



# **PROJECT MANUAL**

**FOR**

**MATTHEWS PARK  
SYNTHETIC TURF ATHLETIC FIELD  
3700 Michael Boulevard  
Mobile, Alabama 36609  
Project #PR-022-21**

**Advertisement Date: May 18, 2022**

**Espalier, LLC**  
P.O. Box 1247  
Fairhope, Alabama 36533  
251-454-3500

**and**

**City of Mobile**  
**Architectural Engineering Department**  
205 Government Plaza  
P.O. Box 1827  
Mobile, Alabama 36633-1827

**Bid Date: June 8, 2022**

**Set Number: \_\_\_\_\_**



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SECTION 00100  
INVITATION TO BID

You are invited to submit a sealed bid for construction of the following facility:

PROJECT NAME: Matthews Park – Synthetic Turf Athletic Field  
PROJECT LOCATION: 3700 Michael Boulevard, Mobile, Alabama 36609  
PROJECT NUMBER: PR-022-21

1 BID DATE:

- A. Sealed Bids will be received and clocked in until 2:15 PM local time, Wednesday, the **8th day of June, 2022**. Bidders shall insert sealed Bids into a receptacle, marked “City of Mobile Bids”, located in the elevator lobby outside the office of the City Clerk Office, 9th Floor South Tower, Government Plaza, 205 Government Street, Mobile, Alabama 36602.
- B. All Bids not clocked in at the City Clerk’s Office prior to the time specified, or Bids received after the specified time, will be automatically rejected and returned immediately, unopened.
- C. Bids will be publicly opened and read at 2:30 PM local time, in the Atrium Lobby of Government Plaza.

2 SPECIFICATIONS AND DRAWINGS:

- A. Specifications and Drawings are on file and may be examined and obtained from the following location: <https://www.cityofmobile.org/bids/>
- B. Bidders shall use complete sets of Bid Documents in preparing their bid. Neither the Owner nor Architect/Engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.
- C. **Addenda will be issued via e-mail to all Pre-Bid Conference attendees.**
- D. **This is a tax exempt project and shall be certified by the requirements of the Alabama Department of Revenue. Bidders shall NOT include sales and use taxes with their bid amounts. Bidders shall complete the Sales Tax Form C-3A and include it as an attachment to their Bid Form (see Section 00400).**
- E. Product Substitutions must be pre-approved before the bid (see Section 01400 for requirements).

3 BID SURETY: Required on Bids \$10,000.00 or more

- A. A Cashier’s Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00 is required to accompany Bid.
- B. Bid Bond must be issued by a Surety licensed to do business in the State of Alabama. Bidder shall require the attorney in fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

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- C. No Bid may be modified, withdrawn, or canceled for a period of sixty (60) days after the time designated above for receipt of bids.
  - D. The City of Mobile will have sixty (60) days from the bid opening date to award contract.
- 4 SURETY QUALIFICATIONS:
- A. A Surety authorized to do business in the State of Alabama must issue Bonds.
  - B. If the Base Bid is \$50,000 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
- 5 IRREGULARITIES AND REJECTION:
- A. The City of Mobile reserves the right to waive irregularities in the Bid and in Bidding, and to reject any or all Bids.
- 6 BIDDER QUALIFICATIONS:
- A. Bids for Work costing \$50,000 or more must be licensed pursuant to current Alabama law and of classifications compliant with the State of Alabama Licensing Board for General Contractors. Note that if the contract amount is \$10,000 or greater, both a Performance Bond and a Labor and Material Payment Bond shall be required. **Before Bidding, Contractor shall verify their license classification of their General Contractors license with the State of Alabama Licensing Board for General Contractors to verify classification is acceptable to perform 51% of the Scope of Work.**
  - B. In case of a joint venture of two or more Contractors, the amount for the bid shall be within the maximum bid limitations as set by the State of Alabama Licensing Board for General Contractors of at least one of the partners to the joint venture.
- 7 NON-RESIDENT CONTRACTORS:
- A. Except for contracts funded in whole or part with funds received from a federal agency, preference shall be given to resident Contractors on the same basis as the nonresident Contractor's state awards contracts to Alabama Contractors bidding in similar circumstances.
  - B. Nonresident Bidders shall, prior to submitting a bid, be registered with the Alabama Secretary of State and the Alabama Department of Revenue. Provide the Secretary of State Business "Entity ID Number" on the Bid Form in the space provided.
- 8 PRE-BID CONFERENCE:
- A. A Pre-Bid Conference shall be held on **May 25, 2022, at Matthews Park, 3700 Michael Boulevard**, at 9:00 AM local time. The conference will include a walkthrough of the site location. Bidders are required to participate in the Pre-Bid Conference, visit the site prior to submitting a Bid and include all costs associated with the project in their Bids.
  - B. Minutes of this conference will be made as an Addendum for the project.

