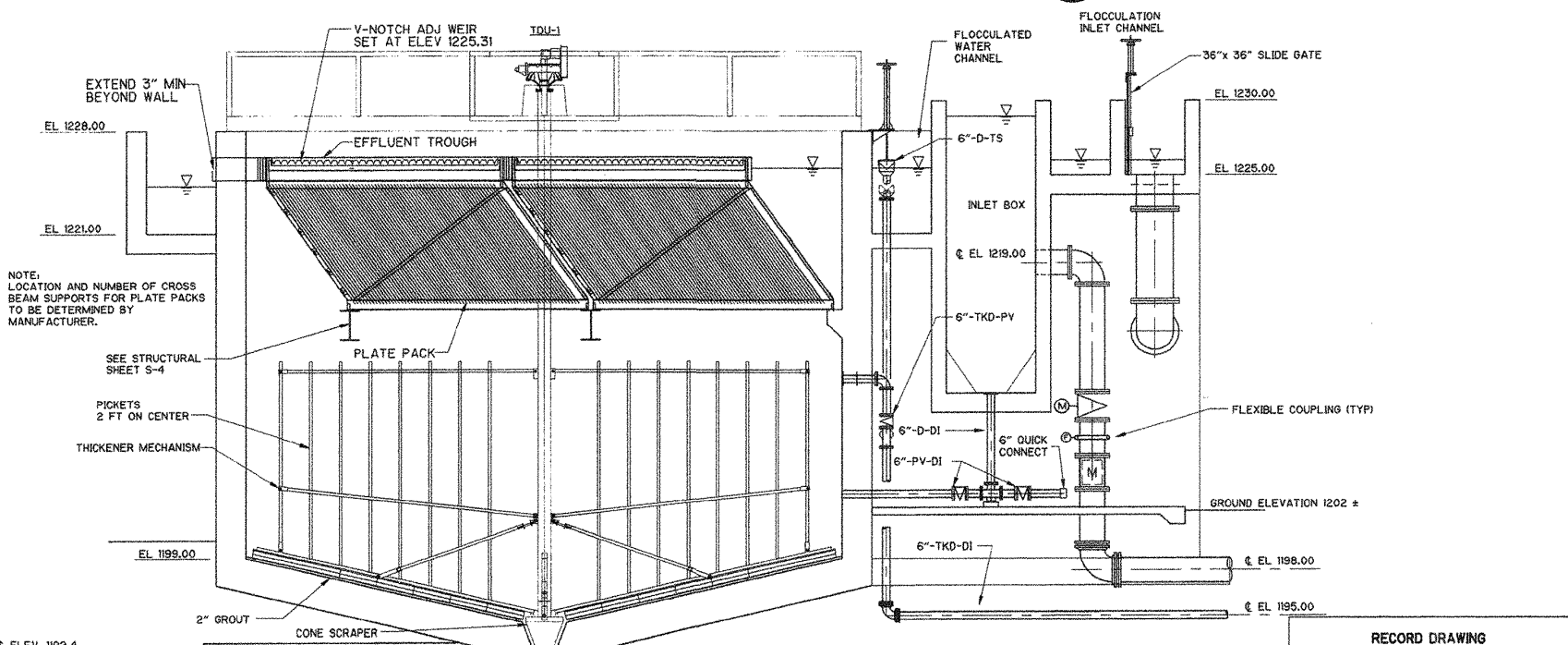
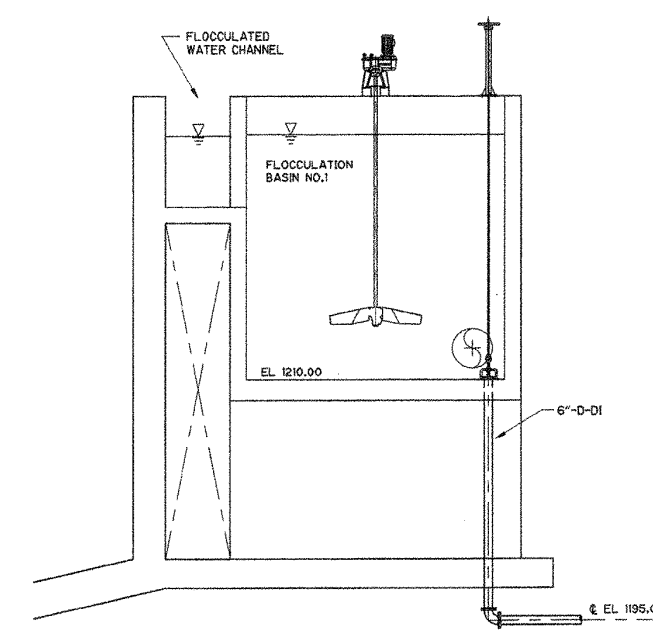
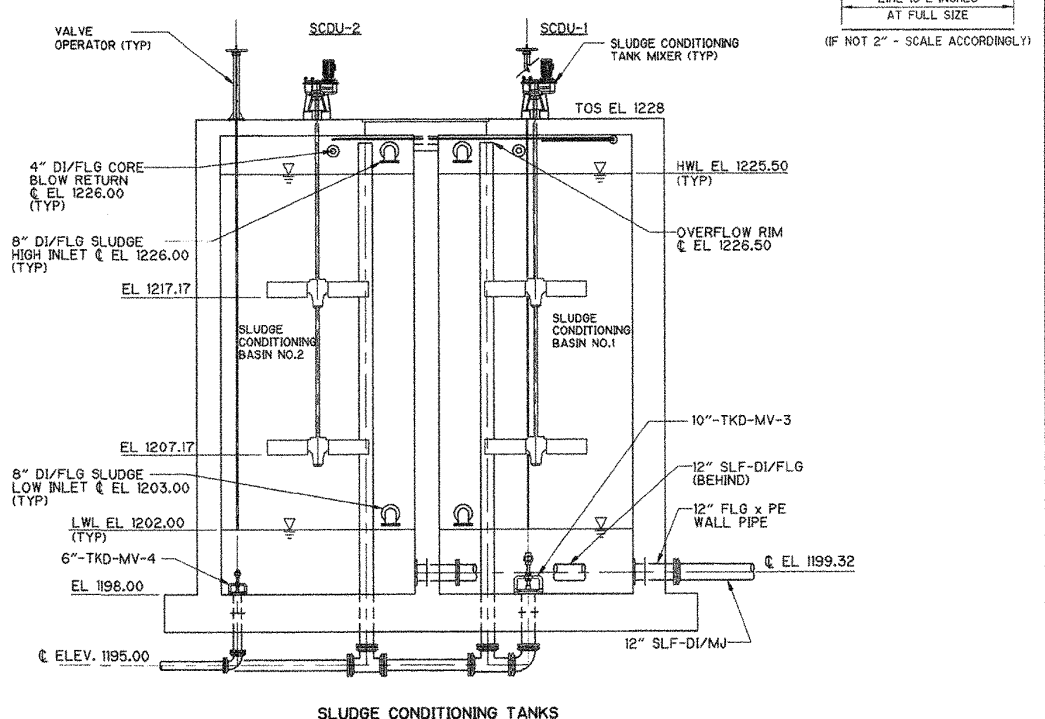
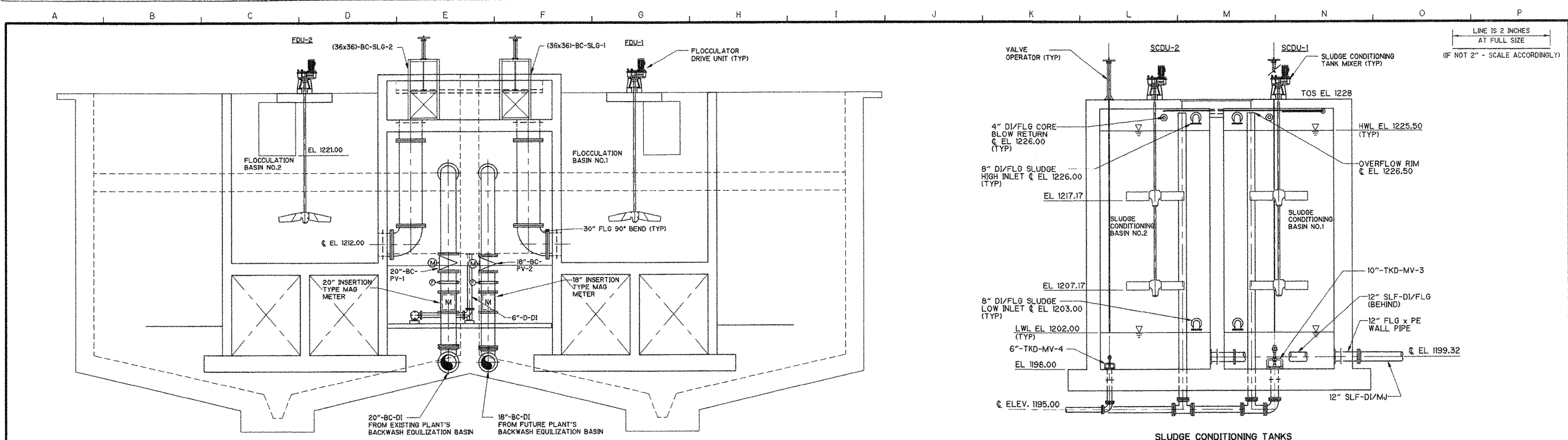
CDM Camp Dresser & McKee Inc.
consulting engineers architects

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
**LANIER FILTER PLANT RESIDUALS HANDLING FACILITY,
 CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS**

**BACKWASH PRE-CLARIFICATION
 UPPER LEVEL PLAN**

PROJECT NO.	6150-27908
FILE NAME:	27908M06.dwg
SHEET NO.	M-6

RECORD DRAWING
 THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY CDM THEREFOR. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE. THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
 BY: *[Signature]* DATE: 10/2/02
CDM



RECORD DRAWING
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 BY: *[Signature]* DATE: 8/23/00
CDM

REV. NO.	DATE	DRWN	CHKD	REMARKS
08/02	JMJ	FAM		RECORD DRAWING
8/10/00	TMM	FAM		CONFORMED DRAWINGS

DESIGNED BY: S. HARDY
 DRAWN BY: TMM
 SHEET CHK'D BY: L. THURN
 CROSS CHK'D BY: KKC
 APPROVED BY: K. COMSTOCK
 DATE: AUGUST 2000

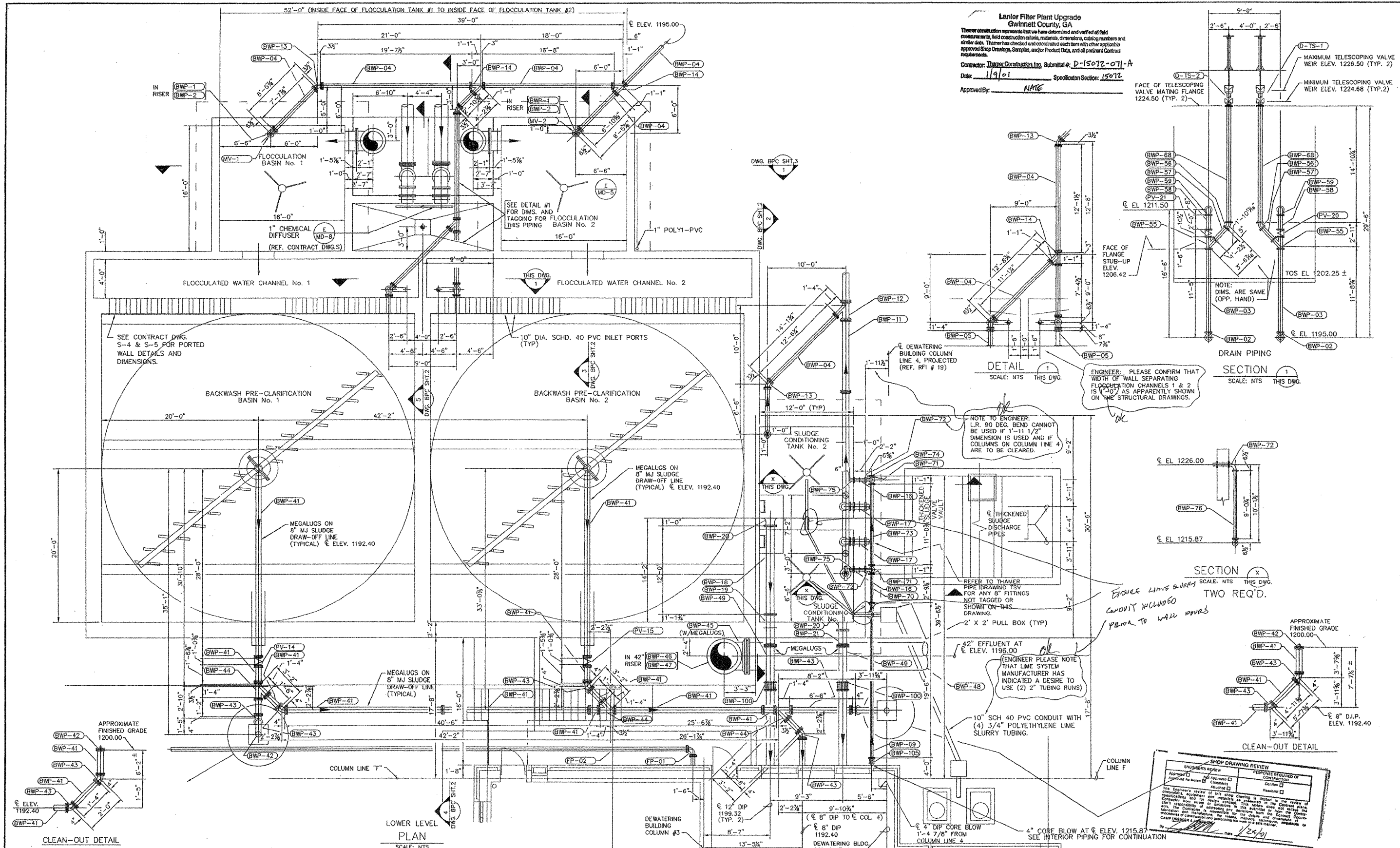
CDM Camp Dresser & McKee Inc.

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

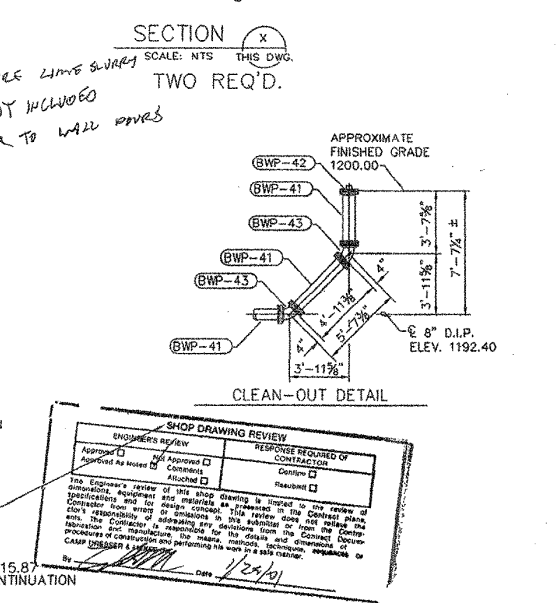
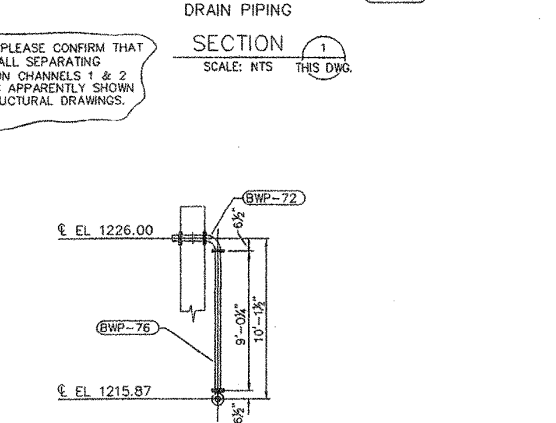
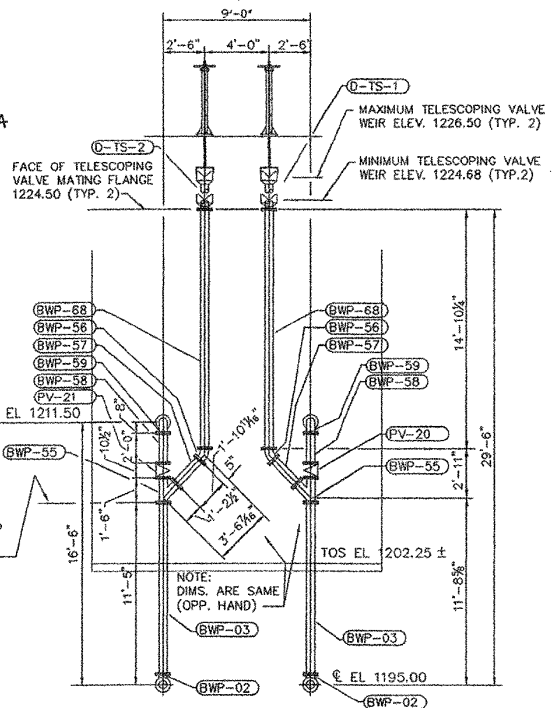
BACKWASH PRE-CLARIFICATION SECTIONS

PROJECT NO. 6150-27908
 FILE NAME: 27908M07.dwg
 SHEET NO. **M-7**

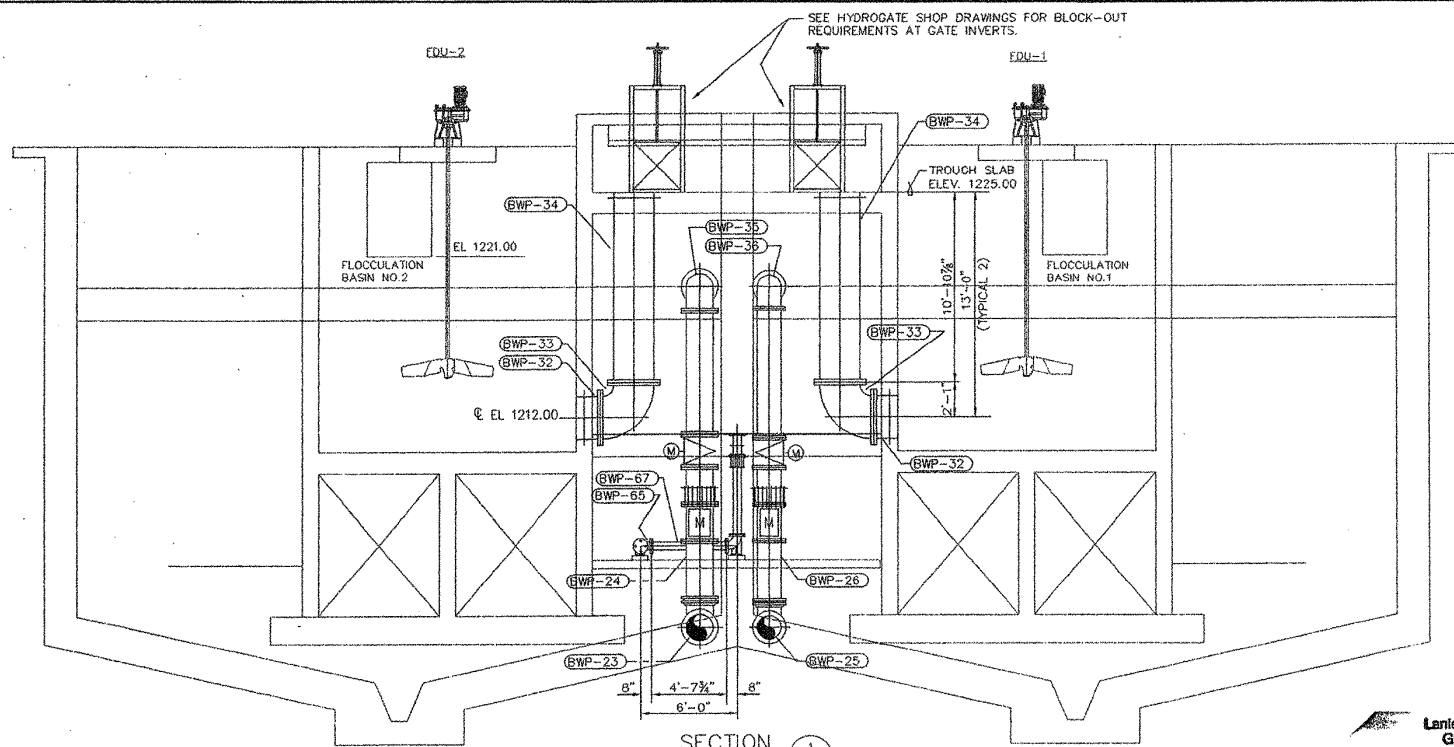
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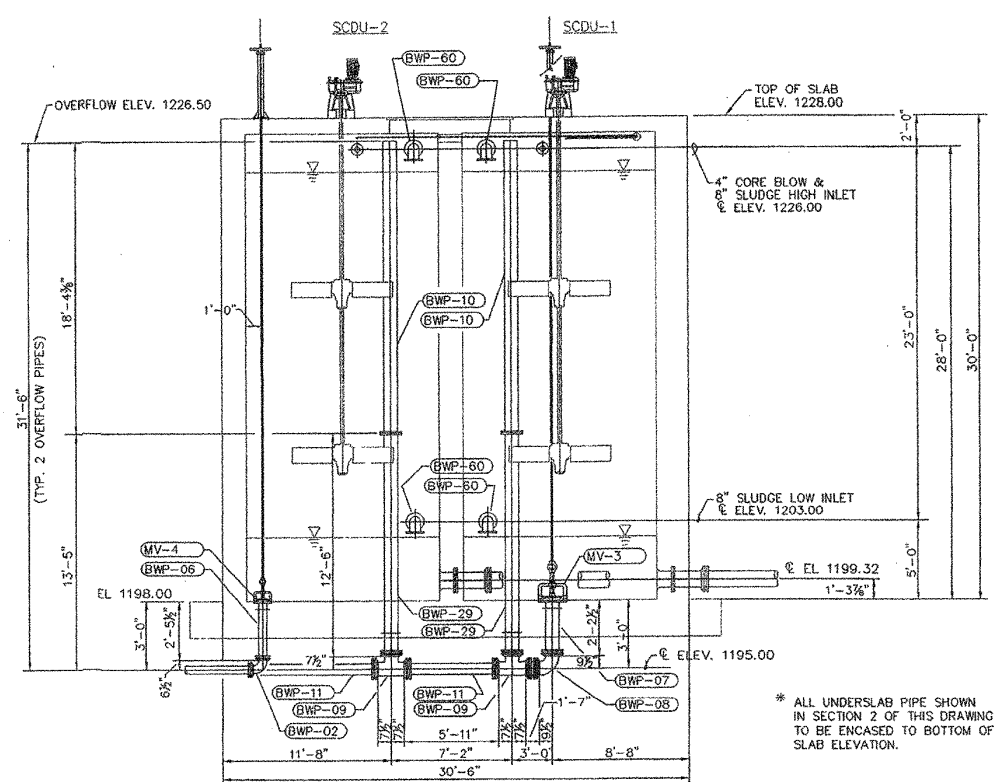
Lanier Filter Plant Upgrade
 Gwinnett County, GA
 Thamer Construction represents that we have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data. Thamer has checked and coordinated each item with other applicable approved Shop Drawings, Samples, and/or Product Data, and all pertinent Contract requirements.
 Contractor: Thamer Construction, Inc. Submittal #: D-15072-071-A
 Date: 1/9/01 Specification Section: 15072
 Approved By: NAME