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9 BID SUBMITTAL:

- A. Bids must be submitted on copies of the Bid Forms furnished in the bidding documents.
- B. Bid, with Bid Security, Sales Tax Form C-3A, City of Mobile Subcontracting and Major Supplier Plan and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words "**SEALED BID FOR MATTHEWS PARK – SYNTHETIC TURF ATHLETIC FIELD - PROJECT NUMBER: PR-022-21**".
- C. The Bid envelope shall be clearly addressed to the Owner as indicated on the Bid Form and include the bid date, the name, address and State License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors.
- D. All Bids of \$50,000 or more must include the bidder's State of Alabama General Contractor's License information written on the outside of the bid envelope. Any bid submitted without such license information may be rejected and returned to the bidder unopened.
- E. In addition, in large letters on both front and back of envelope, write the following: **DO NOT OPEN UNTIL TWO-THIRTY PM, JUNE 8, 2022.**
- F. For a bid to be valid it shall be delivered at designated location prior to time and date for receipt of Bids indicated in INVITATION TO BID, or prior to any extension thereof issued to Bidders. After that time no Bid will be received or withdrawn.
- G. When sent by mail, preferably special delivery, express service, or registered mail, the sealed Bid, marked as indicated above, shall be enclosed in another envelope for mailing such that the exterior mailing container or envelope may be opened without revealing the contents of the Bid. It is the Contractors responsibility to assure delivery of the bid to the City Clerk's Office prior the time and date established.

10 EQUAL OPPORTUNITY:

- A. The City of Mobile, Alabama is an Equal Opportunity Employer and requires that all Contractors comply with the Equal Employment Opportunity laws and the provisions of the Bid Documents in this regard.
- B. The City of Mobile also encourages and supports the utilization of Minority Business Enterprises on these and all other publicly solicited Bids, and shall be in compliance with the City of Mobile's Minority Utilization Plan as adopted by the City Council.
- C. Contractor shall provide an appropriately completed copy of the "City of Mobile Subcontracting and Major Supplier Plan" in the envelope with their Bid Form. Form shall document DBE Subcontractors participating in the project and, should the total % of DBE participation not meet the 15% minimum, all efforts to obtain DBE Subcontractors shall be documented on or attached to the DBE Form when submitted. During construction, contractors are required to submit a "DBE Utilization Report" with every Pay Application.

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- D. Contractors should contact the City of Mobile, Supplier Diversity Manager for assistance with DBE Subcontractor information and any questions regarding the DBE Compliance Forms. Contact Archnique Kidd at 251-208-7967.
- E. A Directory of DBE Vendors can be found at the following location:  
<https://workwith.cityofmobile.org/>

11 ADDITIONAL BIDDING PROCEDURES:

- A. Refer to the complete information in the Bid Documents prior to submitting a bid. Additional Bidding Procedure information is contained therein, particularly in the specification Section 00200 "Instructions to Bidders - AIA Document A701" and in the specification Section 00300 "Supplementary Instructions to Bidders".

12 STATE OF ALABAMA IMMIGRATION ACT

"The State of Alabama, under the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No. 2011-535, Alabama Code Section 31-13-1, et. Seq., requires:

- A. That the Contractor shall be enrolled in the E-Verify Program, shall participate in that Program during the performance of the contract, and shall verify the immigration status of every employee who is required to be verified, according to the applicable federal rules and regulations; and
- B. That it will attach to the contract the company's documentation of enrollment in E-Verify.
- C. The subcontractor must also enroll in the E-Verify Program prior to performing any work on the contract and shall attach to its sworn affidavit documentation establishing that the subcontractor is enrolled in the E-Verify Program.

13 PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

- A. By signing this contract, Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

END OF SECTION 00100



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**SECTION 00200**  
**INSTRUCTIONS TO BIDDERS**

**PART 1 GENERAL**

- A. This section includes the INSTRUCTIONS TO BIDDERS, AIA Document A701 to be utilized with the Owner's most recent modifications and which shall be used in conjunction with the entire Bid Documents and Section 00300 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS for this project.



# DRAFT AIA® Document A701™ - 2018

## Instructions to Bidders

for the following Project:

*(Name, location, and detailed description)*

«Matthews Park – 3700 Michael Boulevard»  
«Mobile, Alabama 36609»  
«PR-022-21»

### THE OWNER:

*(Name, legal status, address, and other information)*

«City of Mobile »« »  
«PO Box 1827 »  
«Mobile, Alabama 36633-1827 »  
« »

### THE ARCHITECT:

*(Name, legal status, address, and other information)*

«Espalier, LLC»« »  
«P.O. Box 1247»  
«Fairhope, Alabama 36533»  
« »

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### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™-2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.



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## ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents. A Bidder must be licensed by the State Licensing Board for General Contractors if the amount for the Contract exceeds the amount established by said Board.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work. A Sub-bidder performing Work must be licensed by the State Licensing Board for General Contractors if the Sub-bidders' contract amount exceeds that established by said Board.

1.10 A non-resident Bidder or Sub-bidder is one who

- a. Is neither organized nor existing under the laws of the State of Alabama
- b. nor maintains its principal place of business in the State of Alabama.

A non-resident contractor who has maintained a permanent branch office within the State of Alabama for at least five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as such contractor continues to maintain a branch office within Alabama.

## ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

§ 2.2 The Bidder is licensed by the State Licensing Board for General Contractors and the amount Bid does not exceed the Bid Limit stipulated in the Bidder's License and by the City of Mobile.

§ 2.3 Each and every Contractor belonging to or comprising a part of any entity that is bidding as a joint venture or association involving two or more contractors is licensed by the State Licensing Board for General Contractors and that the amount Bid does not exceed the Bid limit stipulated in at least one of their licenses.

§ 2.4 Any non-resident Bidder is authorized by the Secretary of State of Alabama and is registered with Alabama Department of Revenue to transact business in Alabama.

§ 2.5 Joint Ventures or Associations of Contractors, whether the same are Bidders or Subcontractors of Bidders, will remain in existence until all insurance and warranty requirements for the Project have been fulfilled.

### **ARTICLE 3 BIDDING DOCUMENTS**

#### **§ 3.1 Distribution**

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

#### **§ 3.2 Modification or Interpretation of Bidding Documents**

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least five (5) calendar days prior to the date for receipt of Bids.

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.2.4 The Contract Drawings and Specifications are intended to cooperate and agree, but should conflicts or difference be found to exist between the requirements within either and clarification has not been obtained in accordance with the above procedure prior to Bidding, then the most costly and/or restrictive interpretation by the decision of the Architectural Engineering Department Director will be final.

#### **§ 3.3 Substitutions**

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

#### **§ 3.3.2 Substitution Process**

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least fifteen (15) calendar days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.3.6 See Division One Section "Substitution Procedures", if included in Specification.

#### § 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than two (2) days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

### ARTICLE 4 BIDDING PROCEDURES

#### § 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents. No bid will be considered unless made out and submitted on a copy of the Bid Form, Section 00410. Additional Bid Forms will be furnished to prospective Bidders upon request.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

Unit Prices: Supply requested Unit Prices where shown on the Bid Form. Such Unit Prices shall be used to adjust the Contract Amount where the quantities shown on the Drawings and/or Specifications do not reflect amounts required for completion of the work. Where Completion of the Work requires quantities in excess of those shown on the drawings and specifications, unit prices shall be used to compute an extra payment to the Contractor. Where completion of work required quantities less than those on the Drawings and/or specifications, unit prices shall be used to compute a credit to the Owner.

Contingency Allowance: As shown on the Bid Form, Contractor shall add the amount of the contingency allowance to the Base Bid to derive the Total Bid. The contingency allowance shall cover cost of material, labor, overhead, profit

and other expenses for complete installation of items of additional work as required for a complete functional project. The contingency allowance shall be used to fund unforeseen conditions not covered in the construction documents and shall be subject to the provisions of change orders. Upon the completion of work any unused portion of the contingency allowance shall be credited to the Owner by change order.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

#### § 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security if so required in the Bidding Documents: *(Insert the form and amount of bid security.)*

«The Bidder shall provide a Bid Security in the form of a cashier's check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond. Bid Security is required for bids exceeding \$10,000.00. Bid Security shall be in the amount of 5% of the TOTAL BID, but in no event more than \$10,000.00.»

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected.

§ 4.2.5 Bonds must be issued by a Surety authorized to do business in the State of Alabama. A Performance Bond and a Labor and Material Payment Bond are required for projects exceeding \$10,000.00. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.