REV. DATE DRAWN CH'D _____ _____ _____	SCALE: DRWN. BY: DATE: JAN. 8, 2001 REF. DWGS.: M-5	THAMER THAMER CONSTRUCTION, INC. 46 TECHNOLOGY PARKWAY SOUTH NORCROSS, GA 30092 (770) 447-1918 (770) 447-1932	PROJECT NAME GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS	DRAWING NAME BACKWASH PRE-CLARIFICATION LOWER PLAN	JOB NO.: 96 FILE NAME: 96BPCsh1 DRAWING NO. BPC SHEET 1 OF 3
---	--	---	--	---	---

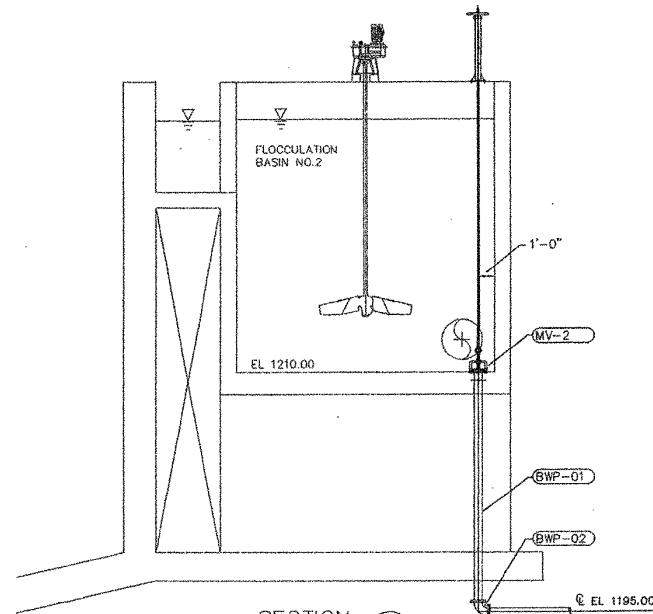


SECTION 1
SCALE: NTS DWG BPC SHT.1

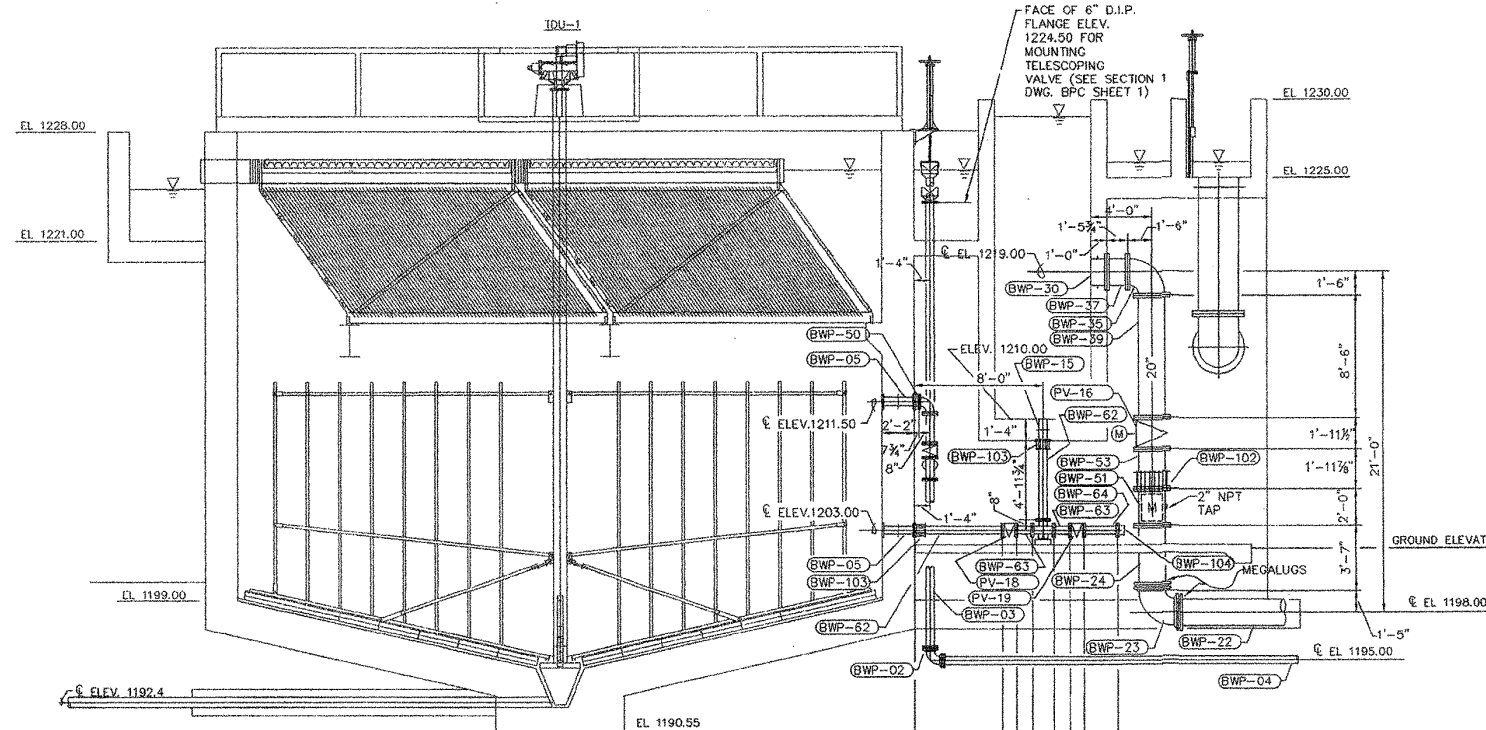


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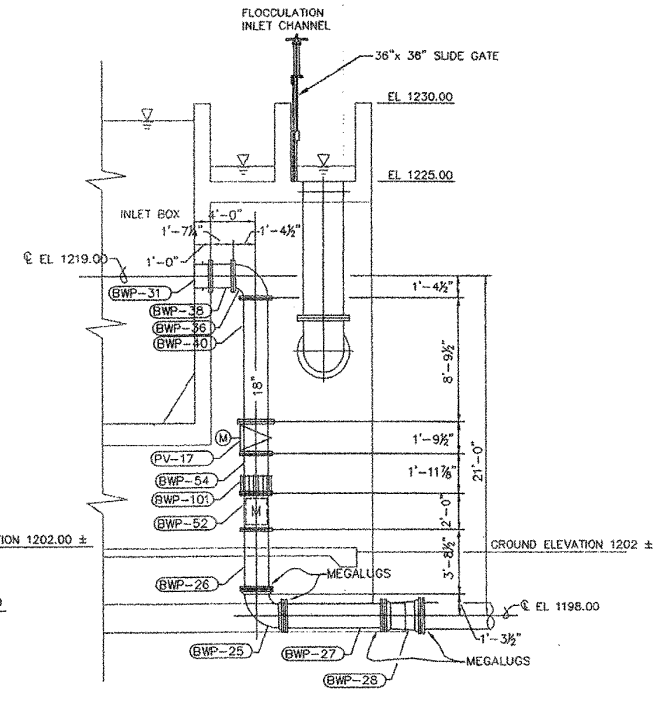
Lanier Filter Plant Upgrade
Gwinnett County, GA
Thamer construction represents that we have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data. Thamer has checked and coordinated each item with other applicable approved Shop Drawings, Samples, and/or Product Data, and all pertinent Contract requirements.
Contractor: Thamer Construction, Inc. Submittal #: D-15072-0711-A
Date: 1/19/21 Specification Section: 15072
Approved By: NRK



SECTION 3
SCALE: NTS DWG BPC SHT.1



SECTION 4
SCALE: NTS DWG BPC SHT.1



SECTION 5
SCALE: NTS DWG BPC SHT.1

NOTES:
1. DIMENSIONS ADJACENT ARE BASED ON USING COMPACT FITTINGS. BEFORE CUTTING PIPE, THAMER FIELD VERIFY THAT COMPACT FITTINGS WERE ACTUALLY SHIPPED, AND THAT FULL LENGTH FITTINGS WERE NOT SUBSTITUTED FOR EXPEDIENCY.

REV.	DATE	DRAWN	CHK'D

SCALE: NTS
DRWN. BY: PG
DATE: JAN. 8, 2001
REF. DWGS.: M-7

THAMER CONSTRUCTION, INC.
46 TECHNOLOGY PARKWAY SOUTH
NORCROSS, GA 30092
(770) 447-1918 (770) 447-1952

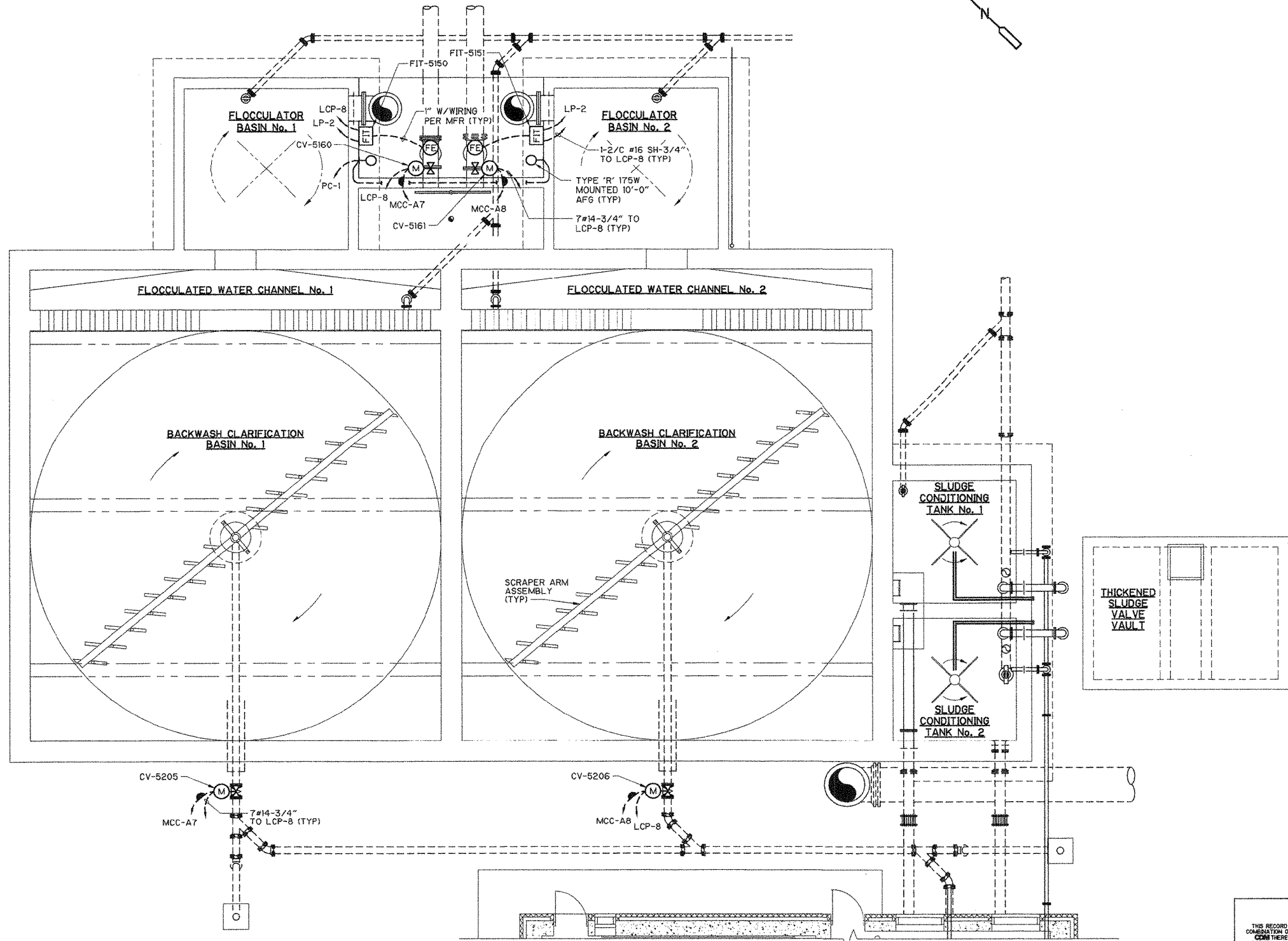
PROJECT NAME
GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY,
CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

DRAWING NAME
BACKWASH PRE-CLARIFICATION SECTIONS

JOB NO.: 96
FILE NAME: 96BPCsh12
DRAWING NO.
BPC
SHEET 2 OF 3

A B C D E F G H I J K L M N O P

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)



PLAN
SCALE: 3/16" = 1'-0"

RECORD DRAWING
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY CDM THEREFOR. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE. THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.
BY: *[Signature]* DATE: 10/20/02
CDM

08/02	JMJ	FAM	RECORD DRAWING
8/17/00	SJP	DCN	CONFORMED DRAWINGS
REV. NO.	DATE	DRWN	CHKD
			REMARKS

DESIGNED BY: D. NICHOLSON
DRAWN BY: R. CARTER
SHEET CHK'D BY: J. SANCHEZ
CROSS CHK'D BY: COMSTOCK
APPROVED BY: W. NELSON
DATE: AUGUST 2000

CDM Camp Dresser & McKee Inc.

GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

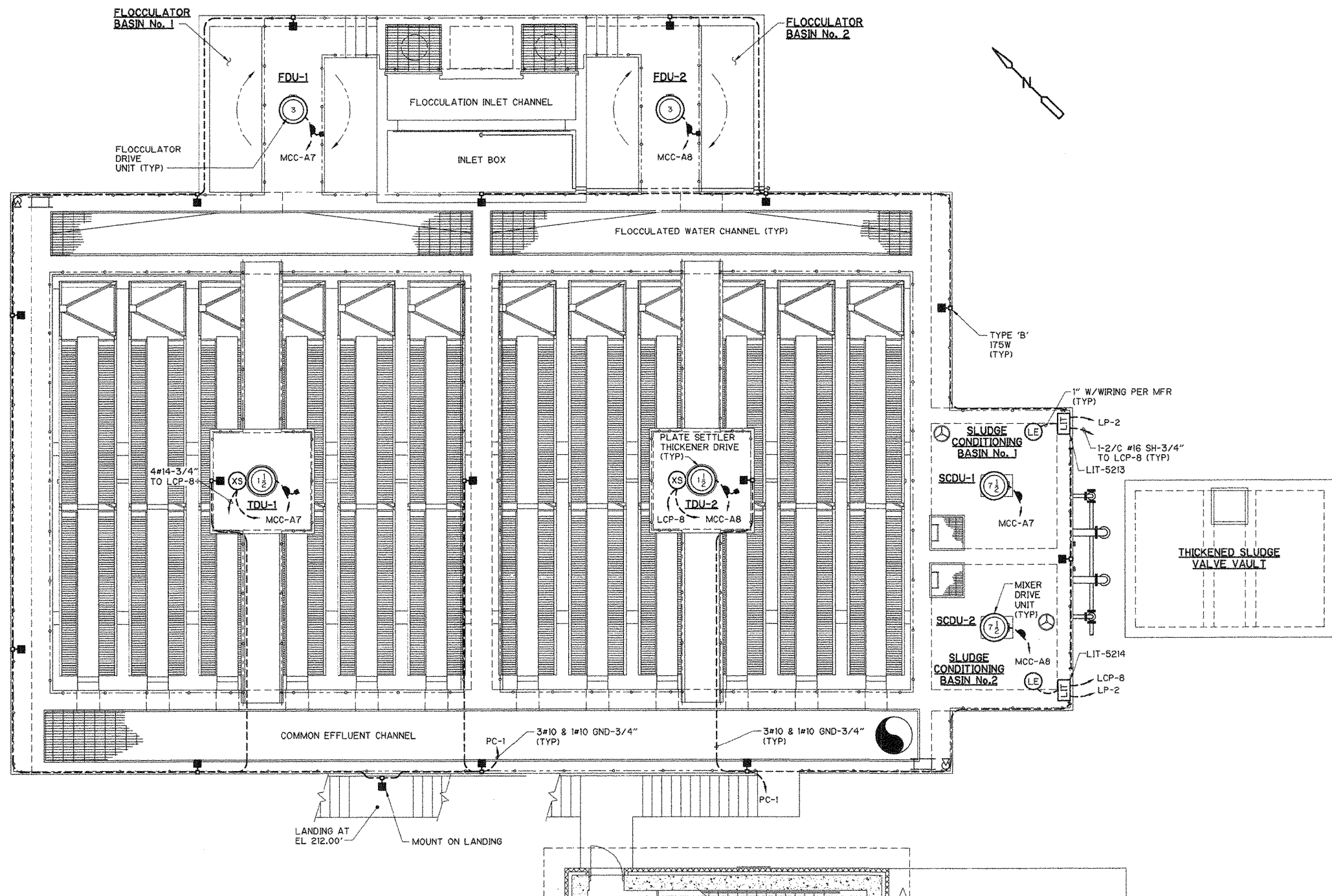
BACKWASH CLARIFICATION LOWER LEVEL ELECTRICAL PLAN

PROJECT NO. 6150-27908
FILE NAME: EBWSHP11
SHEET NO. **E-17**

01/08/02 2:59:48 08/17/00 11:47:36 ebwshp11

A B C D E F G H I J K L M N O P

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)



PLAN
SCALE: 3/16" = 1'-0"

RECORD DRAWING
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BY: *[Signature]* DATE: *10/1/00*
CDM

08/02	JMJ	FAM	RECORD DRAWING	
8/17/00	SJP	DCN	CONFORMED DRAWINGS	
7/21/00	SJP	DCN	ADDENDUM NO. 2	
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. NICHOLSON
DRAWN BY: R. CARTER
SHEET CHK'D BY: J. SANCHEZ
CROSS CHK'D BY: COMSTOCK
APPROVED BY: W. NELSON
DATE: AUGUST 2000

CDM Camp Dresser & McKee Inc.
consulting engineering construction operators

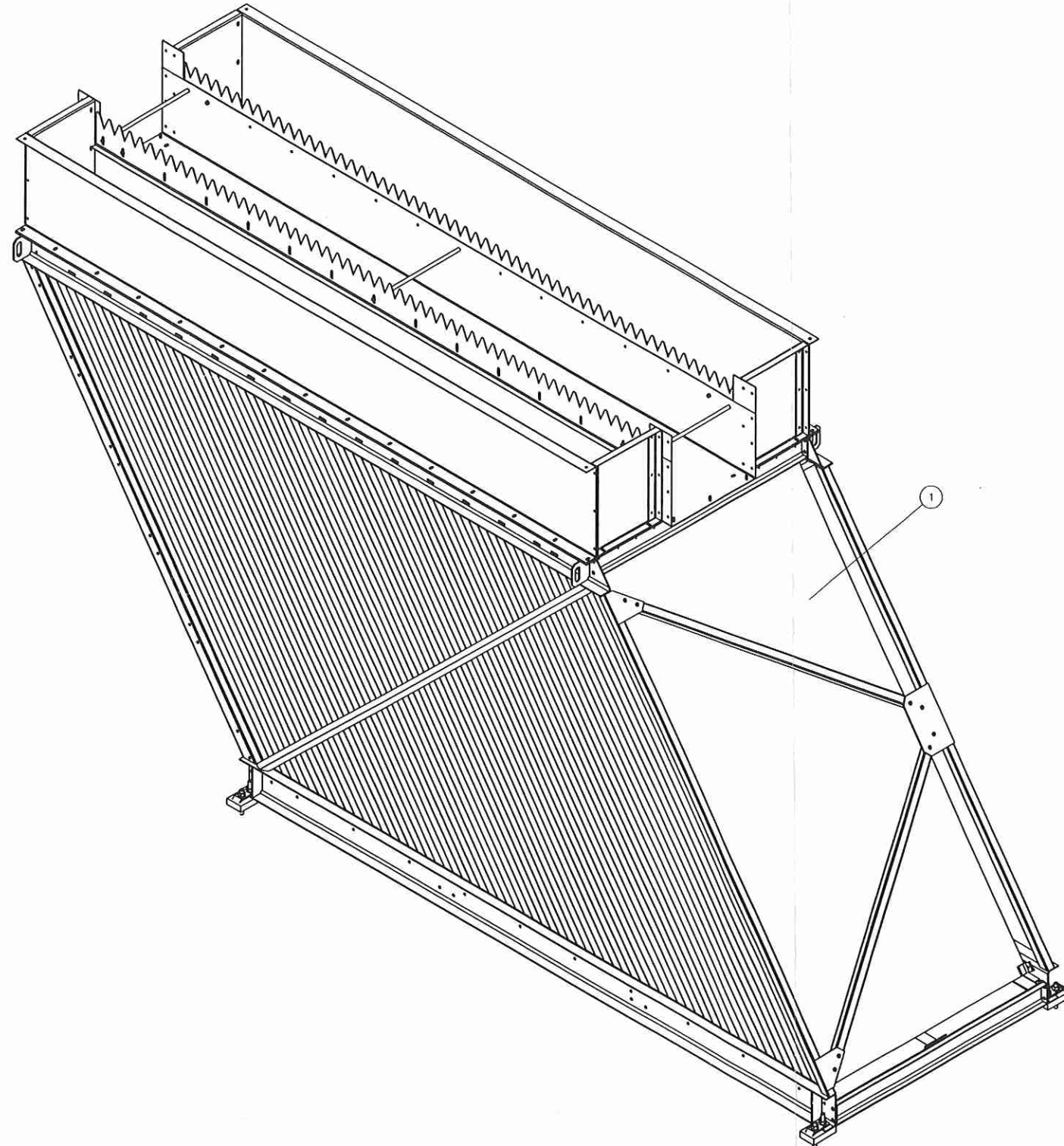
GWINNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES
LANIER FILTER PLANT RESIDUALS HANDLING FACILITY, CHLORINE SYSTEM, AND CLEARWELL IMPROVEMENTS