#### § 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

*(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)*

«Submission of Bid shall be as stated in Section 00100, Invitation to Bid, Paragraph 9, titled "Bid Submittal".»

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted and will be returned unopened.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

#### § 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

### ARTICLE 5 CONSIDERATION OF BIDS

#### § 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

#### § 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

#### § 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 The Owner shall accept Alternates in the order listed on the Bid Form to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

### ARTICLE 6 POST-BID INFORMATION

#### § 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

#### § 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, within three (3) calendar days or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.
- .4 The name of the Project Superintendent and Project Manager together with the resume of qualifications of each;
- .5 Nonresident Contractor shall submit a letter from an attorney as required by Subparagraph 11.1.2 below and;
- .6 Engineering Firm or Testing Laboratory for testing as specified.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.



§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

§ 6.3.5 The Contractor shall, within ten (10) calendar days of receiving Contract Forms for signature, furnish to the Owner the following items, along with the signed contract, or the Bid Security will be forfeited automatically without further delay:

- .1 A Signed Construction Contract;
- .2 Performance Bond and Labor and Material Payment Bond (originals) on all Bids over \$10,000.00;
- .3 Certificate of Insurance and copy of Builder's Risk Policy (original), as identified in the specifications;
- .4 Schedule of Values; and
- .5 Federal Immigration Law Compliance: E-Verify enrollment documentation.

§ 6.3.6 The Bid Check or Bond of the three (3) lowest Bidders will not be returned until after the Construction Contract is executed.

## ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

### § 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

§ 7.1.4 A Surety authorized to do business in the State of Alabama shall issue Performance Bond and Labor and Material Payment Bond, as required by the Contract Documents. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc.

### § 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than ten (10) calendar days from receiving the Construction Contract forms for signature.

§ 7.2.2 The bonds shall be written on City's Performance Bond and Labor and Material Payment Bond forms.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

## **ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

§ 8.1.1 AIA Document A101, Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a stipulated sum will be edited electronically and include the standard signatures as required by the City of Mobile.

## **ARTICLE 9 NONDISCRIMINATION**

§ 9.1.1 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities. Contractor shall provide a completed copy of the City of Mobile Subcontracting and Major Supplier Plan with the Bid Form, for bids of \$250,000.00 or greater.

## **ARTICLE 10 USE OF DOMESTIC PRODUCTS**

§ 10.1.1 Section 39-3-1 Code of Alabama provides that the Contractor agrees, in the execution of this contract, to use material supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500 nor more than 20 percent of the gross amount of the contract price.

§ 10.1.2 Section 39-3-4, Code of Alabama provides that the Contractor for a municipal construction project, financed by the State of Alabama or any political subdivision thereof, is required to use steel produced within the United States. If the Contractor violates the requirement to use domestic steel, this contract will automatically be revoked and the contractor shall not be entitled to any set-off or recoupment for labor or materials used up to the time of revocation.

## **ARTICLE 11 PREFERENCE TO RESIDENT CONTRACTORS**

§ 11.1.1 Except for contracts funded in whole or in part with funds received from a federal agency, preference shall be given to Alabama resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded the contracts only on the same basis as a the nonresident bidder's state awards contracts to Alabama contractors bidding under similar circumstances. In the letting of public contracts in which any state, county or municipal funds are utilized, resident contractors in Alabama, be they corporations, individuals or partnerships, are to be granted preference over nonresidents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of domicile of the nonresident.

§ 11.1.2 A successful nonresident bidder shall include in his post bid submittals a written opinion of an attorney at law licensed to practice law in such nonresident bidders' state of domicile, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that state in the letting of any or all public contracts.

## **ARTICLE 12 PRE-BID REQUIREMENTS**

### **§ 12.1 STATE OF ALABAMA CONTRACTORS LICENSE**

§ 12.1.1 If the Project total bid amount is \$50,000 or more, a license issued by the State of Alabama Licensing Board for General Contractors is required prior to submitting a bid and the licensed classification and bid limits must cover the type of work in this project. See Invitation to Bid, Section 6 "Bidder Qualifications".

### **§ 12.2 A NONRESIDENT BIDDER**

§ 12.2.1 Every bidder shall be registered with the Department of Revenue and with the Alabama Secretary of the State prior to bidding. The Secretary of State's "Business Entity ID" registration number shall be included on the bid form.