BACKWASH PRE-CLARIFICATION UPPER LEVEL ELECTRICAL PLAN

PROJECT NO. 6150-27908
FILE NAME: EBWSHP18
SHEET NO. **E-18**

Ferris
2-8958
08/24/00 09:50:47
E:\wshp18

ATTACHMENT 2: LFP US Filters Inclined Plate Settler Shop Drawings (11#)



No.	Qty.	Description	Material
1	24	LME MODEL PP-1278-61-510	ASSY'
2	12	TROUGH WALL EXTENSION	ASSY'
3	12	TROUGH WALL EXTENSION SLIDE PLATE	FRP
4	12	TROUGH WALL EXTENSION GASKET	40D NEO
5	120	THREADED ROD: 1/2"-13 UNC x 8" LONG	316
6	120	FLAT WASHER: 1/2"	316
7	120	HEX NUT: 1/2"-13 UNC	316
8	12	TROUGH END PANEL	316
9	24	TROUGH END PANEL BRACKETS	316
10	552	HEX HEAD CAP SCREW: 3/6"-16 UNC x 1 1/4" LONG	316
11	660	FLAT WASHER: 3/8"	316
12	732	LOCK WASHER: 3/8"	316
13	732	HEX NUT: 3/8"-16 UNC	316
14	456	SEALING WASHER: 3/8"	40D NEO
15	24	TROUGH CONNECTION GASKET	40D NEO
16	96	VERTICAL RETAINING STRIPS	316
17	48	HORIZONTAL RETAINING STRIPS	316
18	96	ANCHOR CLAMP PLATES	316
19	96	JACK BOLT: 3/4"-10 UNC x 4" LONG	316
20	192	HEX NUT: 3/4"-10 UNC	316
21	192	FLAT WASHER: 3/4"	316

REV	DATE	BY	DESCRIPTION	CHKD	APPR

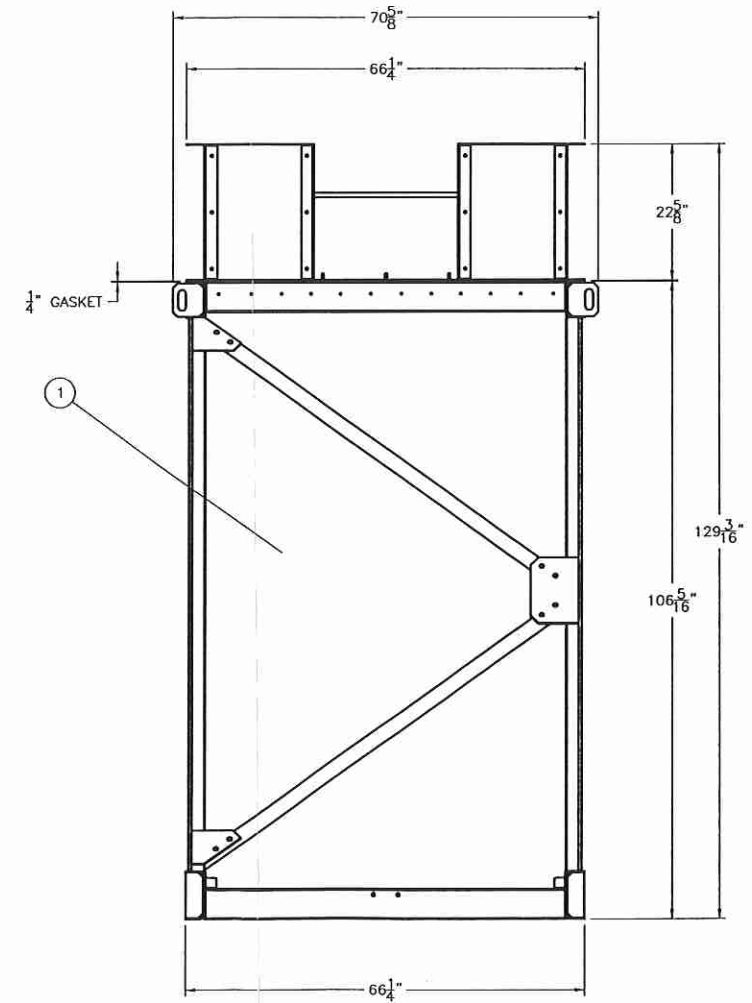
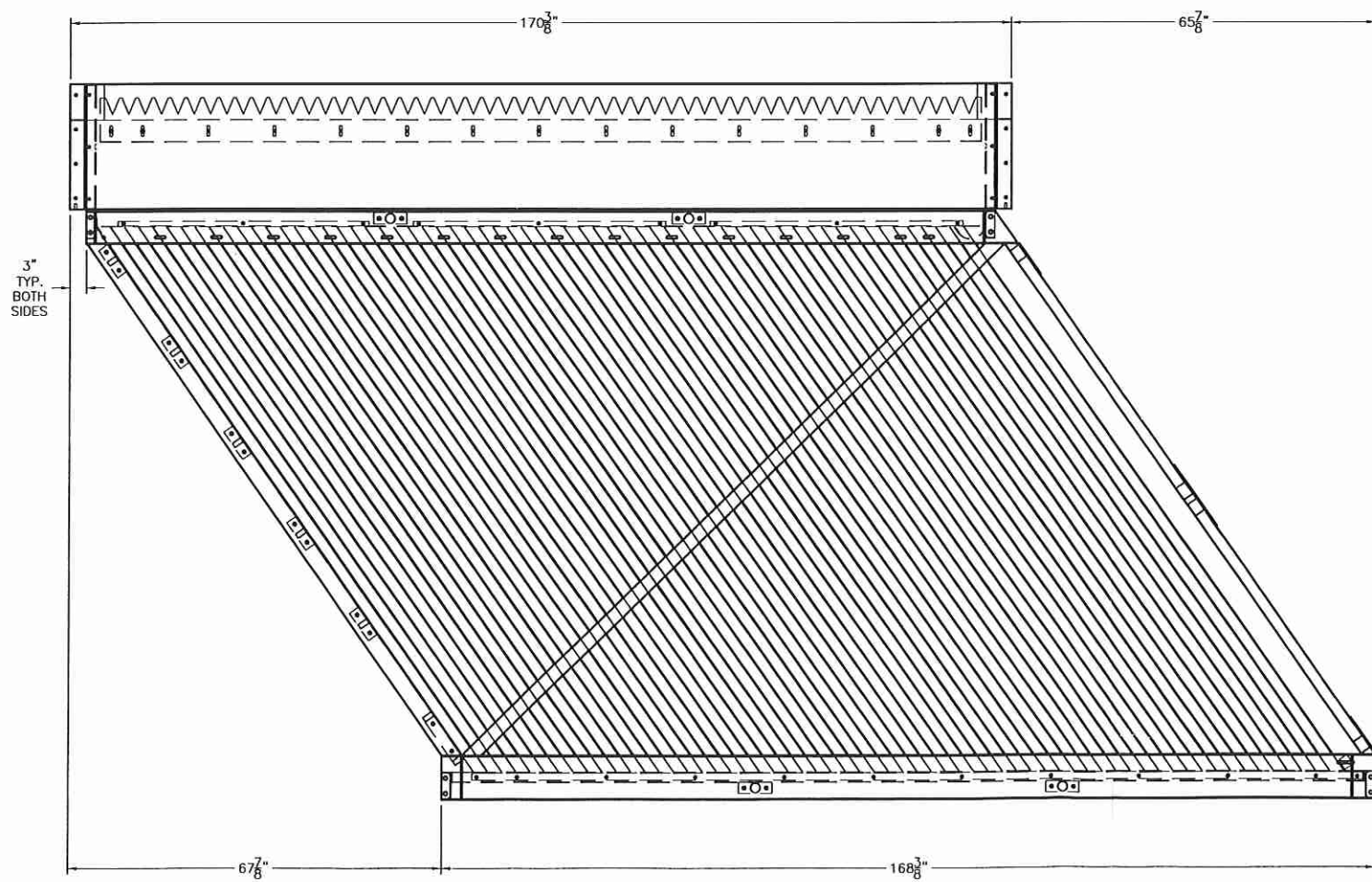
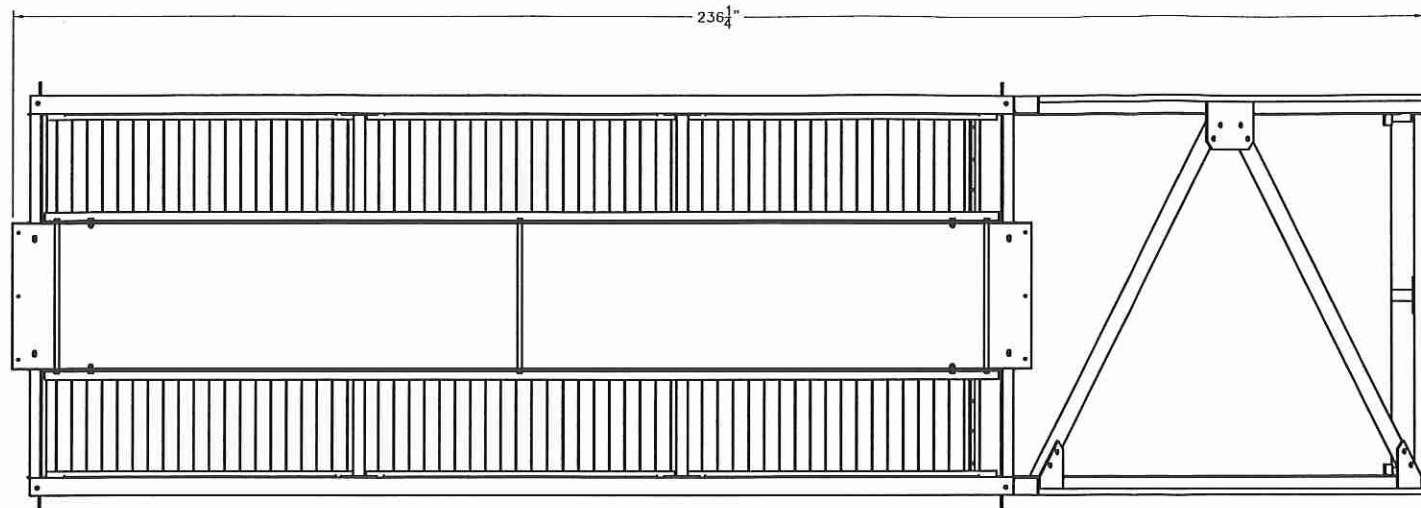
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LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK DETAILS

DRAWN	Scott M. Herman
CHECKED	— = 1" ON ORIG
APPROVED	SCALE: NTS
DATE	10/13/00
BAAN #	SHEET 1 OF 6

USFilter
ZIMPRO PRODUCTS
ROTHSCHILD, WI. 54474
DRAWING NUMBER
LFP2-101300



REV	DATE	BY	DESCRIPTION	CHKD	APPR

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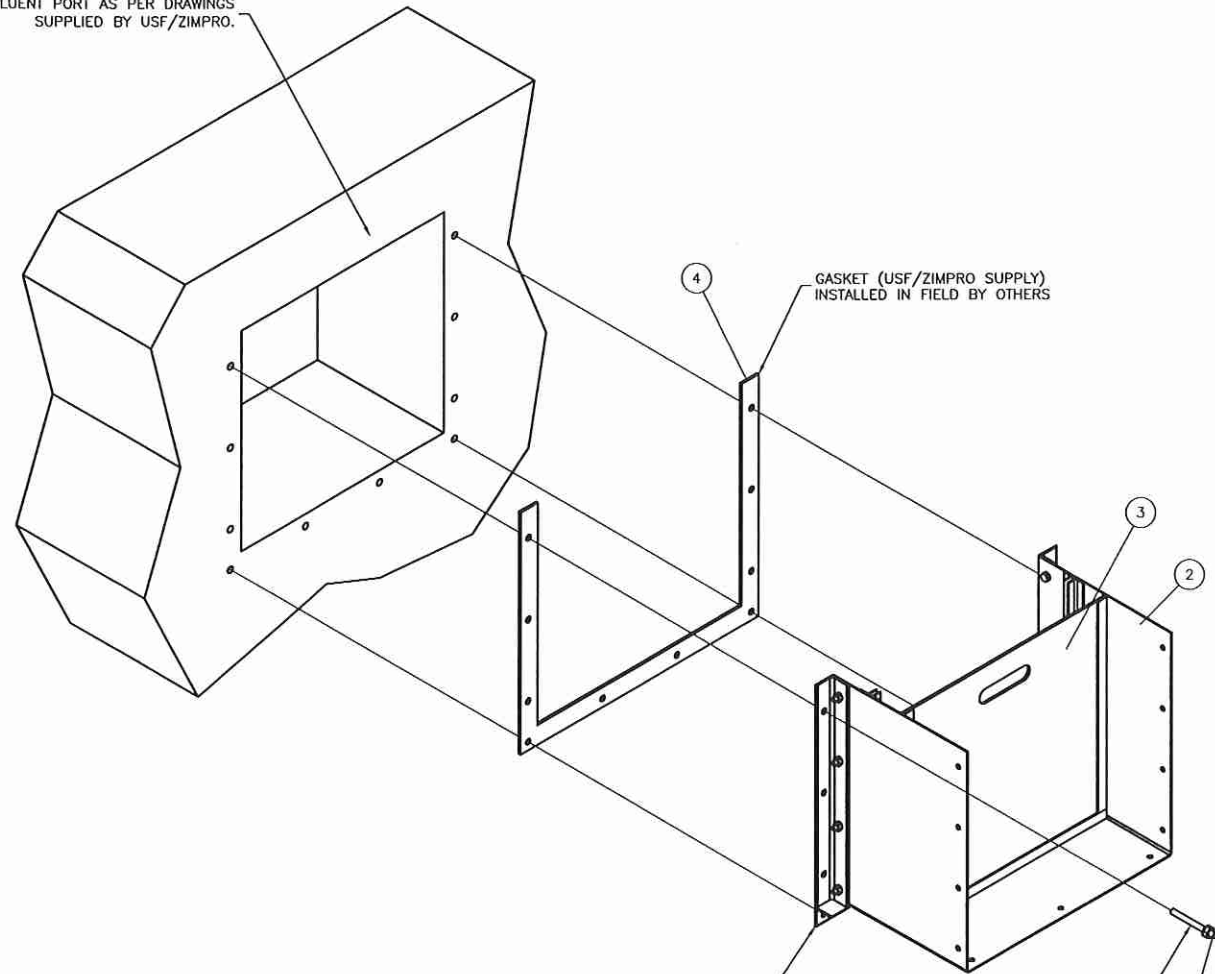
LME MODEL PP-1278-61-510
 LANIER FILTER PLANT
 GWINETTE, GA.
 PLATE PACK DETAILS

DRAWN Scott M. Herman
 CHECKED _____
 APPROVED _____
 DATE 10/13/00
 BAAN # _____
 SCALE 1/16"=1"
 SHEET 2 OF 6

USFilter
 ZIMPRO PRODUCTS
 ROTHSCHILD, WI. 54474
 DRAWING NUMBER LFP2-101300
 REV 1

NOTE: THESE DIMENSIONS ARE ONLY SUPPLIED AS A GUIDE FOR ANY CONCRETE DESIGN THAT MAY NEED TO BE DONE. USF/ZIMPRO RECOMMENDES THAT TROUGH EXTENSION FLANGE BE USED AS A DRILLING TEMPLATE THEN LAYING OUT THE ANCHOR BOLTS.

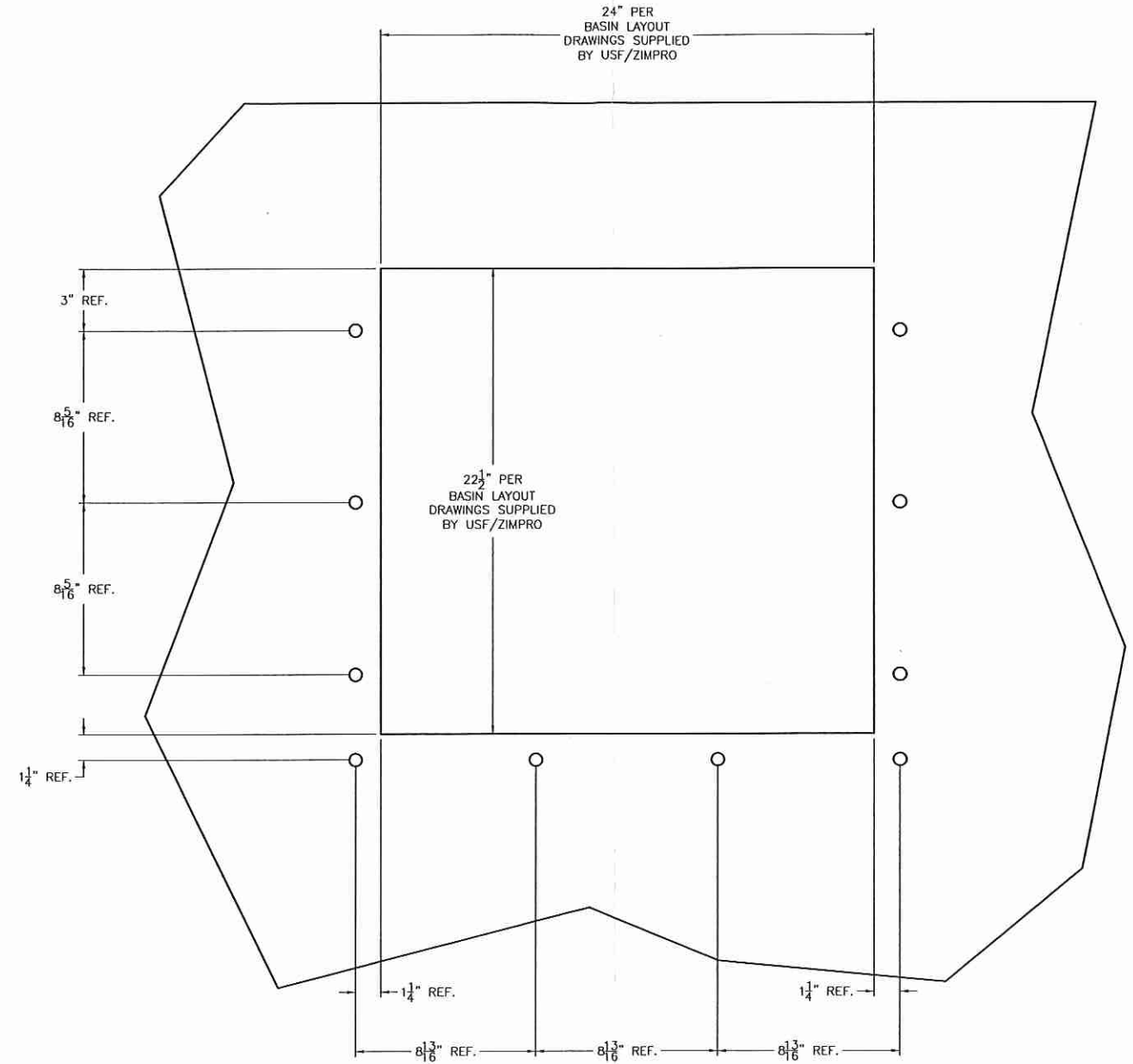
EFFLUENT PORT AS PER DRAWINGS SUPPLIED BY USF/ZIMPRO.



4 GASKET (USF/ZIMPRO SUPPLY) INSTALLED IN FIELD BY OTHERS

3 TROUGH EXTENSION (INSTALLED BY OTHERS)
NOTE: USE FLANGE ON TROUGH EXTENSION AS A TEMPLATE TO LOCATE ANCHOR BOLT HOLES. THIS WILL HELP GUARANTEE A TIGHT FIT BETWEEN CONCRETE AND EQUIPMENT.

5 6 7
THREADED STUD/FLAT WASHER/HEX NUT
USF/ZIMPRO SUPPLY
(INSTALLED IN FIELD BY OTHERS)



24" PER BASIN LAYOUT DRAWINGS SUPPLIED BY USF/ZIMPRO

22 1/2" PER BASIN LAYOUT DRAWINGS SUPPLIED BY USF/ZIMPRO

3" REF.

8 5/16" REF.

8 5/16" REF.

1 1/4" REF.

1 1/4" REF.

1 1/4" REF.

8 1/8" REF.

8 1/8" REF.

8 1/8" REF.

REV	DATE	BY	DESCRIPTION	CHKD	APPR

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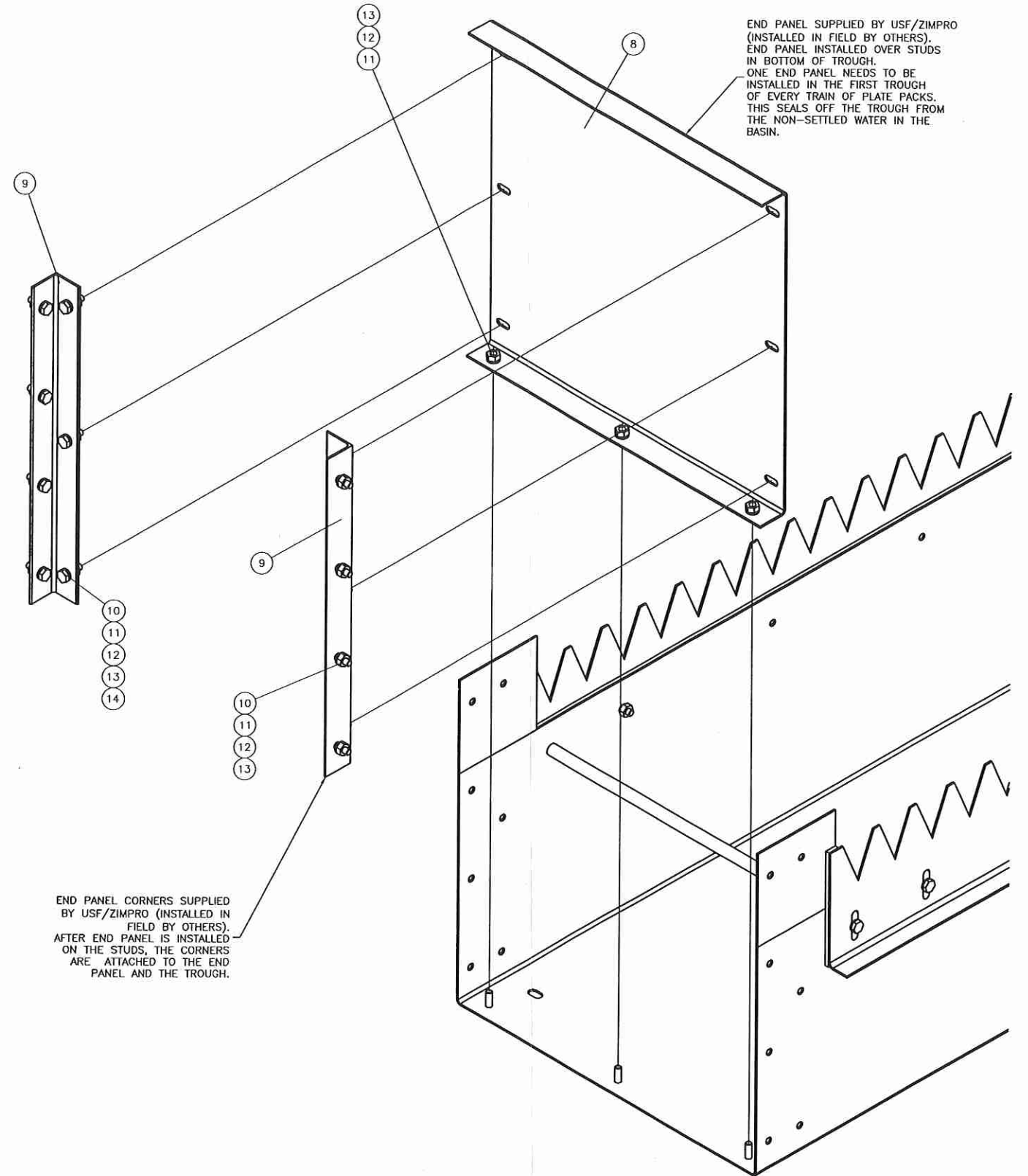
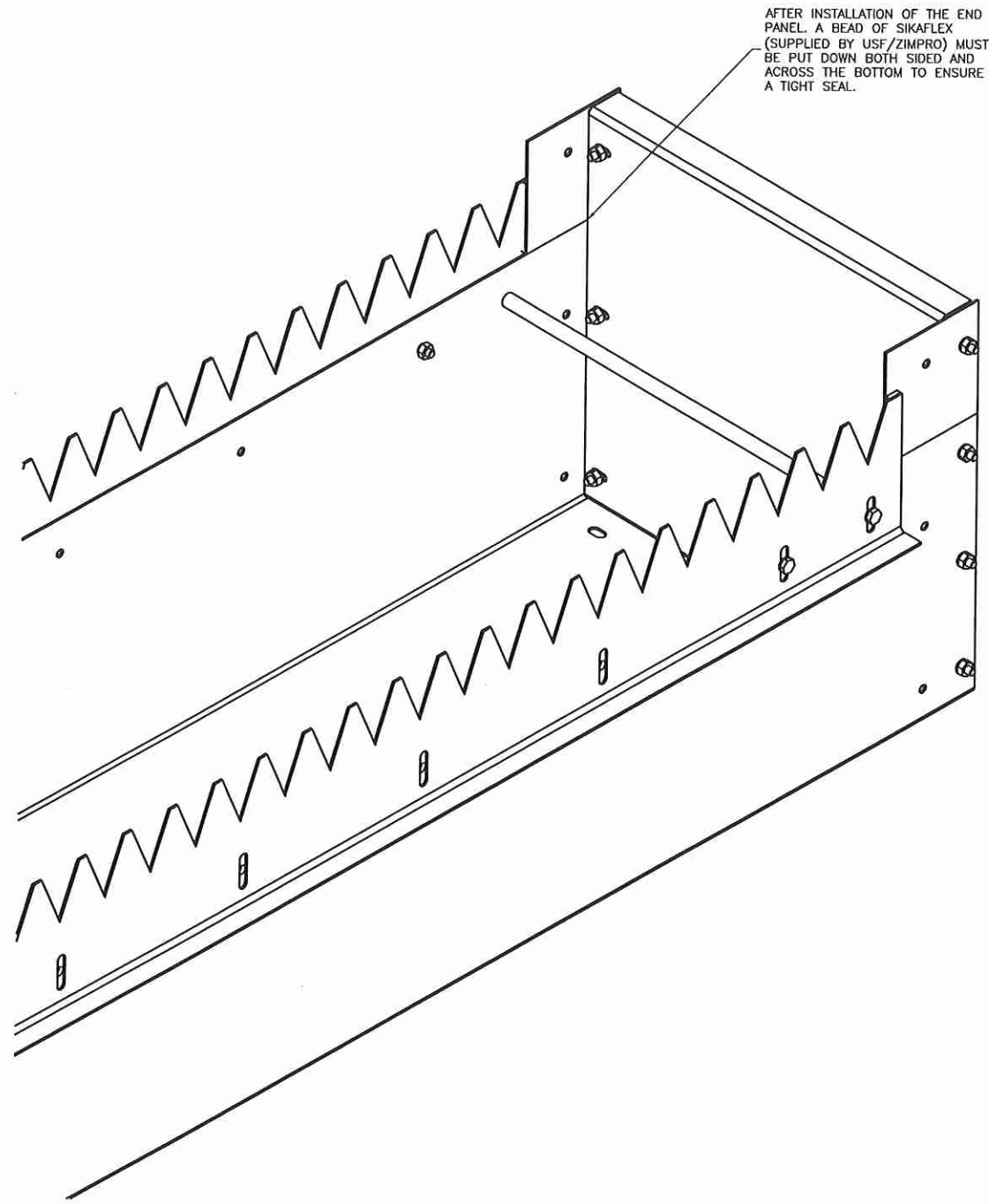
LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK DETAILS

DRAWN	Scott M. Herman
CHECKED	— = 1" ON ORIG
APPROVED	SCALE AS NOTED
DATE	10/13/00
BAAN #	SHEET 3 OF 6

USFilter
ZIMPRO PRODUCTS
ROTHSCHILD, WI. 54474
DRAWING NUMBER
LFP2-101300

L:\PROJ2000\SO0010-GWINETTE GA\GWINETTE PP 101300.DWG - LAYOUT3 - 04/10/2001 10:02am - HERMANSM



REV	DATE	BY	DESCRIPTION	CHKD	APPR

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LME MODEL PP-1278-61-510
 LANIER FILTER PLANT
 GWINETTE, GA.
 PLATE PACK DETAILS

DRAWN	Scott M. Herman
CHECKED	
APPROVED	
DATE	10/13/00
BAAN #	

1" = 1" ON ORIG
 SCALE NTS
 SHEET 4 OF 6

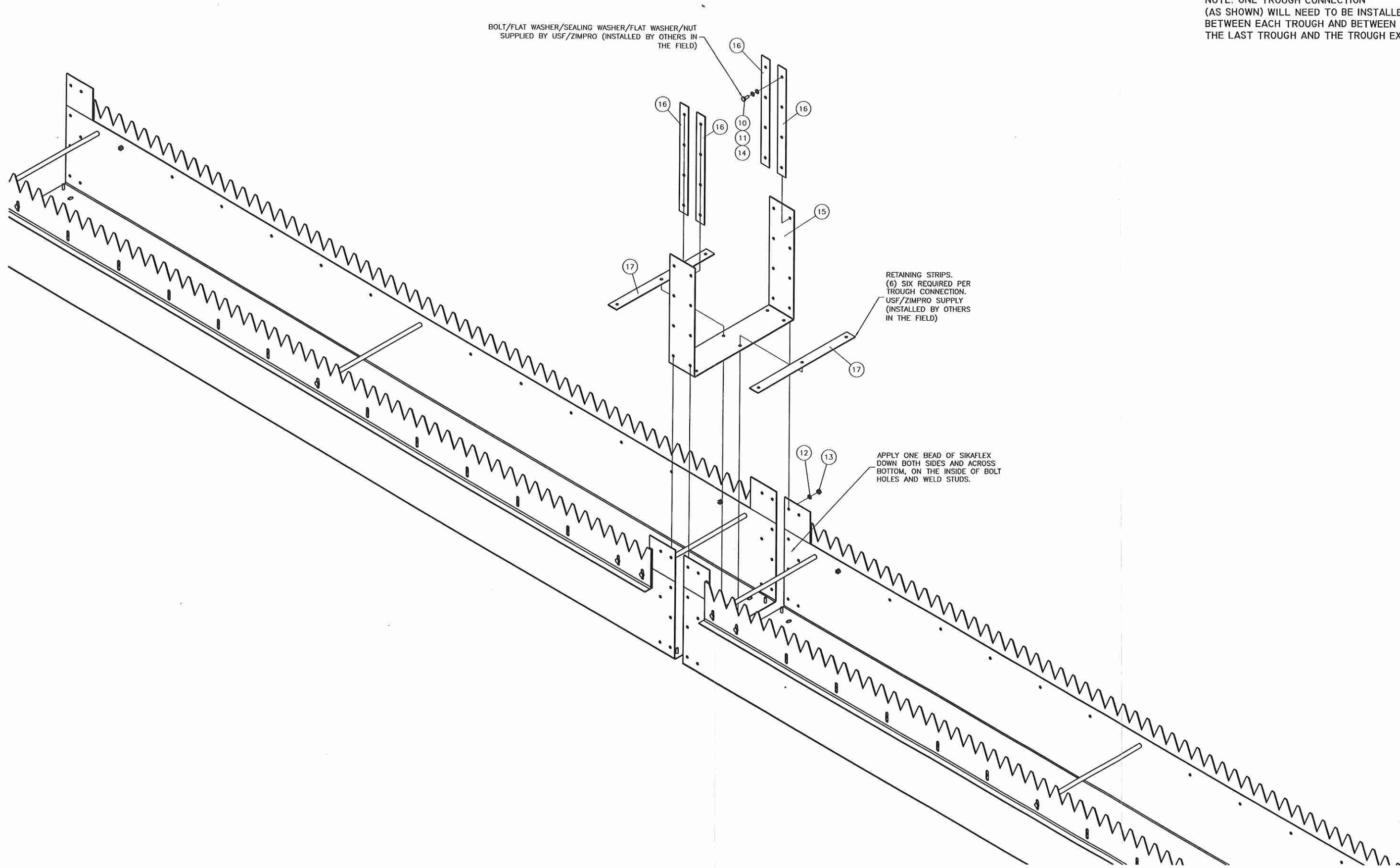
USFilter
 ZIMPRO PRODUCTS
 ROTHSCHILD, WI. 54474
 DRAWING NUMBER
 LFP2-101300

NOTE: ONE TROUGH CONNECTION (AS SHOWN) WILL NEED TO BE INSTALLED BETWEEN EACH TROUGH AND BETWEEN THE LAST TROUGH AND THE TROUGH EXTENSION.

BOLT/FLAT WASHER/SEALING WASHER/FLAT WASHER/NUT SUPPLIED BY USF/ZIMPRO (INSTALLED BY OTHERS IN THE FIELD)

RETAINING STRIPS. (6) SIX REQUIRED PER TROUGH CONNECTION. USF/ZIMPRO SUPPLY (INSTALLED BY OTHERS IN THE FIELD)

APPLY ONE BEAD OF SIKAFLEX DOWN BOTH SIDES AND ACROSS BOTTOM, ON THE INSIDE OF BOLT HOLES AND WELD STUDS.



REV	DATE	BY	DESCRIPTION	CHKD	APPR

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LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK DETAIL

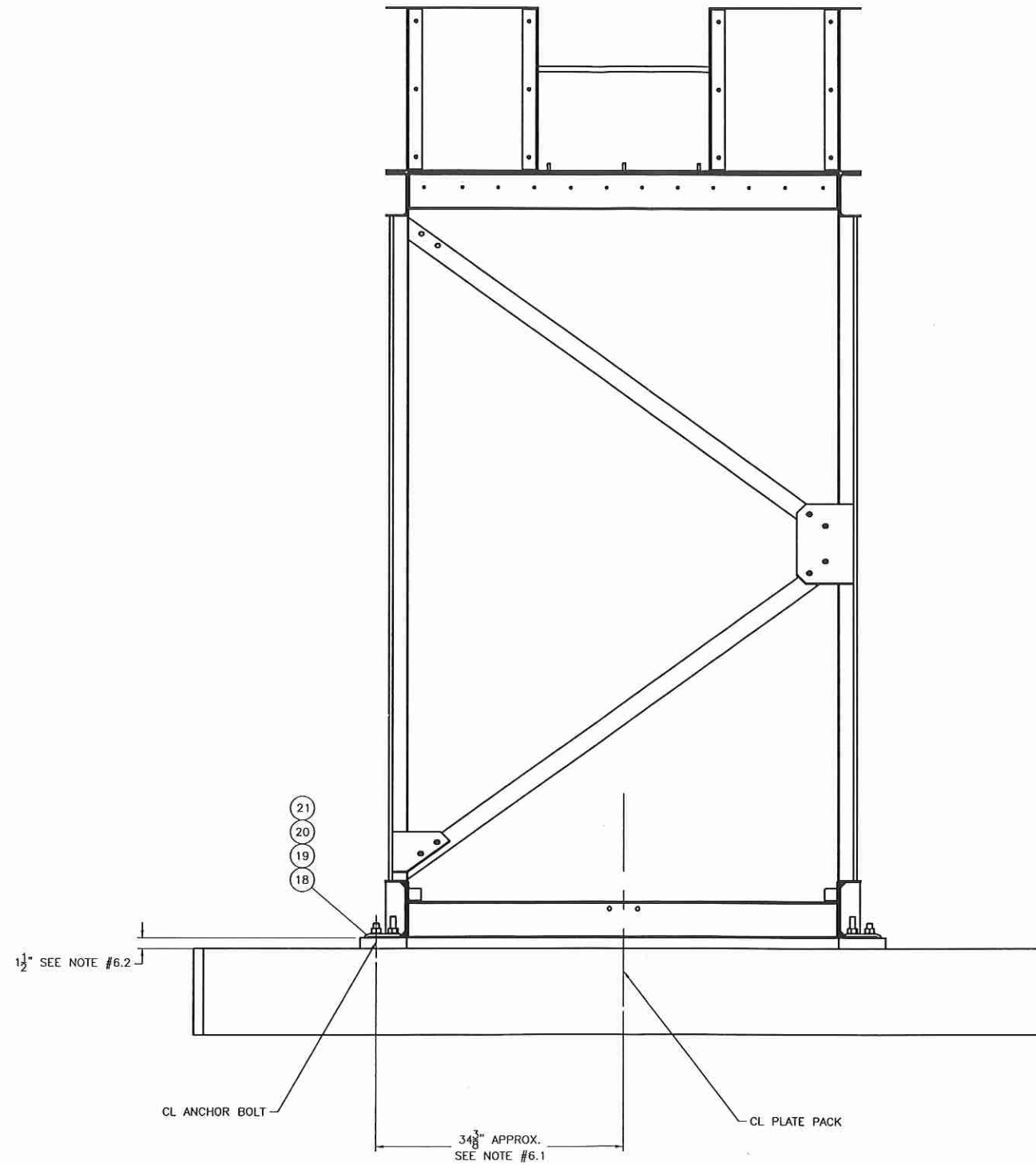
DRAWN	Scott M. Herman	SCALE	1" = 1" ON ORIG
CHECKED		SCALE	NTS
APPROVED		DATE	10/13/00
DATE	10/13/00	BAAN #	
BAAN #		SHEET	5 OF 6

USFilter
ZIMPRO PRODUCTS
ROTHSCHILD, WI. 54474

DRAWING NUMBER
LFP2-101300

6.1) SINCE ACTUAL PLACEMENT OF THE ANCHOR BOLTS IS DONE IN THE FIELD BY OTHERS THE EXACT LOCATION MAY VARY FROM THE DIMENSION SHOWN.

6.2) THE AMOUNT OF GROUT SHOWN IS AN APPROXIMATION. THE ELEVATION OF THE BASE OF THE V-NOTCH WEIR IS THE CRITICAL/HOLD DIMENSION AND THE AMOUNT OF GROUT CAN VARY DEPENDING ON ANY BEAM DEFLECTION THAT MAY OCCUR.



REV	DATE	BY	DESCRIPTION	CHKD	APPR
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

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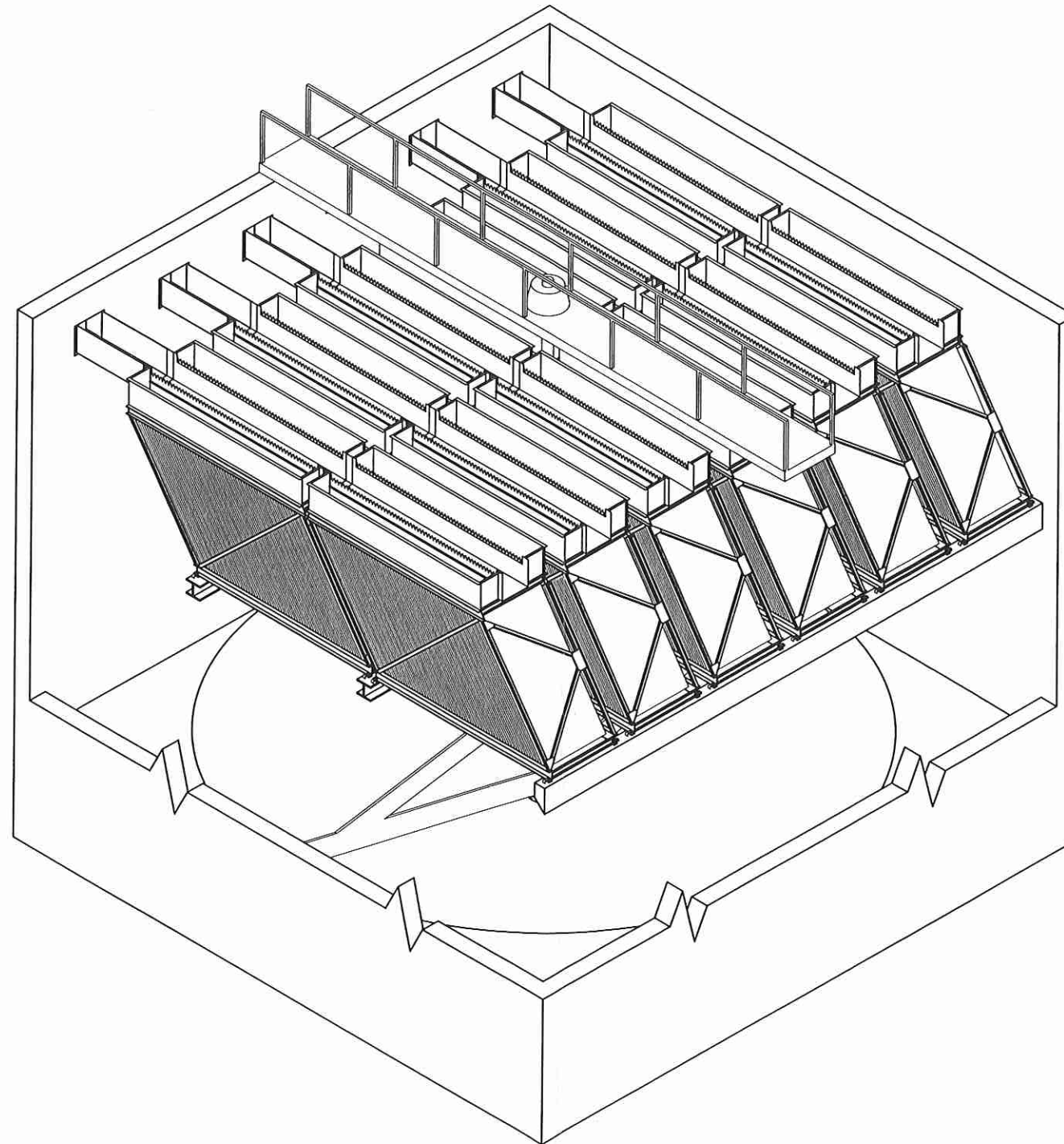
LME MODEL PP-1278-61-510
 LANIER FILTER PLANT
 GWINETTE, GA.
 PLATE PACK DETAILS

DRAWN	Scott M. Herman	SCALE	AS NOTED
CHECKED		SHEET	6 OF 6
APPROVED			
DATE	10/13/00		
BAAN #			

USFilter
 ZIMPRO PRODUCTS
 ROTHSCHILD, WI. 54474
 DRAWING NUMBER
 LFP2-101300

NOTE: TWO (2) WALLS HAVE BEEN REMOVED FOR CLARITY

ISOMETRIC VIEW OF SINGLE BASIN.
TYPICAL FOR EASH BASIN



ISOMETRIC VIEW OF SINGLE BASIN

REV	DATE	BY	DESCRIPTION	CHKD	APPR

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LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

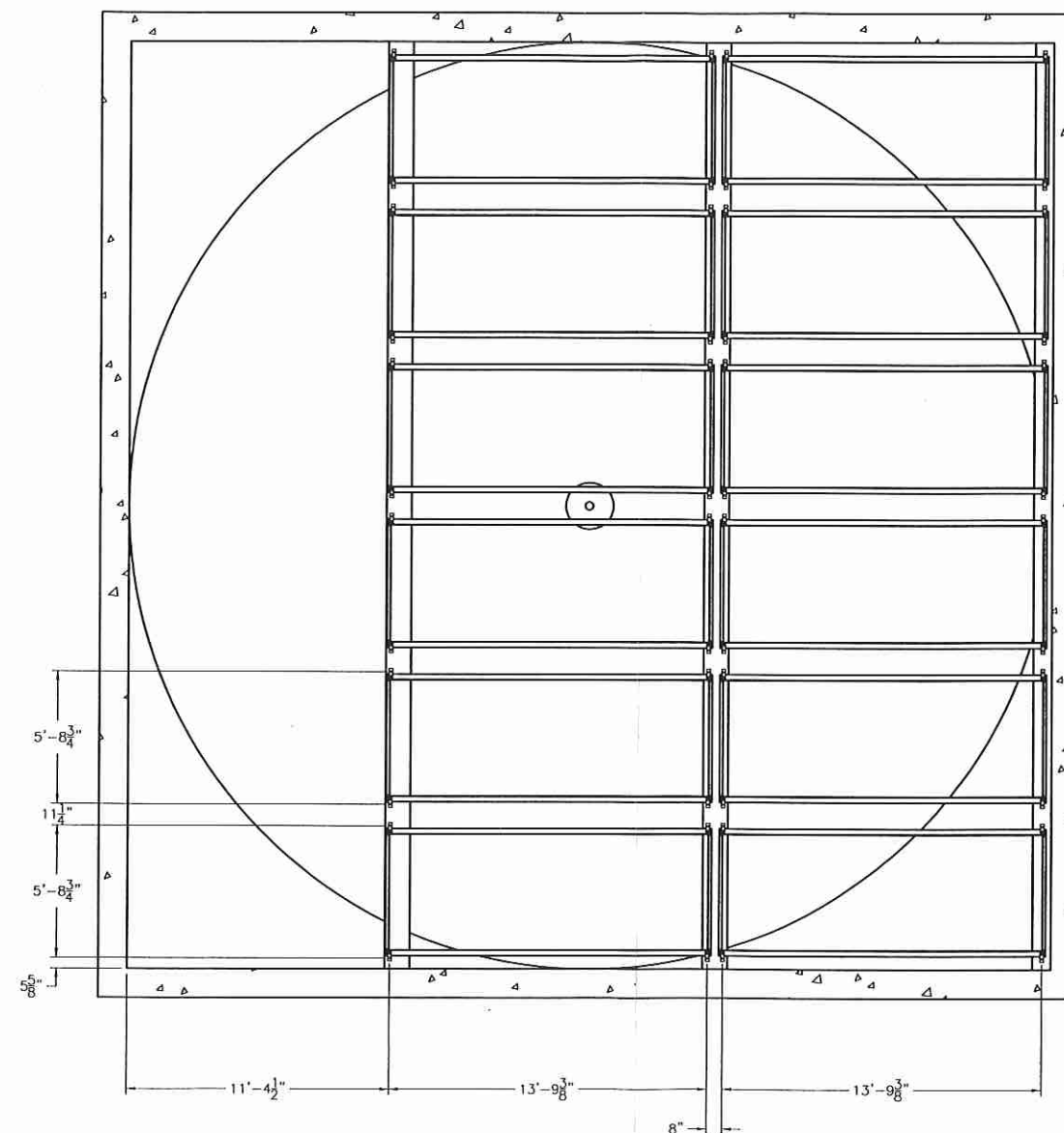
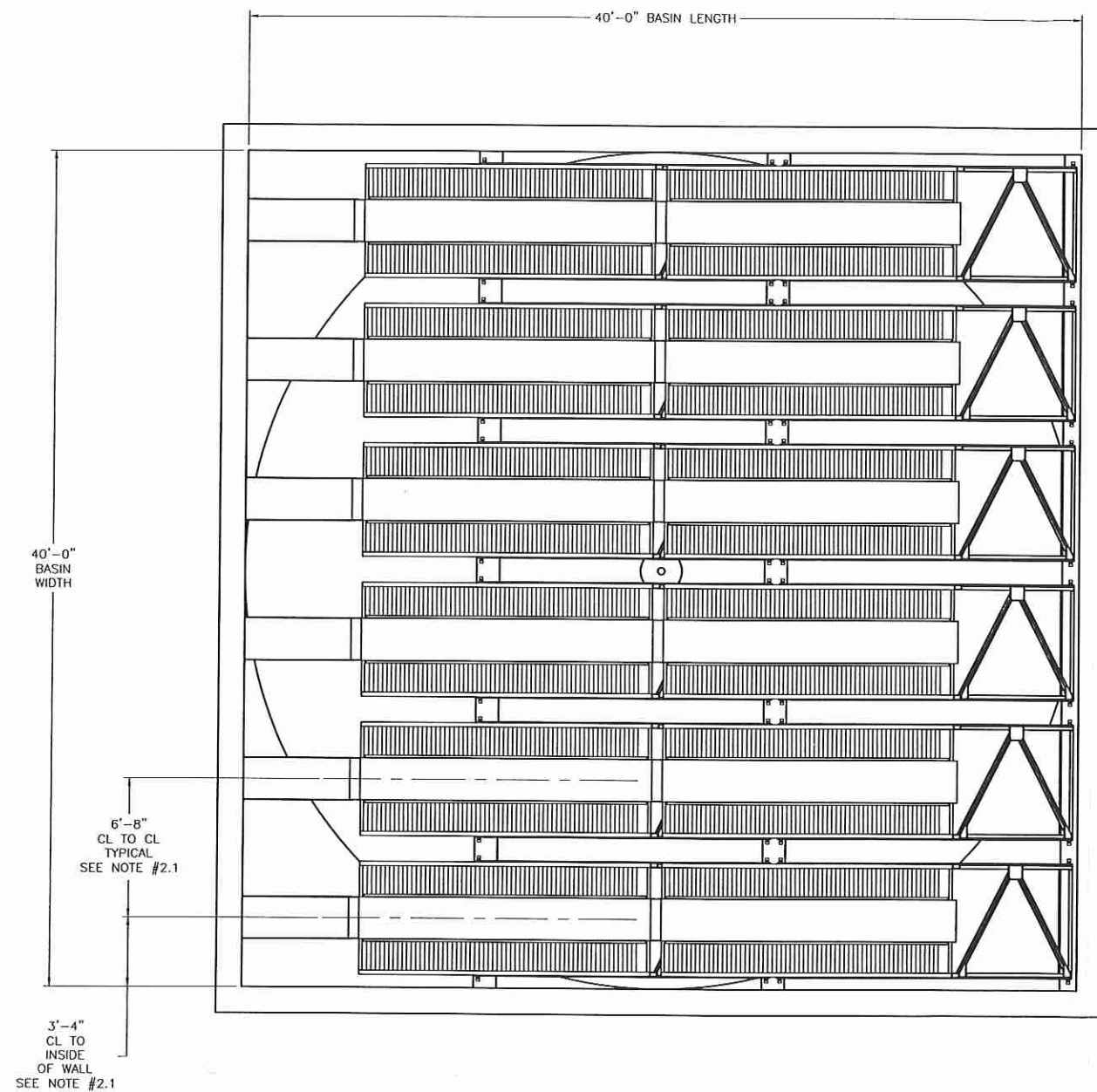
PLATE PACK BASIN LAYOUT

DRAWN	Scott M. Herman
CHECKED	SCALE 1" = 1" ON ORIG
APPROVED	SCALE NTS
DATE	10/13/00
BAAN #	SHEET 1 OF 5



DRAWING NUMBER LFP1-101300

2.1) THIS IS A CRITICAL HOLD DIMENSION. OUR CALCULATIONS HAVE DETERMINED THE OPTIMAL DISTANCE BETWEEN THE PLATE PACKS AND ANY VARIATION IN THIS DIMENSION COULD EFFECT THE PERFORMANCE OF THE BASIN. WE RECOMMENDED THAT THIS DIMENSION CHANGE BY NO MORE THAN $\pm \frac{1}{8}$ " (NON-ACCUMULATIVE ACROSS THE WIDTH OF THE BASIN)



ANCHOR BOLT LOCATIONS
3/4" ANCHOR BOLTS

PLAN VIEW OF SINGLE BASIN

REV	DATE	BY	DESCRIPTION	CHKD	APPR

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LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK BASIN LAYOUT

DRAWN	Scott M. Herman	SCALE	1/4"=1'-0"
CHECKED		SCALE	1/4"=1'-0"
APPROVED		DATE	10/13/00
DATE	10/13/00	BAAN #	
BAAN #		SHEET	2 OF 5

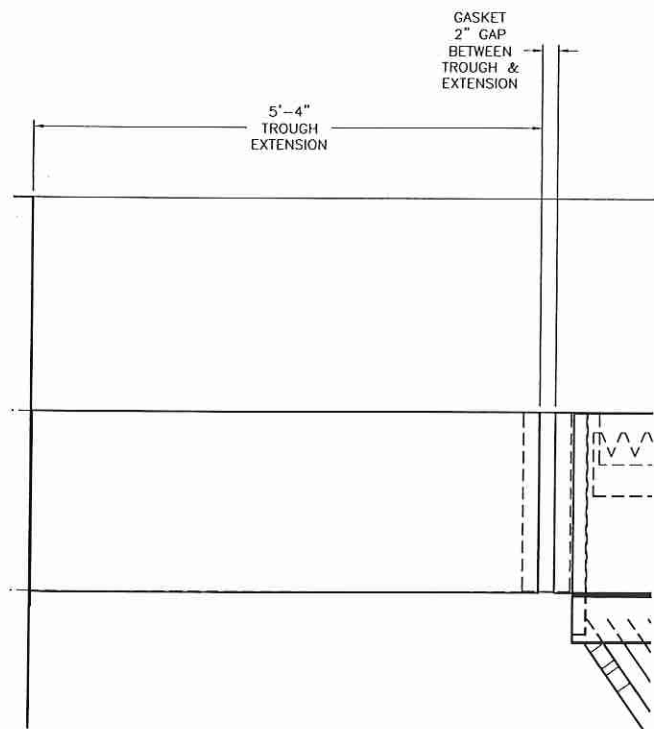
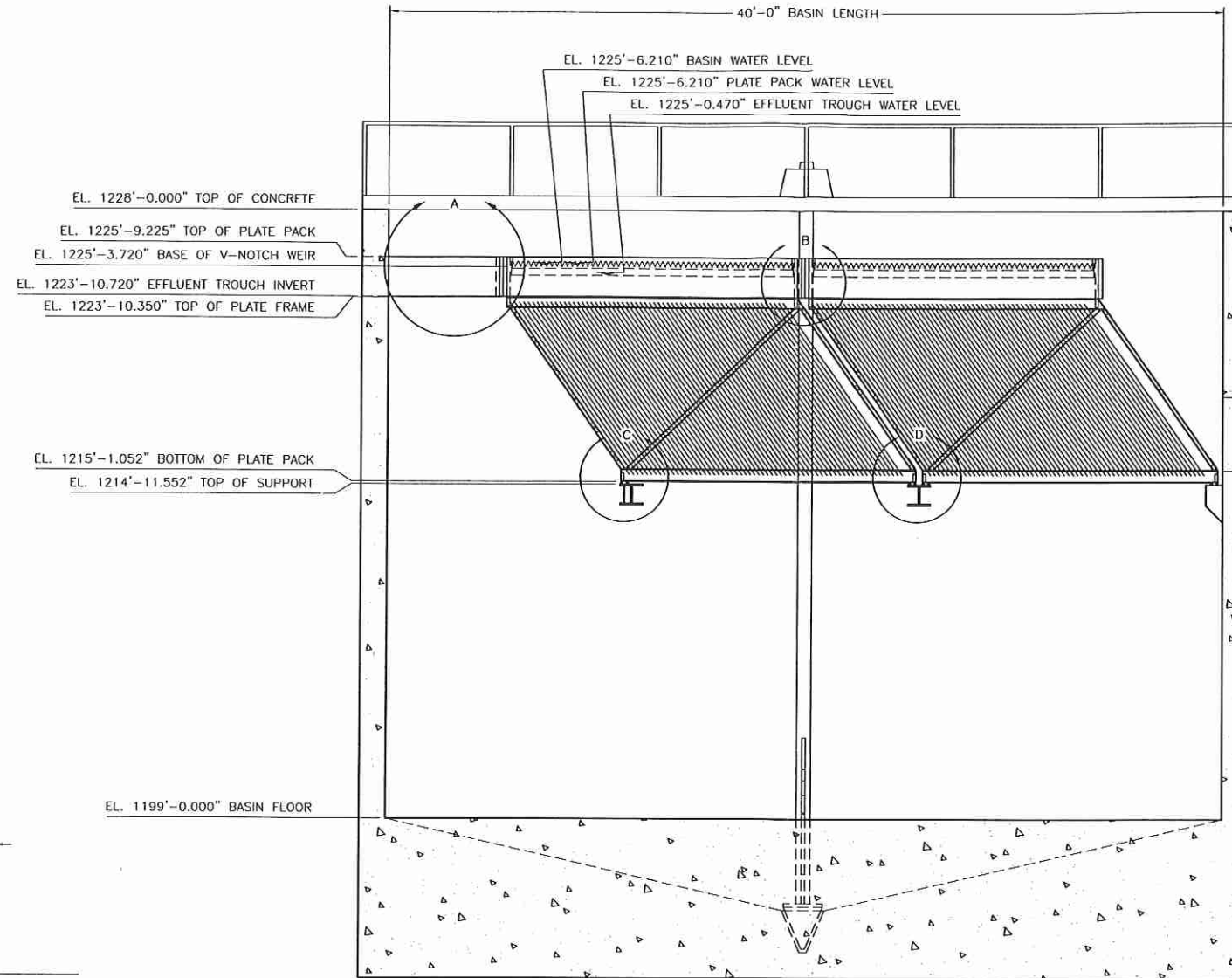
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ROTHSCHILD, WI. 54474

DRAWING NUMBER
LFP1-101300

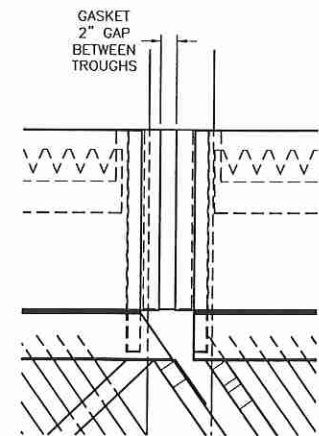
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*NOTE: SIZE OF CONCRETE BEAMS TO BE VERIFIED BY CONSULTING ENGINEER.

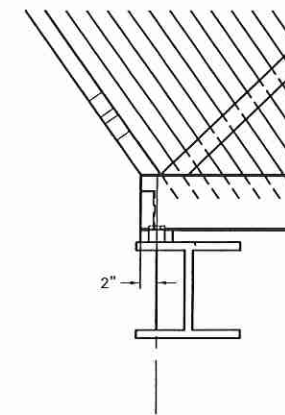
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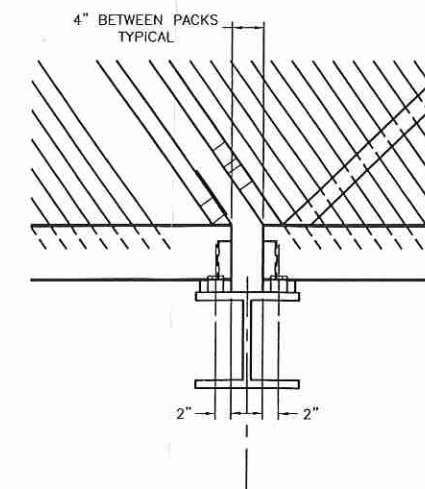
VIEW A



VIEW B



VIEW C



VIEW D

ELEVATION VIEW OF PLATE PACKS

REV	DATE	BY	DESCRIPTION	CHKD	APPR

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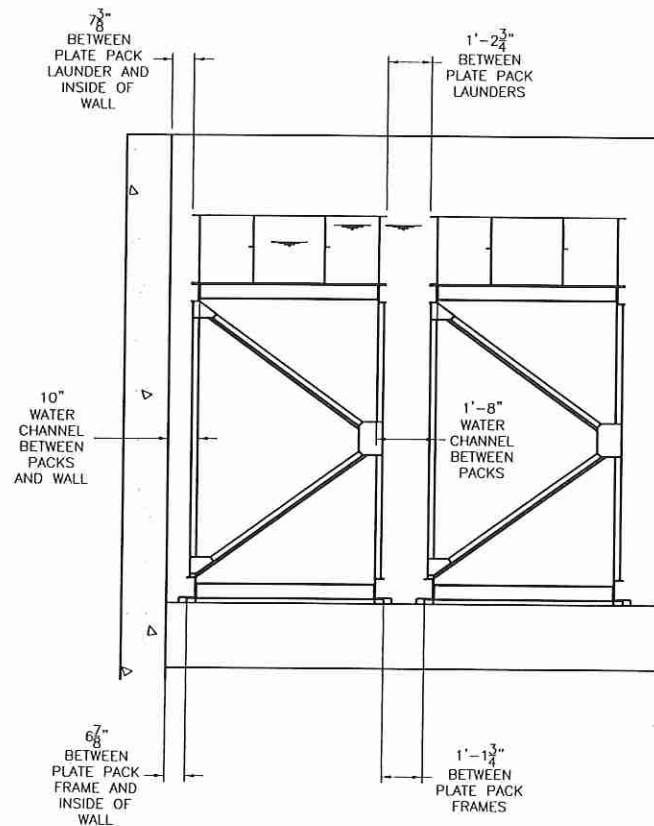
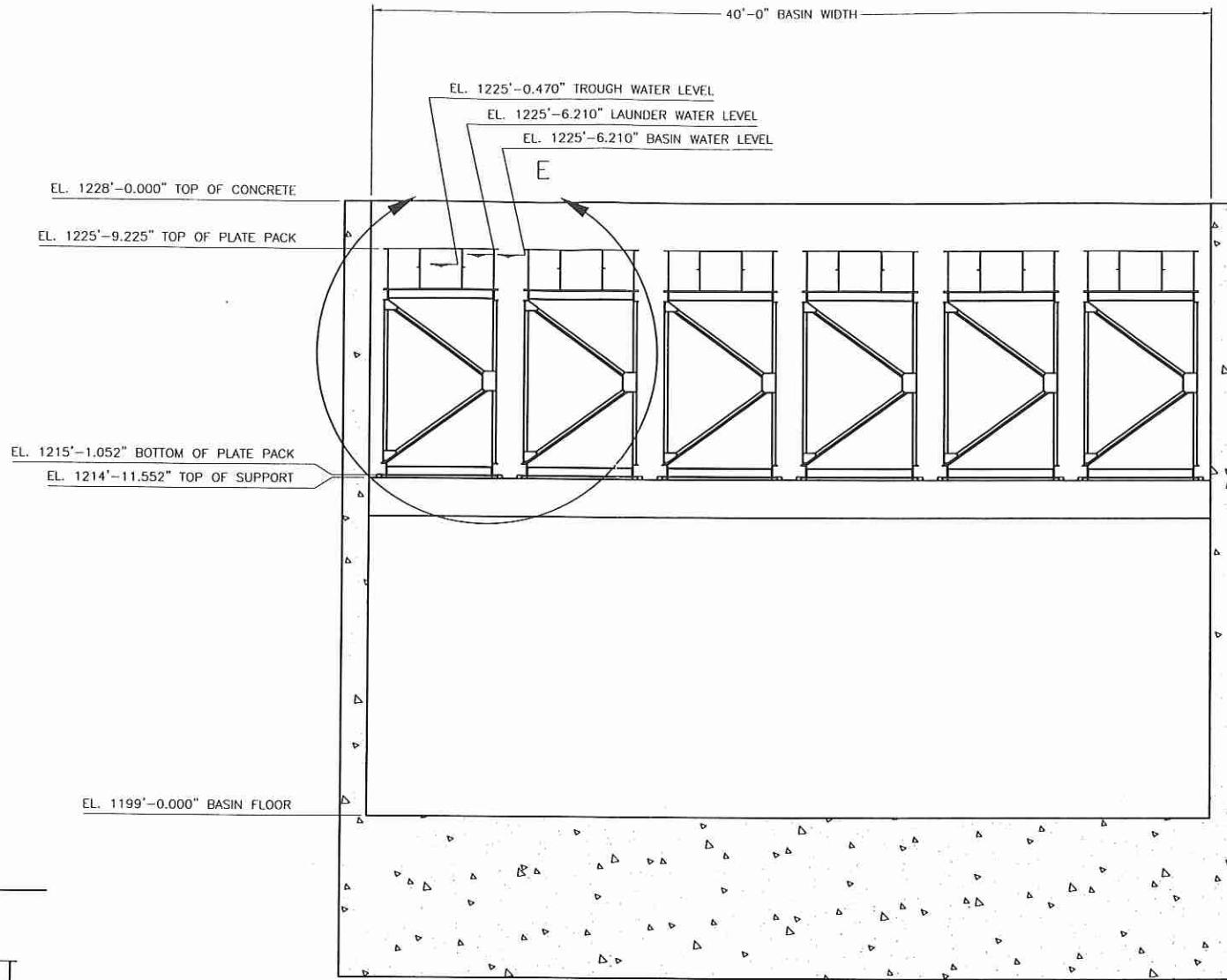
LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK BASIN LAYOUT

DRAWN	Scott M. Herman
CHECKED	1" = 1" ON ORIG
APPROVED	SCALE 1/4" = 1'-0"
DATE	10/13/00
BAAN #	SHEET 3 OF 5

USFilter
ZIMPRO PRODUCTS
ROTHSCHILD, WI. 54474

DRAWING NUMBER
LFP1-101300



VIEW E

*NOTE: SIZE OF CONCRETE BEAMS TO BE VERIFIED BY CONSULTING ENGINEER.

ELEVATION VIEW OF PLATE PACKS

REV	DATE	BY	DESCRIPTION	CHKD	APPR

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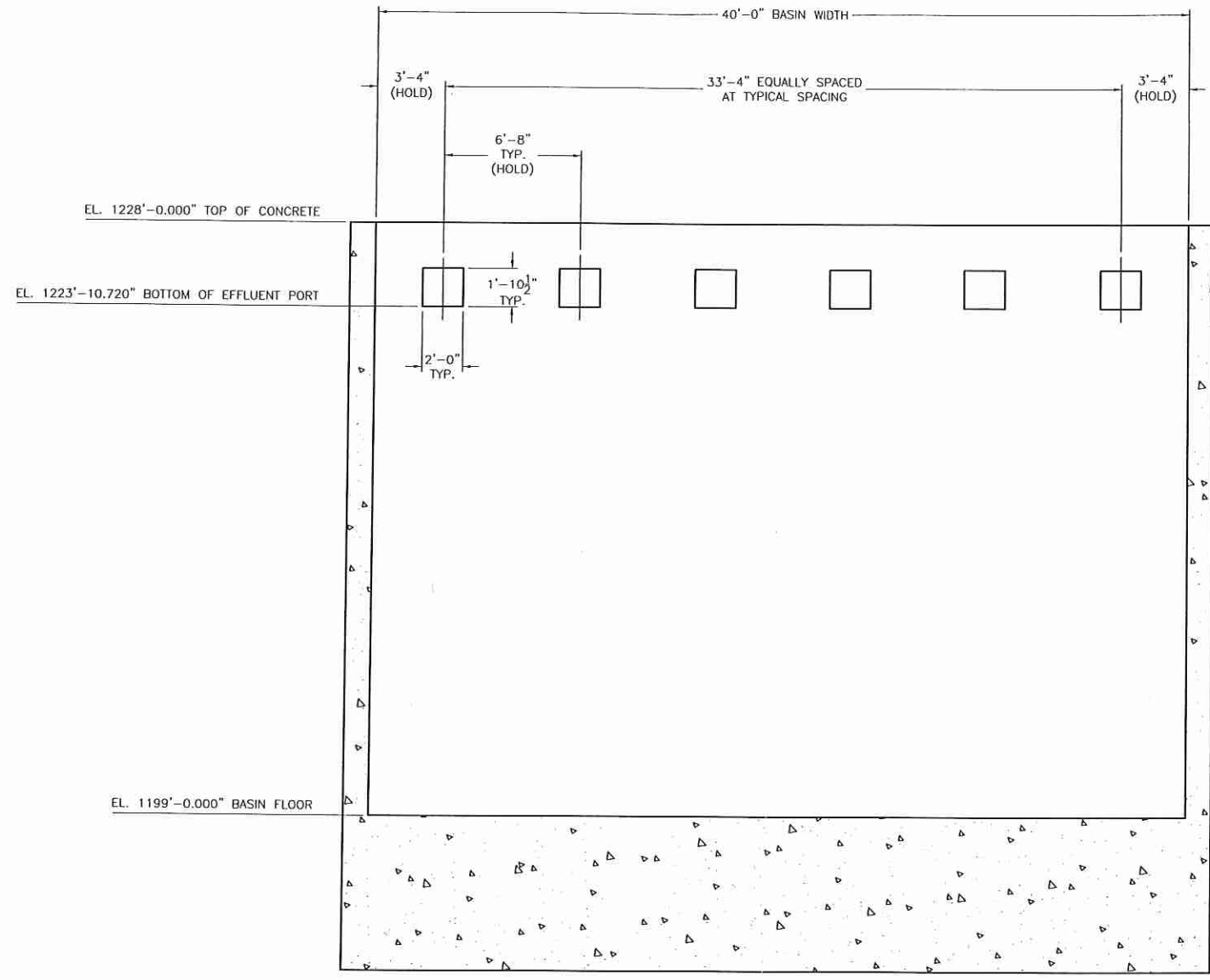
LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK BASIN LAYOUT

DRAWN	Scott M. Herman
CHECKED	1" = 1" ON ORIG
APPROVED	SCALE 1/4" = 1'-0"
DATE	10/13/00
BAAN #	SHEET 4 OF 5



DRAWING NUMBER
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ELEVATION VIEW OF EFFLUENT PORTS

REV	DATE	BY	DESCRIPTION	CHKD	APPR

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LME MODEL PP-1278-61-510
LANIER FILTER PLANT
GWINETTE, GA.

PLATE PACK BASIN LAYOUT

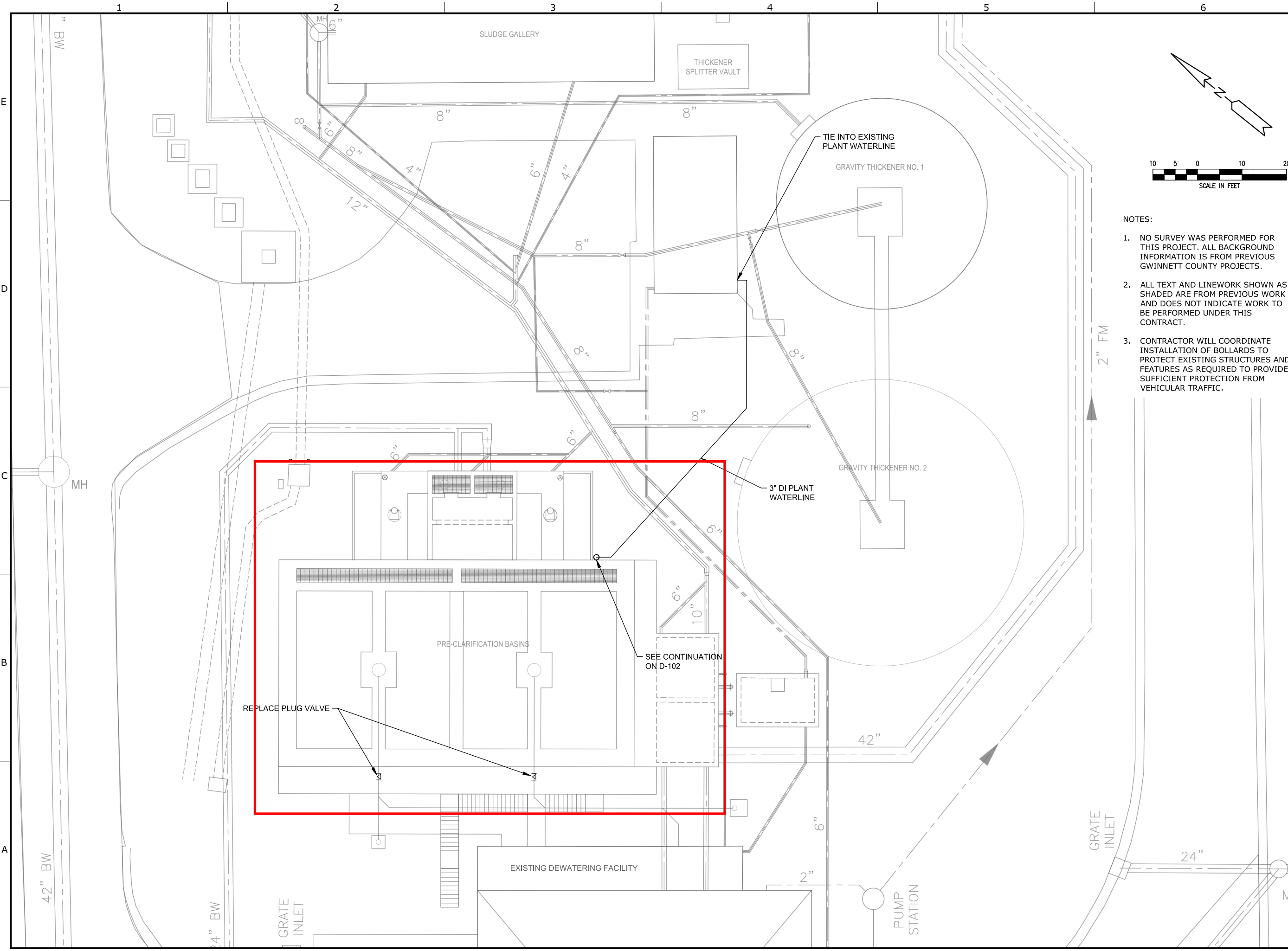
DRAWN	Scott M. Herman
CHECKED	— = 1" ON ORIG
APPROVED	SCALE AS NOTED
DATE	10/13/00
BAAN #	SHEET 5 OF 5



DRAWING NUMBER
LFP1-101300

ATTACHMENT 3: M-1188-80 Inclined Plate Settler Drawings (7#)

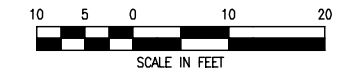
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The Water Tower
2500 Clean Water Ct. Bldg A, Ste 304
Buford, GA 30519
407.447.2388
www.wadetrtrim.com

Certificate of Authorization Name: Wade Trim, Inc.
Authorization Number: PEF007400
Expiration Date: 06/30/2026

CONSULTANT PROJ. NO. GWN200101Q



- NOTES:
1. NO SURVEY WAS PERFORMED FOR THIS PROJECT. ALL BACKGROUND INFORMATION IS FROM PREVIOUS GWINNETT COUNTY PROJECTS.
 2. ALL TEXT AND LINWORK SHOWN AS SHADED ARE FROM PREVIOUS WORK AND DOES NOT INDICATE WORK TO BE PERFORMED UNDER THIS CONTRACT.
 3. CONTRACTOR WILL COORDINATE INSTALLATION OF BOLLARDS TO PROTECT EXISTING STRUCTURES AND FEATURES AS REQUIRED TO PROVIDE SUFFICIENT PROTECTION FROM VEHICULAR TRAFFIC.

NOT FOR CONSTRUCTION



BUFORD, GA
GWINNETT COUNTY
DEPARTMENT OF WATER
RESOURCES
LANIER
FILTER PLANT
2590 S. WATERWORKS
ROAD 30518

GCDWR PROJ. NO. M-1188-80

NO	DATE	ISSUED FOR	BY
C	08/16/24	90% DESIGN	HY
B	10/30/23	60% DESIGN	HY
A	05/26/23	30% DESIGN	HY

DATE	08/16/2024
DESIGNED BY	GPE
DRAWN BY	MR
CHECKED BY	TG
CHECKED BY	
APPROVED BY	HY

SHEET TITLE

PROPOSED SITE
PLAN/YARD PIPING
PLAN

78 C-102

SCALE: 1" = 10'

SHEET X OF XXX

GENERAL NOTES

- DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES ARE BASED ON PREVIOUS CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING W/ FIELD MEASUREMENTS ALL DIMENSIONS AND ELEVATIONS FOR FABRICATION AND/OR MODIFICATIONS OR ADDITIONS BEING MADE UNDER THIS CONTRACT. ANY DISCREPANCIES SHALL BE PRESENTED TO THE OWNER AND ANY DESIGN CONFLICTS SHALL BE RESOLVED WITH OWNER PRIOR TO FABRICATIONS OR CONSTRUCTION OF IMPACTED ITEMS.
- ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN WITH THE ± SYMBOL, ARE APPROXIMATE AND SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR BEFORE FABRICATION AND CONSTRUCTION.
- ALL DIMENSIONS OR ELEVATIONS MARKED WITH AN ASTERISK "*" SHALL BE DETERMINED OR VERIFIED WITH EQUIP. MFR. CERTIFIED SHOP DRAWINGS OR FIELD MEASUREMENTS OF EXISTING CONSTRUCTION BEFORE FABRICATION AND CONSTRUCTION.
- ALL ADHESIVE ANCHORING SYSTEMS FOR POST-INSTALLED ANCHORS AND/OR REINFORCING DOWELS IN CONCRETE OR MASONRY SHALL BE "HIT-HY 200 ADHESIVE ANCHORING SYSTEM" BY HILTI AT SIZE AND SPACING INDICATED ON DRAWINGS WITH EMBEDMENT DEPTH INDICATED ON DRAWINGS. (SEE TABLE ON THIS SHEET FOR EMBEDMENT DEPTHS NOT INDICATED ON SECTIONS.) ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS PER ACI 318-19, 26.7.2.f.
- ALL POST-INSTALLED ANCHOR BOLTS INTO NEW OR EXISTING CONCRETE SHALL BE ASTM A316 STAINLESS STEEL THREADED ROD WITH STAINLESS STEEL WASHER AND NUT, U.N.O.
- ALL ELEVATIONS ARE REFERENCED TO GWINNETT COUNTY GIS DATUM.

DEMOLITION

- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING STRUCTURES, WHICH ARE TO REMAIN, DURING DEMOLITION WORK. ALL DAMAGE SHALL BE REPAIRED TO THE COMPLETE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- WHEN REMOVING EXISTING CONCRETE BY CUTTING OR CHIPPING THE CONTRACTOR SHALL ONLY REMOVE REINFORCING BARS WHICH CANNOT BE BENT INTO AREAS WHERE NEW CONCRETE WOULD COMPLETELY COVER THEM.
- IF FRACTURE OF ADJACENT CONCRETE OCCURS DURING DEMOLITION/ALTERATION WORK, THE REPAIR SHALL BE WITH AN ENGINEER APPROVED PRESSURE INJECTED EPOXY, TO THE COMPLETE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PROVIDE WRITTEN PLAN AND DESCRIPTION OF ALL DEMOLITION, MODIFICATION, OR ALTERATION WORK ON EXISTING STRUCTURES FOR REVIEW AND ACCEPTANCE PRIOR TO BEGINNING WORK.

CAST-IN-PLACE CONCRETE

- THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI STANDARD 350-06/350R-06 CODE AND ACI DETAILING MANUAL, SP-06 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER
- ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
- ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 5000 PSI @ 28 DAYS, UNLESS NOTED OTHERWISE.
- STEEL REINFORCING SHALL NOT BE SPLICED AT POINTS OTHER THAN SHOWN ON THE PLANS, EXCEPT AS APPROVED BY THE ENGINEER, UNLESS NOTED OTHERWISE.
- ALL COLD JOINTS IN CONCRETE STRUCTURES SHALL HAVE A CONTINUOUS WATERSTOP CREATING A WATERTIGHT JOINT AS DETAILED. WHERE NOT SPECIFIED ALL COLD JOINTS SHALL HAVE A HYDROPHILIC WATERSTOP PER SPECIFICATIONS. KEEP WATERSTOP DRY DURING INSTALLATION AND UNTIL NEW CONCRETE POUR.
- THE LENGTH OF ALL LAP SPLICES SHALL BE AS SPECIFIED IN "REINFORCING TENSION SPLICE TABLE" ON THIS SHEET UNLESS OTHERWISE INDICATED IN DRAWINGS. WHEN BARS OF DIFFERENT SIZE ARE BEING LAPPED, THE LENGTH SHALL BE THE SPECIFIED LAP LENGTH OF THE LARGER BAR.
- BOTTOM AND TOP REINFORCING BARS FOR ALL DISCONTINUOUS ENDS OF BEAMS AND SLABS SHALL HAVE HOOKS AND SPLICES CONFORMING TO ACI MANUAL OF STANDARD PRACTICE.
- ALL NEW TO EXISTING CONCRETE SHALL HAVE A CONTINUOUS HYDROPHILIC RUBBER WATERSTOP (TYP, U.N.O.)
- ALL FILLET AND TOPPING CONCRETE SHALL BE HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 8000 PSI, FILLET CONCRETE, SHALL BE PLACED TO PRODUCE CONTOURS INDICATED ON PLANS, AND SHALL RECEIVE SMOOTH FLOAT FINISH.
- CONCRETE COVER OVER PRIMARY REINFORCEMENT SHALL BE (2) INCHES MINIMUM (1 1/2" FOR COLUMN TIES AND BEAM STIRRUPS), UNLESS NOTED OTHERWISE, AND (3) INCHES MINIMUM WHERE CAST AGAINST EARTH.

CONCRETE REPAIR

- SEE SHEET S-502 FOR CONCRETE REHABILITATION DETAILS.
- FOR CONCRETE PATCHING MATERIAL, SEE SPECIFICATION SECTION 03 93 00.
- CONCRETE CRACK REPAIR SHALL BE PERFORMED USING A HYDROPHILIC POLYURETHANE INJECTION REFER TO SPEC SECTION 03 93 00 FOR ADDITIONAL INFORMATION. THE QUANTITIES OF CRACK REPAIR FOR BIDDING PURPOSES ARE IN THE "STRUCTURAL DEFECT QUANTITY SUMMARY TABLE" ON THIS SHEET.

METALS-STEEL

- STRUCTURAL STEEL AND MISCELLANEOUS METALS DESIGN SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC/ANSI 360.
- ALL STRUCTURAL STEEL W AND WT SHAPES SHALL CONFORM TO ASTM A-992, GRADE 50. MISCELLANEOUS METALS SHALL CONFORM TO ASTM A-36.
- BOLTS SHALL BE A MINIMUM 3/4" DIAMETER, ASTM A325N, TYPE 1, UNLESS NOTED OTHERWISE. PROVIDE COMPATIBLE A563 GRADE DH, HEAVY HEX NUTS, AND F436 GRADE 1 WASHERS.
- ALL GALVANIZED STEEL SHALL BE HOT-DIP GALVANIZED CONFORMING TO ASTM A123, UNLESS NOTED OTHERWISE.
- ALL STAINLESS STEEL BARS AND SHAPES SHALL CONFORM TO ASTM A267, TYPE 316 OR 316L. ALL STAINLESS STEEL PLATES SHALL CONFORM TO ASTM A240, TYPE 316 OR 316L, UNLESS OTHERWISE SPECIFIED.
- WELDING SHALL CONFORM TO AWS D1.1 AND AISC 341-05. ALL ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR A5.5, CLASS E70XX.
- STAINLESS STEEL WELDING SHALL CONFORM TO AWS D1.6. ALL ELECTRODES FOR STAINLESS STEEL FABRICATION SHALL CONFORM TO A5.4 OR A5.9.

MISCELLANEOUS

- CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND ACCOMMODATE OPENINGS AND EMBEDDED ITEMS SHOWN ON OTHER DRAWINGS.

DESIGN LOADS

- DESIGN LOADS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2018.
- DESIGN LOADS (GENERAL) - RISK CATEGORY III
 - CONC. SLAB LIVE LOAD = 200 PSF
 - PLATFORMS, WALKS AND STAIR LIVE LOAD = 100 PSF
- WIND LOADS:
 - BASIC WIND SPEED (3-SECOND) = 113 MPH
 - WIND EXPOSURE = CATEGORY C
 - TOPOGRAPHIC FACTOR Kz1 = 1.0
 - HEIGHT AND EXPOSURE FACTOR: = 1.40
- EARTHQUAKE LOADS:
 - SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS Ss = 0.205
 - SPECTRAL RESPONSE ACCELERATION AT 1-SEC PERIODS S1 = 0.088
 - SITE CLASS C
 - DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS Sds = 0.219
 - DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-SEC PERIODS Sd1 = 0.141
 - SEISMIC USE GROUP B
 - SEISMIC IMPORTANCE FACTOR I = 1.25

ABBREVIATIONS

ALT	ALTERNATE	HPC	HIGH PERFORMANCE COATING
ALUM	ALUMINUM	HK	HOOK
AVG	AVERAGE	HT	HEIGHT
B	BOTTOM	ID	INSIDE DIAMETER
BLDG	BUILDING	IEP	INVERT ELEVATION
BM	BEAM	IF	INSIDE FACE
BOTT	BOTTOM	IN	INCHES
BSMT	BASEMENT	IN TO IN	IN FACE WALL TO IN FACE WALL
CJ	CONSTRUCTION JOINT	INS	INSIDE
CL	CENTERLINE	INT	INTERIOR
CLR	CLEAR	JT	JOINT
CHAN	CHANNEL	KIP	THOUSAND POUNDS
COL	COLUMN	KSI	KIPS PER SQUARE INCH
CONC	CONCRETE	KB	KNEE BRACE
CONST	CONSTANT	L	LENGTH
CONSTR	CONSTRUCTION	LP	LOW POINT
CONT	CONTINUOUS	LGHT	LENGTH
CLSM	CONTROLLED LOW STRENGTH MATERIAL	MATRL	MATERIAL
CMU	CONCRETE MASONRY UNIT	MAX	MAXIMUM
COR	CORNER	MIN	MINIMUM
CY	CUBIC YARD	MCP	MULTIPLE CORROSION PROTECTION
DBR	DOWEL BAR REPLACEMENT	MO	MASONRY OPENING
DBL	DOUBLE	NA	NOT APPLICABLE
DET	DETAIL	NF	NEAR FACE
DIA	DIAMETER	NS	NEAR SIDE
DIAG	DIAGONAL	NTS	NOT TO SCALE
DISC	DISCONTINUOUS	NOT IN CONTRACT	NOT IN CONTRACT
DWLS	DOWELS	OC	ON CENTER
EJ	EXPANSION JOINT	OD	OUT SIDE DIAMETER
EE	EACH END	OF	OUT SIDE FACE
EF	EACH FACE	OPNG	OPENING
ES	EACH SIDE	OPS	OPPOSITE
EQ	EQUAL	PSF	POUNDS PER SQ. FEET
EW	EACH WAY	PSI	POUNDS PER SQUARE INCH
EAC	EACH	PT	PRESSURE TREATED
EL	ELEVATION	REINF	REINFORCEMENT
EX	EXISTING	RE	REFER TO
EXIST	EXISTING/ EXTENSION	REM	REMOVABLE
EXT	EXTERIOR/ EXTENSION	SHTS	SHEETS
FC	FILLET CONCRETE	SIM	SIMILAR
FD	FLOOR DRAIN	SJ	SLAB CONTROL JOINT
FF	FAR FACE	SS	STAINLESS STEEL
FS	FAR SIDE	STR	STIRRUPS
FIN	FINISH	STRUCT	STRUCTURAL
FL	FLOOR	T	TYPE
FND	FOUNDATION	T/	TOP
FT	FEET	TERS	TEMPORARY EARTH RETENTION SYSTEM
FTNG	FOOTING	THK	THICK
GR	GALVANIZED	TOS	ELEVATION TOP OF STRUCTURAL STEEL
GR	GRADE	TYP	TYPICAL
GWV	GROSS VEHICLE WEIGHT	UNO	UNLESS NOTED OTHERWISE
H	HORIZONTAL	V	VERTICAL
HC	HOLLOW CORE	VEF	VERTICAL EACH FACE
HEW	HORIZONTAL EACH WAY	W	WIDTH
HP	HIGH POINT	WP	WORK POINT

**ADHESIVE ANCHORING SYSTEM
MINIMUM EMBEDMENT DEPTH FOR
DOWELS AND RODS**

REINFORCING BARS/DOWELS		
BAR SIZE	EMBED DEPTH	REMARKS
#3	5 1/2"	
#4	5 1/2"	
#5	7"	
#6	8 1/2"	
#7	10"	
#8	11 3/4"	

ANCHOR RODS		
BOLT DIAMETER	EMBED DEPTH	
3/8"	3 1/2"	
1/2"	4 1/4"	
5/8"	5"	
3/4"	6 5/8"	
1"	8 1/4"	

- NOTES:**
- ALL ANCHORS INSTALLED WITH AN ADHESIVE ANCHORING SYSTEM SHALL, AT A MINIMUM, HAVE THE EMBEDMENT DEPTHS INDICATED IN THE TABLE ABOVE UNLESS SPECIFICALLY INDICATED OTHERWISE ON DRAWINGS.
 - CONFIRM REQUIRED EMBEDMENT DEPTHS WITH MANUFACTURERS REQUIREMENTS FOR DEVELOPING THE TENSION CAPACITY OF THE ANCHOR RODS (TYP).

**REINFORCING TENSION
SPLICE TABLE**

BAR SIZE	TENSION LAP	* TOP BARS
#3	16"	22"
#4	20"	29"
#5	24"	36"
#6	29"	43"
#7	42"	63"
#8	48"	72"
#9	54"	81"
#10	61"	91"
#11	67"	101"

- NOTES:**
- ABOVE TABLE IS FOR NORMAL WEIGHT CONCRETE; f'c = 5,000 PSI AND REINFORCING STEEL; fy = 60,000 PSI.
 - ALL SPLICES SHALL BE CONSIDERED TENSION SPLICES USING LAP LENGTHS IN TABLE ABOVE UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS.
 - LENGTHS ARE BASED ON LAP CLASS B SPLICES WITH CENTER TO CENTER SPACING OF BARS GREATER THAN 6 DIAMETERS.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST UNDER THEM.
 - USE TENSION LAP LENGTHS FOR HORIZONTAL & VERTICAL WALL BARS.

STRUCTURAL DEFECT QUANTITY SUMMARY TABLE

ITEM	DEFECT TYPE	ESTIMATED QUANTITY	PAY UNIT
1	FILLET CONCRETE SPALL	56	SFT
2	JOINT SEALANT REPAIR	16	LFT
3	T1 CRACK REPAIR-LEAKING >6" AF	214	LFT
4	T1 CRACK REPAIR-LEAKING <6" AF	117	LFT
5	T1 CRACK REPAIR-LEAKING OVERHEAD	144	LFT
6	LEDGER ANGLE REPLACEMENT (DET. 6 / S-501)	170	LFT



The Water Tower
2500 Clear Water Ct, Bldg A, Ste 304
Buford, GA 30519
470.447.2388
www.wadeftrim.com

Certificate of Authorization Name: Wade Trim, Inc.
Authorization Number: PE007490
Expiration date: 06/30/2025

CONSULTANT PROJ. NO. GWN200101Q

NO RECORD DRAWING ON



BUFORD, GA
GWINNETT COUNTY
DEPARTMENT OF WATER
RESOURCES
LANIER
FILTER PLANT
2590 S. WATERWORKS
ROAD 30518

GCDWR PROJ. NO. M-1188-80

C	DATE	DESIGN	HY
B	10/16/23	60% DESIGN	HY
A	05/26/23	30% DESIGN	HY
NO	DATE	ISSUED FOR	BY

DATE 08/16/2024
DESIGNED BY TMB
DRAWN BY TSB
CHECKED BY BG
CHECKED BY BG
APPROVED BY HY

SHEET TITLE

NOTES, ABBREVIATIONS, AND TABLES

78 S-001

SCALE: As indicated

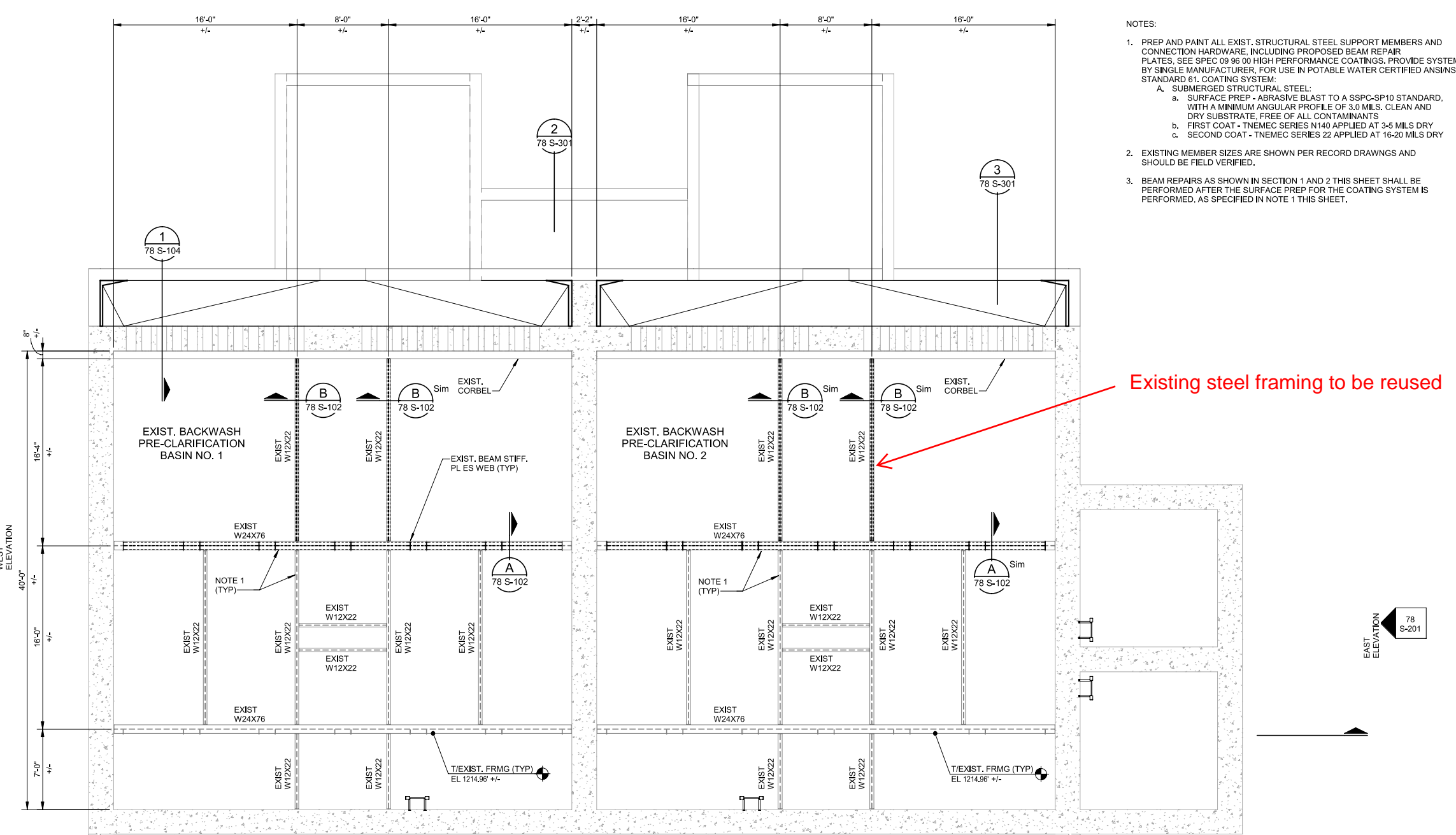
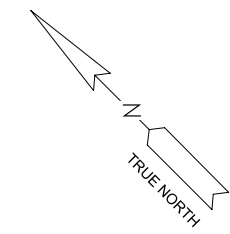
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Autodesk Docs://GWN2001-Lanier Filter Plant/GWN200101Q-LFP Residuals Predarification Basin Rehab-S-R22.rvt

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Autodesk Docs://GWN2001-Lanier Filter Plant/GWN200101Q-LFP Residuals Preclarification Basin Rehab-S-R22.rvt 8/15/2024 3:41:39 PM

1 2 3 4 5 6



- NOTES:
- PREP AND PAINT ALL EXIST. STRUCTURAL STEEL SUPPORT MEMBERS AND CONNECTION HARDWARE, INCLUDING PROPOSED BEAM REPAIR PLATES, SEE SPEC 09 96 00 HIGH PERFORMANCE COATINGS. PROVIDE SYSTEM BY SINGLE MANUFACTURER, FOR USE IN POTABLE WATER CERTIFIED ANSINFS STANDARD 61. COATING SYSTEM:
 - SUBMERGED STRUCTURAL STEEL:
 - SURFACE PREP - ABRASIVE BLAST TO A SSPC-SP10 STANDARD, WITH A MINIMUM ANGULAR PROFILE OF 3.0 MILS. CLEAN AND DRY SUBSTRATE, FREE OF ALL CONTAMINANTS
 - FIRST COAT - TNEPEC SERIES N140 APPLIED AT 3-5 MILS DRY
 - SECOND COAT - TNEPEC SERIES 22 APPLIED AT 16-20 MILS DRY
 - EXISTING MEMBER SIZES ARE SHOWN PER RECORD DRAWINGS AND SHOULD BE FIELD VERIFIED.
 - BEAM REPAIRS AS SHOWN IN SECTION 1 AND 2 THIS SHEET SHALL BE PERFORMED AFTER THE SURFACE PREP FOR THE COATING SYSTEM IS PERFORMED, AS SPECIFIED IN NOTE 1 THIS SHEET.

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BUFORD, GA

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DEPARTMENT OF WATER
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LANIER
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CHECKED BY	BG
APPROVED BY	HY

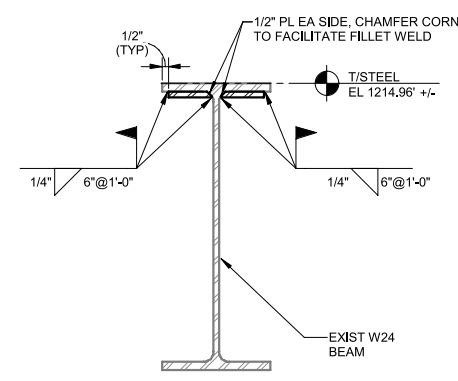
SHEET TITLE

BACKWASH
PRE-CLARIFICATION
FRAMING PLAN

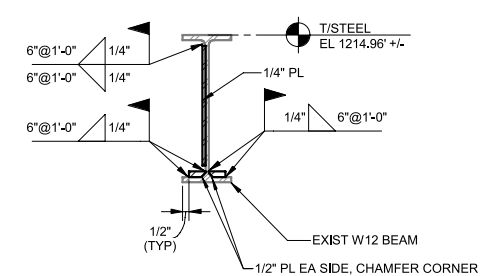
78 S-102

SCALE: As indicated

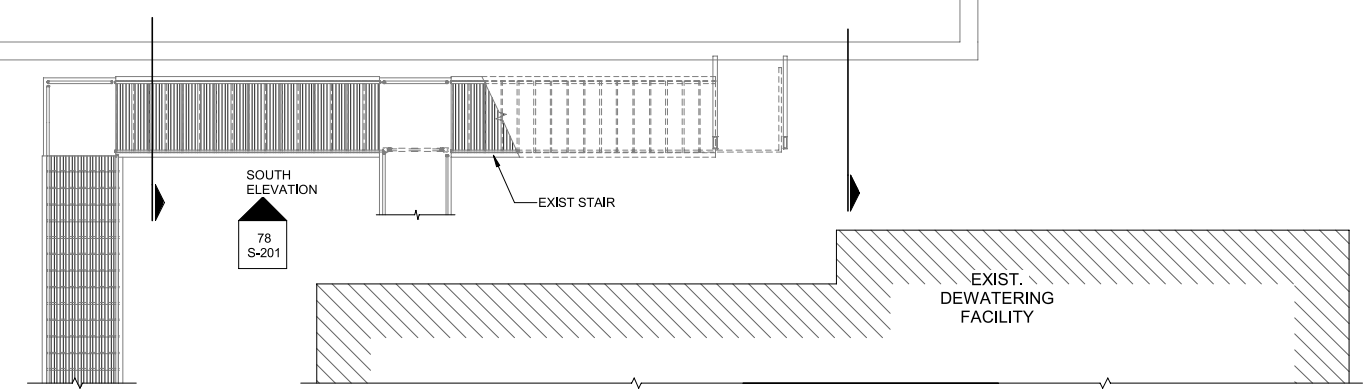
SHEET X OF XXX



A EXIST BEAM REPAIR DETAIL
78 S-102 SCALE: NONE



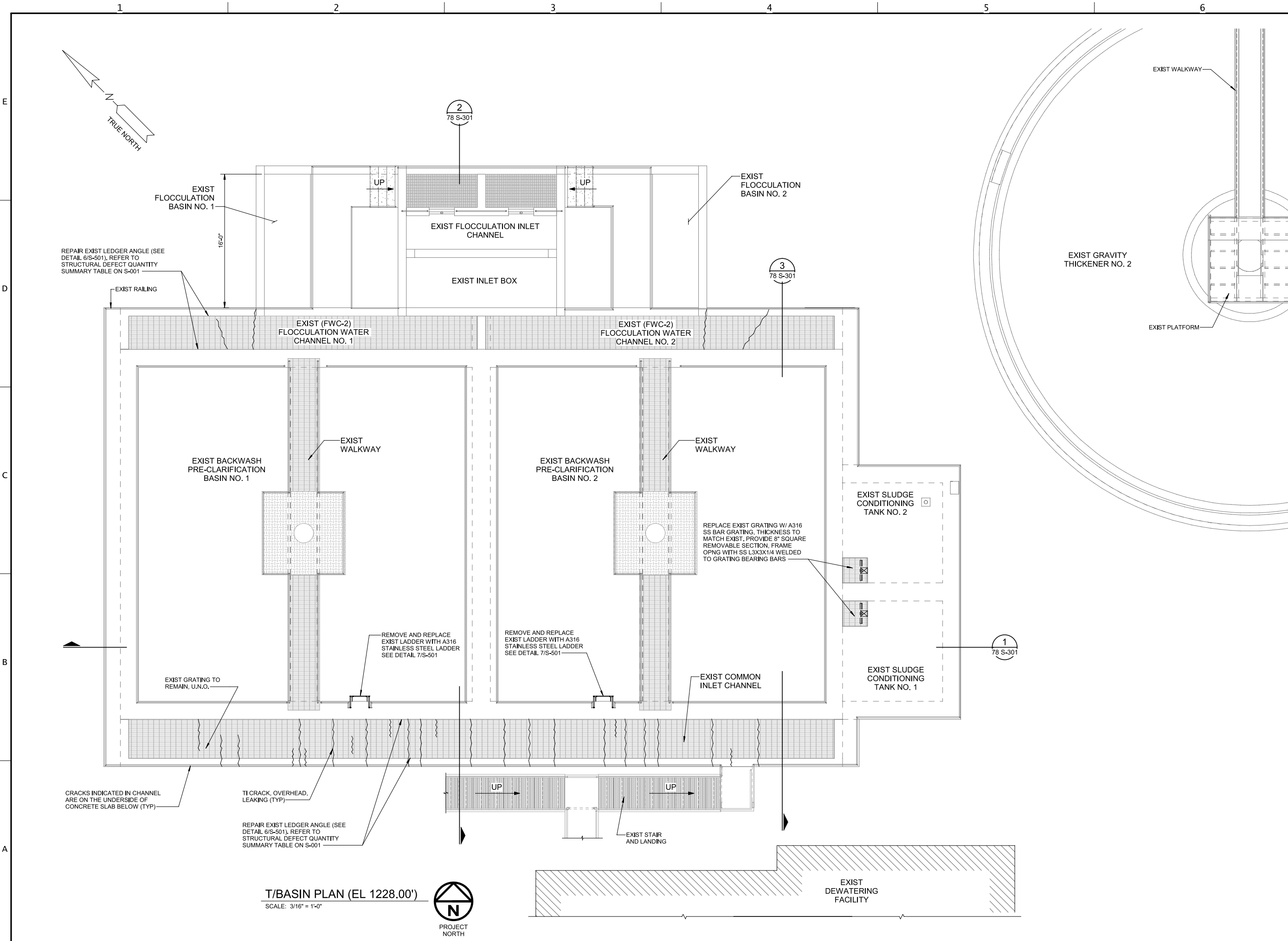
B EXIST BEAM REPAIR DETAIL
78 S-102 SCALE: NONE



EXISTING FRAMING IMPROVEMENTS PLAN
(EL 1214.96')
SCALE: 3/16" = 1'-0"



Autodesk Docs://GWN2001-Lanier Filter Plant/GWN200101Q-LFP Residuals Preclarification Basin Rehab-SR22.rvt
8/15/2024 3:41:39 PM



WADE TRIM
 The Water Tower
 2500 Clean Water Ct, Bldg A, Ste 304
 Buford, GA 30519
 470.447.2388
 www.wadefirm.com
 Certificate of Authorization Name: Wade Trim, Inc.
 Authorization Number: PEF007400
 Expiration date: 06/30/2025

CONSULTANT PROJ. NO. GWN200101Q

NO RECORD DRAWING ON

Gwinnett
 Water Resources
 BUFORD, GA

GWINNETT COUNTY
 DEPARTMENT OF WATER
 RESOURCES
LANIER
 FILTER PLANT
 2590 S. WATERWORKS
 ROAD 30518

GCDWR PROJ. NO. M-1188-80

NO	DATE	ISSUED FOR	BY
C	08/16/24	90% DESIGN	HY
B	10/16/23	60% DESIGN	HY
A	05/26/23	30% DESIGN	HY

DATE	08/16/2024
DESIGNED BY	TMB
DRAWN BY	TSB
CHECKED BY	BG
CHECKED BY	BG
APPROVED BY	HY

SHEET TITLE

**BACKWASH
 PRE-CLARIFICATION
 TOP SLAB ELEVATION**

78 S-103

SCALE: 3/16" = 1'-0"

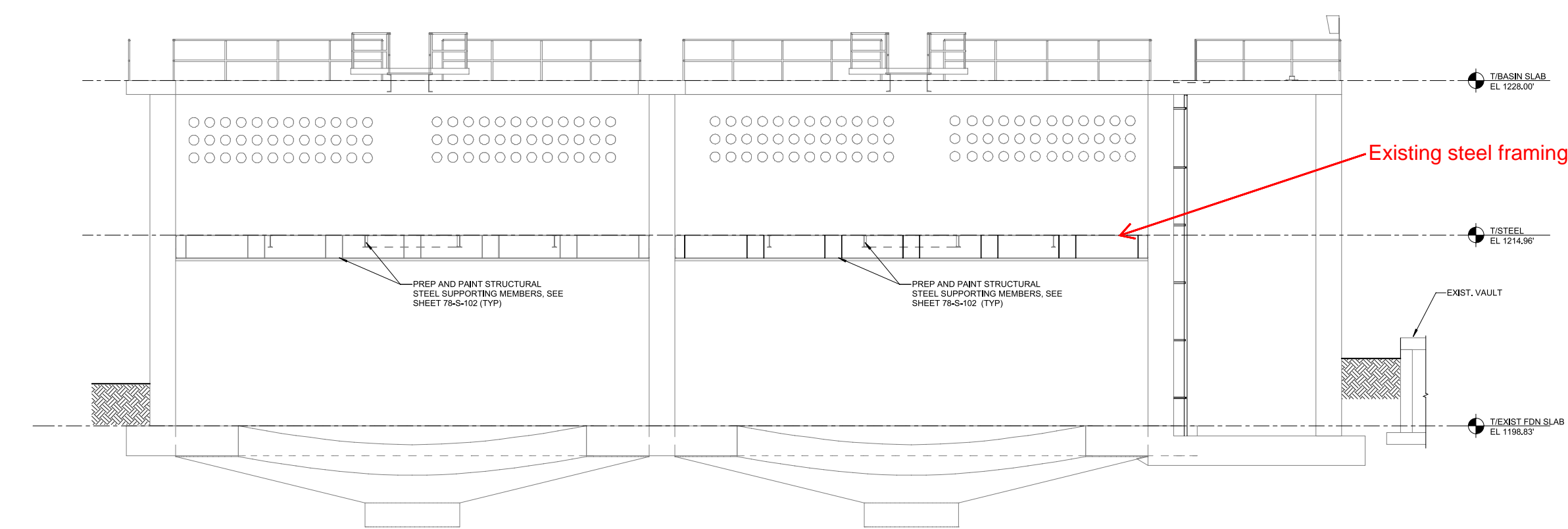
SHEET X OF XXX

T/BASIN PLAN (EL 1228.00')
 SCALE: 3/16" = 1'-0"

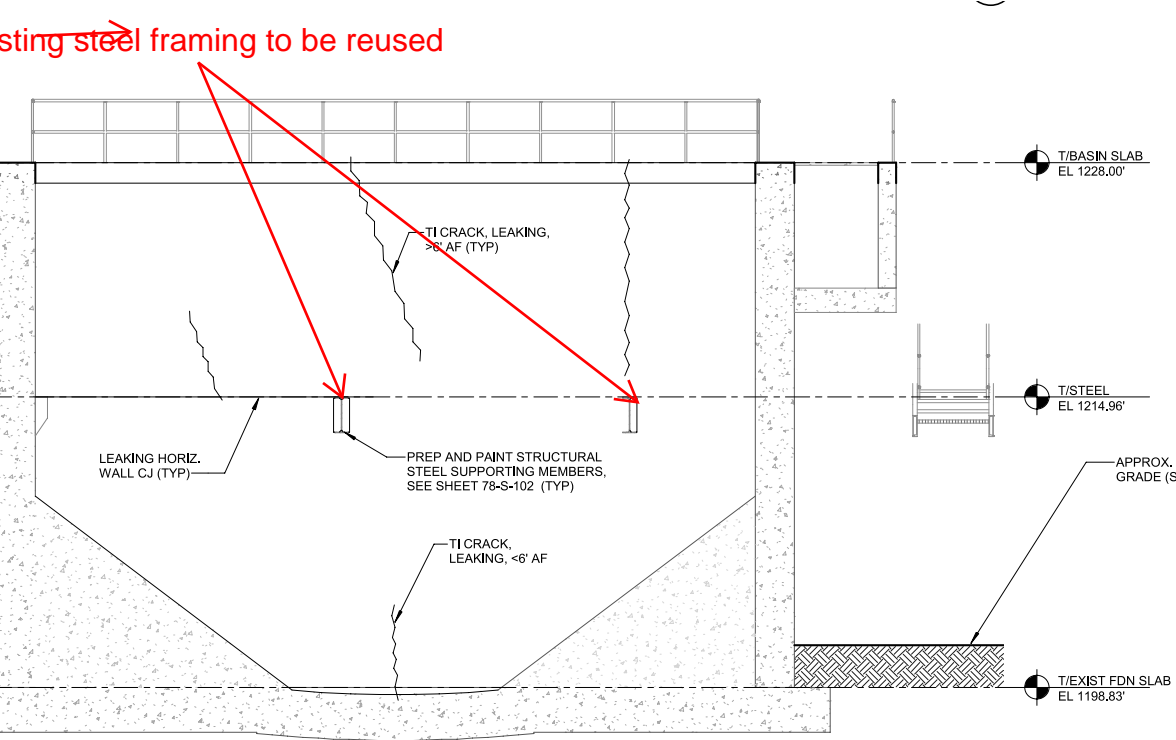
 PROJECT NORTH

Autodesk Docs://GWN2001-Lanier Filter Plant/GWN200101Q-LFP Residuals Predenitrification Basin Rehab-SR22.rvt 8/15/2024 3:41:42 PM

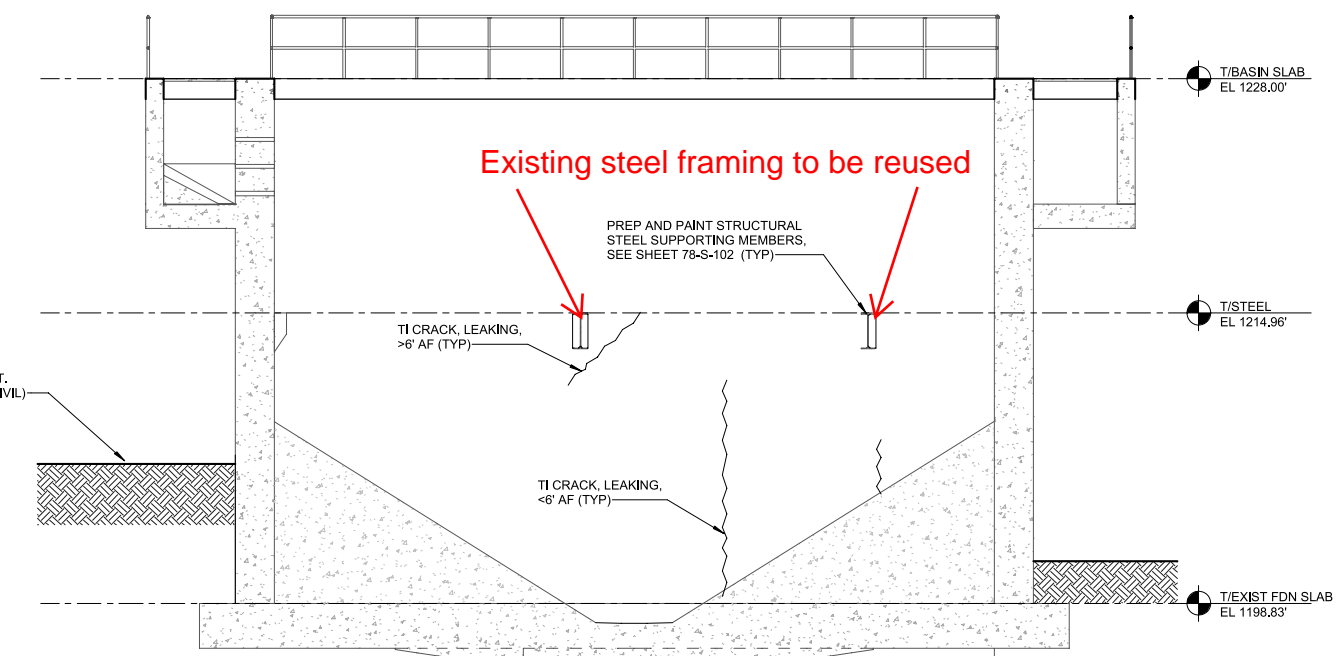
1 2 3 4 5 6



SECTION I
78 S-101 SCALE: 3/16" = 1'-0"



SECTION II
78 S-101 SCALE: 3/16" = 1'-0"



SECTION III
78 S-101 SCALE: 3/16" = 1'-0"

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CONSULTANT PROJ. NO. GWN200101Q

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BUFORD, GA

GWINNETT COUNTY
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LANIER
FILTER PLANT
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ROAD 30518

GCDWR PROJ. NO. M-1188-80

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DATE	08/16/2024
DESIGNED BY	TMB
DRAWN BY	TSB
CHECKED BY	BG
CHECKED BY	BG
APPROVED BY	HY

SHEET TITLE

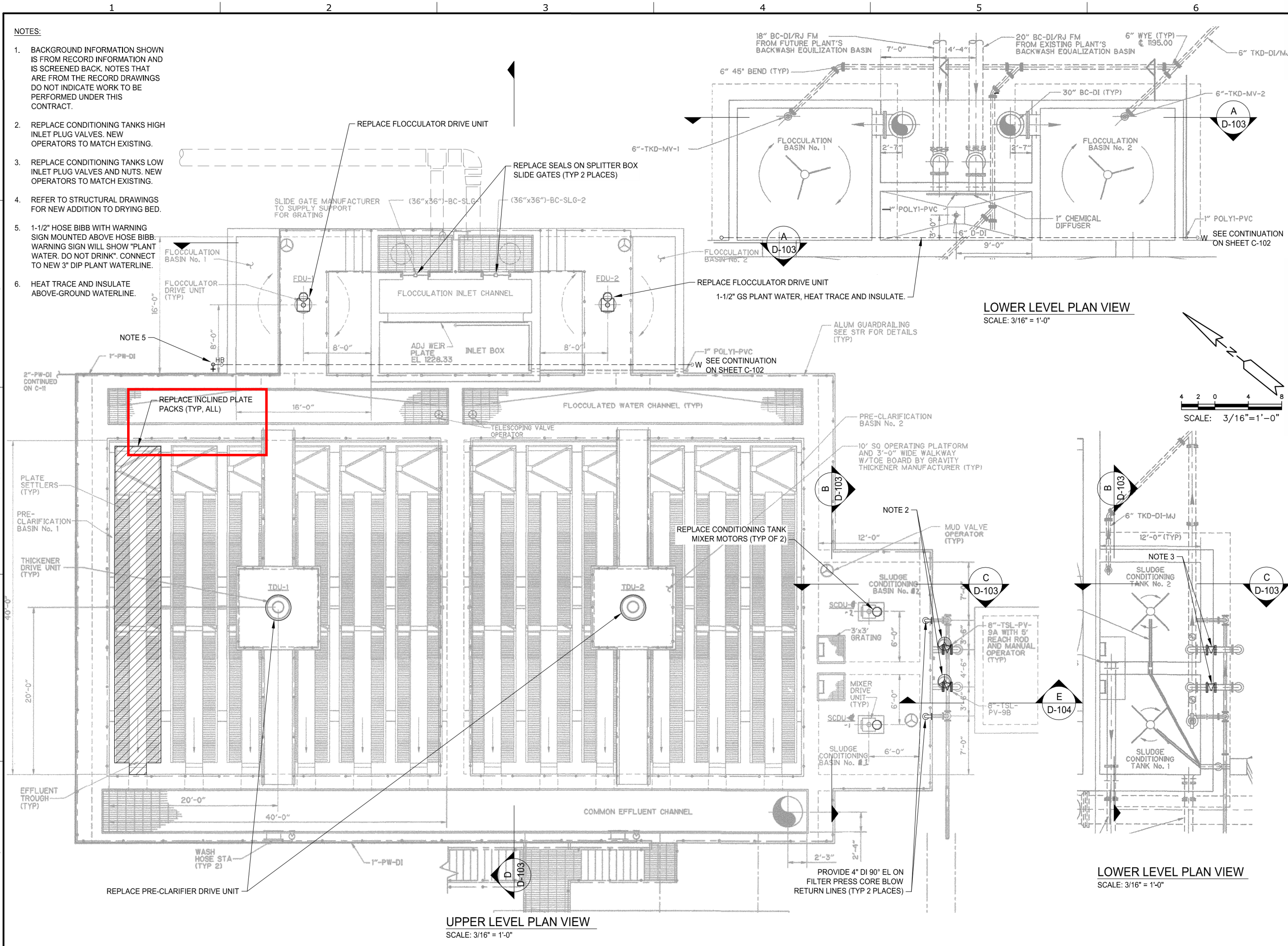
STRUCTURAL
SECTIONS

78 S-301

SCALE: 3/16" = 1'-0"

SHEET X OF XXX

c:\users\mrobertson\dc\accdocs\wade trim\gwn2001-lanier filter plant\project files\02 design\02 civil 3d\01 wade trim\wpln-78 d 102



- NOTES:**
- BACKGROUND INFORMATION SHOWN IS FROM RECORD INFORMATION AND IS SCREENED BACK. NOTES THAT ARE FROM THE RECORD DRAWINGS DO NOT INDICATE WORK TO BE PERFORMED UNDER THIS CONTRACT.
 - REPLACE CONDITIONING TANKS HIGH INLET PLUG VALVES. NEW OPERATORS TO MATCH EXISTING.
 - REPLACE CONDITIONING TANKS LOW INLET PLUG VALVES AND NUTS. NEW OPERATORS TO MATCH EXISTING.
 - REFER TO STRUCTURAL DRAWINGS FOR NEW ADDITION TO DRYING BED.
 - 1-1/2" HOSE BIBB WITH WARNING SIGN MOUNTED ABOVE HOSE BIBB. WARNING SIGN WILL SHOW "PLANT WATER. DO NOT DRINK". CONNECT TO NEW 3" DIP PLANT WATERLINE.
 - HEAT TRACE AND INSULATE ABOVE-GROUND WATERLINE.

The Water Tower
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Buford, GA 30519
407.447.2388
www.wadetrtrim.com

Certificate of Authorization Name: Wade Trim, Inc.
Authorization Number: PEF007400
Expiration Date: 06/30/2026

CONSULTANT PROJ. NO. GWN200101Q

NOT FOR CONSTRUCTION

Gwinnett
Water Resources

BUFORD, GA

GWINNETT COUNTY
DEPARTMENT OF WATER
RESOURCES

**LANIER
FILTER PLANT**
2590 S. WATERWORKS
ROAD 30518

GCDWR PROJ. NO. M-1188-80

NO	DATE	ISSUED FOR	BY
C	08/16/24	90% DESIGN	GPE
B	10/30/23	60% DESIGN	GPE
A	05/26/23	30% DESIGN	GE
NO			

DATE	08/16/2024
DESIGNED BY	GPE
DRAWN BY	MDR
CHECKED BY	RH
CHECKED BY	
APPROVED BY	HY

SHEET TITLE

**PRE-CLARIFICATION
BASIN
MODIFICATIONS
PLANS**

78 D-102

SCALE: AS SHOWN

SHEET X OF XXX

Aug-15-2024 11:17:42

Aug-15-2024 11:11:03
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CONSULTANT PROJ. NO. GWN200101Q

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BUFORD, GA

GWINNETT COUNTY
 DEPARTMENT OF WATER
 RESOURCES

LANIER
 FILTER PLANT
 2590 S. WATERWORKS
 ROAD 30518

GCDWR PROJ. NO. M-1188-80

NO	DATE	ISSUED FOR	BY
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DATE	08/16/2024
DESIGNED BY	GPE
DRAWN BY	MDR
CHECKED BY	RH
CHECKED BY	
APPROVED BY	HY

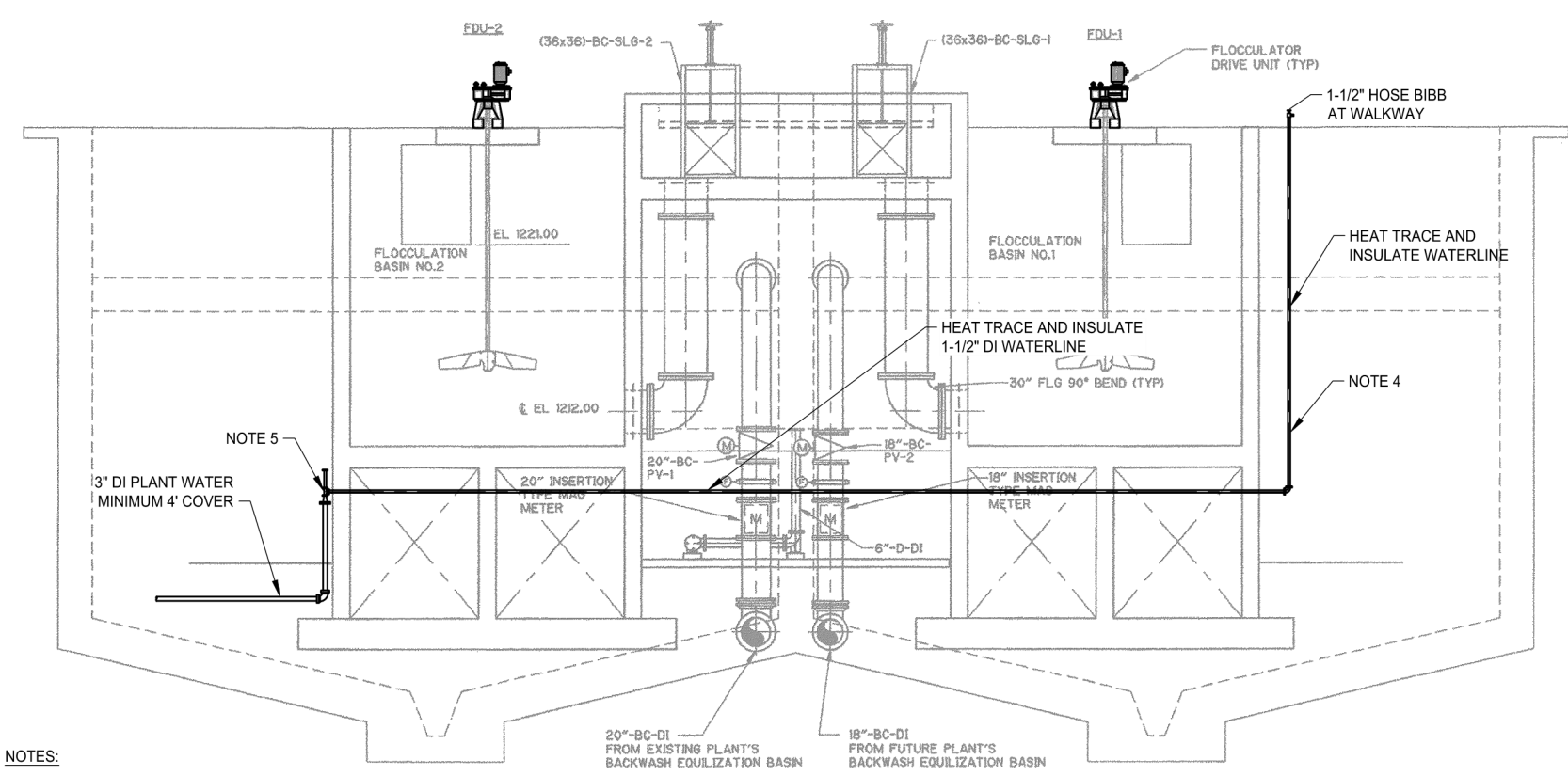
SHEET TITLE

**PRE-CLARIFICATION
 BASIN
 MODIFICATIONS
 SECTIONS**

78 D-103

SCALE: AS SHOWN

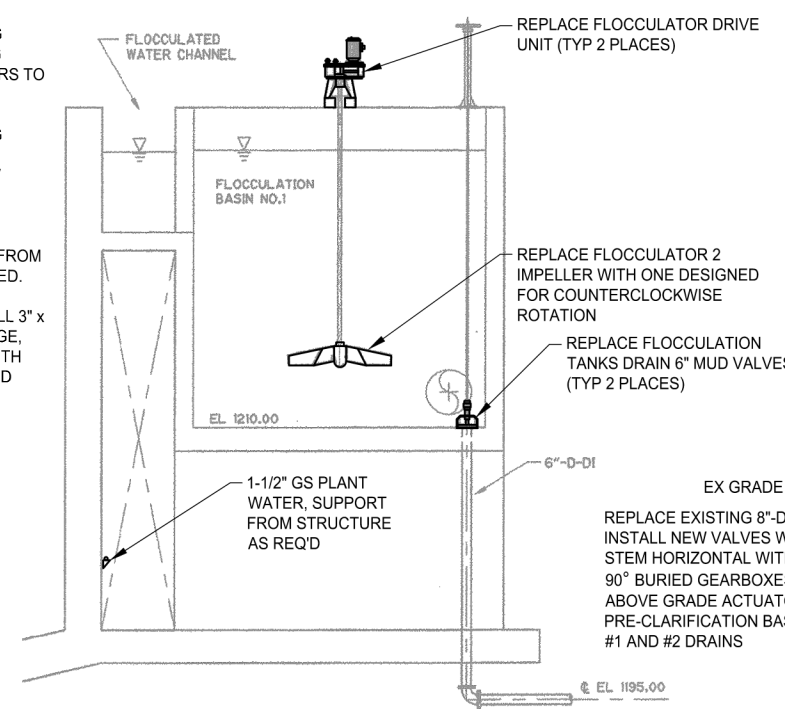
SHEET X OF XXX



PRE-CLARIFICATION INLET PIPING AND FLOCCULATION BASINS

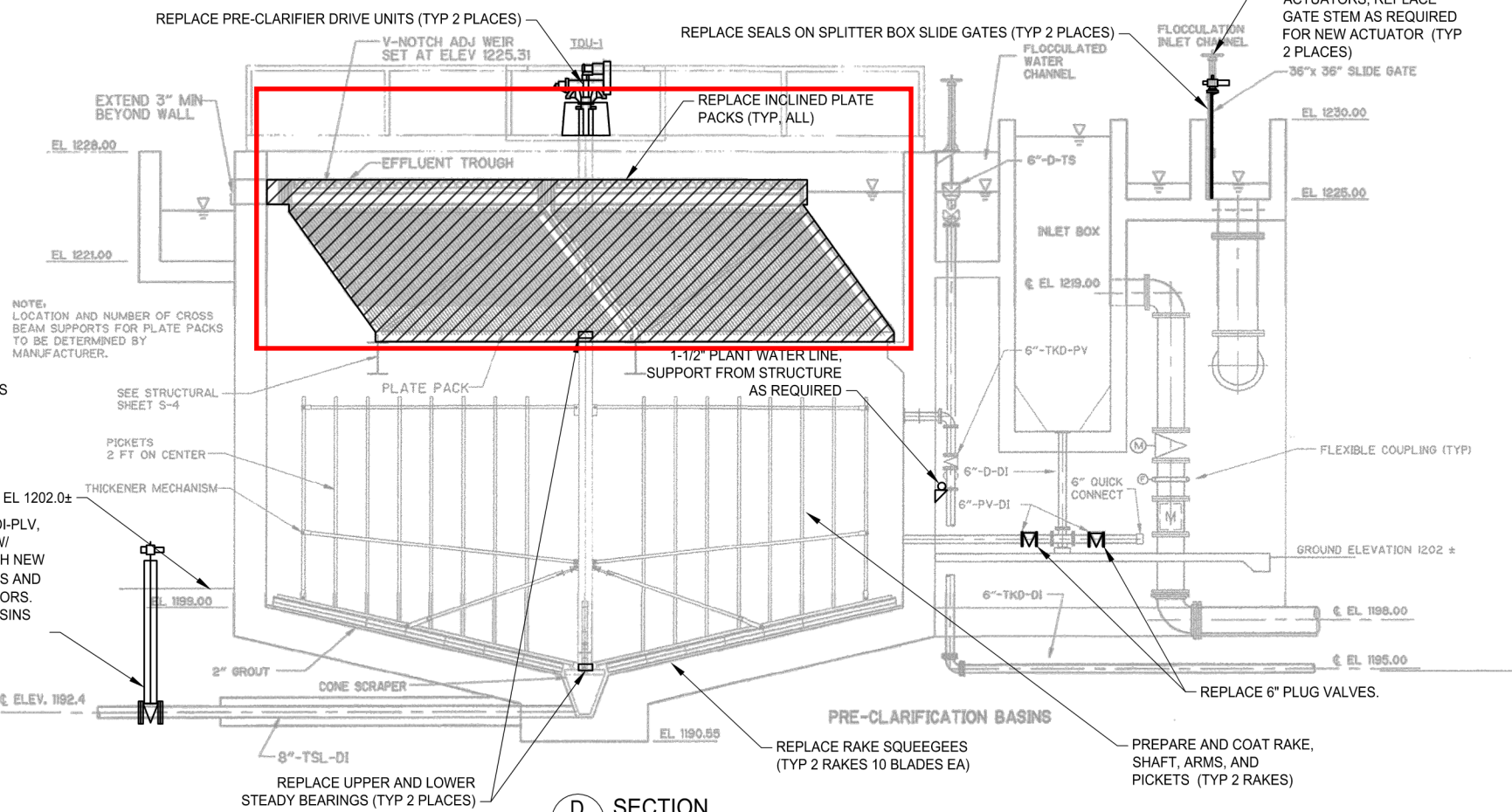
A SECTION
D-102 SCALE: 3/16" = 1'-0"

- NOTES:
- BACKGROUND INFORMATION SHOWN IS FROM RECORD INFORMATION AND IS SCREENED BACK. NOTES THAT ARE FROM THE RECORD DRAWINGS DO NOT INDICATE WORK TO BE PERFORMED UNDER THIS CONTRACT.
 - REPLACE CONDITIONING TANKS HIGH INLET PLUG VALVES. NEW OPERATORS TO MATCH EXISTING.
 - REPLACE CONDITIONING TANKS LOW INLET PLUG VALVES AND NUTS. NEW OPERATORS TO MATCH EXISTING.
 - SUPPORT WATERLINES FROM STRUCTURE AS REQUIRED.
 - CONTRACTOR TO INSTALL 3" x 1-1/2" COMPANION FLANGE, 1-1/2" TEE, AND 12" LENGTH OF 1-1/2" PIPE WITH BLIND FLANGE.



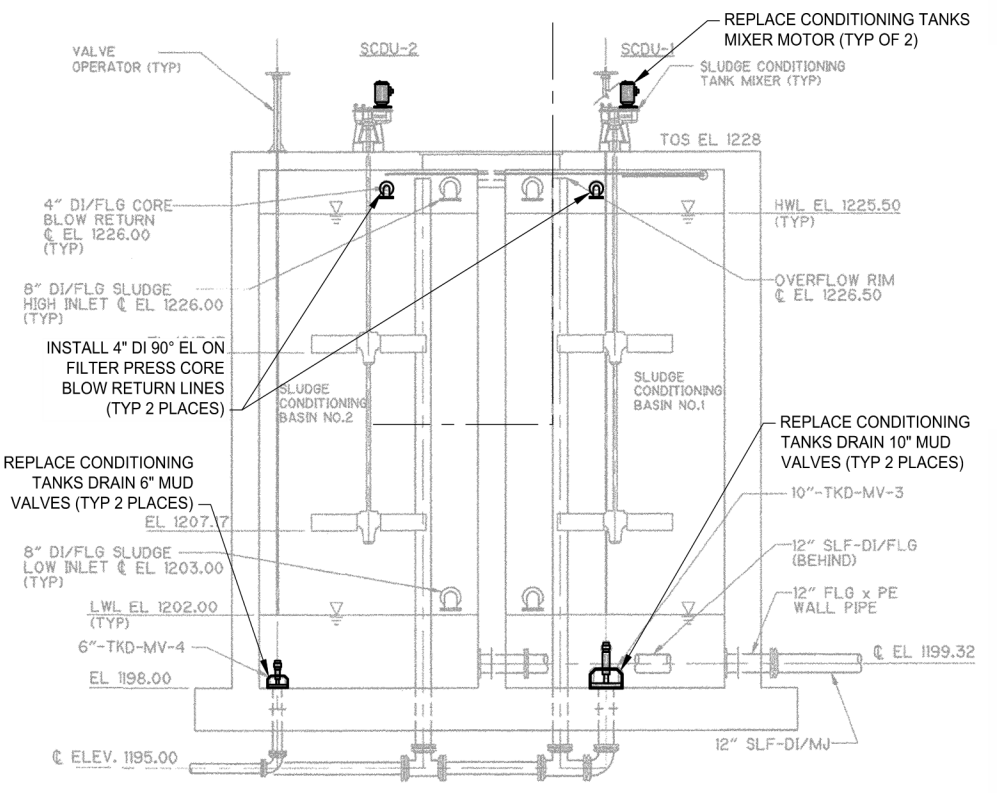
FLOCCULATION BASIN AND INLET PIPING

C SECTION
D-102 SCALE: 3/16" = 1'-0"



PRE-CLARIFICATION BASINS

D SECTION
D-102 SCALE: 3/16" = 1'-0"



SLUDGE CONDITIONING TANKS

B SECTION
D-102 SCALE: 3/16" = 1'-0"

- REPLACE CONDITIONING TANKS DRAIN 6" MUD VALVES (TYP 2 PLACES)
- REPLACE CONDITIONING TANKS DRAIN 10" MUD VALVES (TYP 2 PLACES)
- REPLACE EX MANUAL OPERATOR W/ELECTRIC ACTUATORS. REPLACE GATE STEM AS REQUIRED FOR NEW ACTUATOR (TYP 2 PLACES)

- REPLACE 6" PLUG VALVES.
- PREPARE AND COAT RAKE, SHAFT, ARMS, AND PICKETS (TYP 2 RAKES)

- REPLACE RAKE SQUEEGEES (TYP 2 RAKES 10 BLADES EA)
- REPLACE UPPER AND LOWER STEADY BEARINGS (TYP 2 PLACES)

D SECTION
D-102 SCALE: 3/16" = 1'-0"