## **ARTICLE 13 POST-BID REQUIREMENTS**

### **§ 13.1 CITY CONTRACTOR'S LICENSE**

13.1.1 A City of Mobile Contractors License is required and must be current before the Contractor signs the Contract. Contractor must qualify and post \$10,000.00 Surety Bond with the Land Use/Code Administration Department before a Contractors License will be issued by the Revenue Department. Information on the City Contractors License may be obtained by writing or calling:

Land Use/Code Administration  
P. O. Box 1827  
Mobile, Alabama 36633-1827  
Phone: 251.208.7421

Revenue Department  
P. O. Box 1827  
Mobile, Alabama 36633-1827  
251.208.7461

**13.2 E-VERIFY DOCUMENTATION**

§ 13.2.1 The Contractor agrees that it shall comply with all of the requirements of the State of Alabama Immigration Law (Act. No. 2011-535 as amended by Act. No. 2012-491, Alabama Code (1975) Section 31-13-1, et. Seq., See Section 31-13-9), and the provisions of said Law, including all penalties for violation thereof, are incorporated therein.

**13.3 PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES**

§ 13.3 The Contractor represents and agrees that it is not currently engaged in, nor will engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.





SECTION 00300  
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

**THE ATTENTION OF ALL BIDDERS IS CALLED TO THE FOLLOWING  
INSTRUCTIONS AND CONDITIONS:**

I. BIDDING DOCUMENTS:

- A. Bidders may obtain complete sets of Bid Documents and Specifications (Project Manual) from the Department of Architectural Engineering as listed in the Invitation to Bid.
- B. Bidders shall use the complete set of documents in preparing their bid. Neither the City of Mobile nor the Architect assume responsibility for errors or misinterpretations resulting from use of an incomplete set of documents.

2. INTERPRETATION OF BID DOCUMENTS:

- A. Bidders shall carefully study and compare the Bidding Documents and compare various components of the Bidding Documents with each other, shall examine the site and local conditions and shall at once report to the Project Manager any errors, inconsistencies or ambiguities discovered.
- B. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Project Manager by 3:00 PM at least five (5) calendar days prior to the date for receipt of Bids. E-mail requests are required and should be addressed to [joe@espaliertdesign.com](mailto:joe@espaliertdesign.com). Interpretations, corrections and changes to the Bidding Documents will be made by a formal, written Addendum. Interpretations, corrections and changes to the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely on them.
- C. Any discrepancy not resolved prior to Bidding shall be bid by the Contractor to provide for the most costly and/or restrictive interpretation of the documents.

3. BIDDING PROCEDURES:

- A. No Bid will be considered unless made out and submitted on a copy of the Bid Form as set forth by the Bid Documents.
- B. All blanks on the Bid Form shall be legibly executed in a non-erasable medium.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- D. Interlineations, alterations and erasures must be initialed by the signer of the Bid.

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- E. All requested Alternates, Unit Prices and Allowances shall be bid as indicated on the Bid Form and the Bid Documents.
- F. Addenda shall be considered as a part of the Bid Documents and those issued prior to the opening of Bids shall be acknowledged on the Bid Form and any adjustment in cost shall be included in the Contract Sum.

4. BID SECURITY:

- A. A Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00, must accompany bid. By submitting a Bid Security, the Bidder pledges to enter into a Contract with the City of Mobile on the terms stated in the Bid, and will, if required, furnish bonds covering faithful performance of the Contract and required insurance certificate. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds or insurance or any other required document, the amount of the Bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
- B. Bid Bond shall be valid for a minimum of sixty (60) days from the date of the Bid. The Owner reserves the right to retain the security of all Bidders until the successful Bidder enters into the Contract or until (60) days after Bid opening, whichever is sooner.
- C. Bonds must be issued by a Surety licensed to do business in the State of Alabama. If the project cost is more than \$50,000.00 the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
- D. Power of Attorney is required for all Bonds.
- E. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment of retainage being made to the Contractor.

5. EXAMINATION OF DOCUMENTS AND SITE WORK:

- A. Before submitting a Bid, Bidders should carefully examine the Bid Documents, visit the site of the Work, including attendance at the MANDATORY Pre-Bid conference, fully inform themselves as to existing conditions and limitations, and include in the Bid a sum to cover the cost of all items included in the Contract and necessary to perform the Work. The submission of a Bid will be considered as conclusive evidence that the Bidder has made such examination.

6. SUBMISSION OF BIDS:

- A. Bid, with Bid Security, Sales Tax Form C-3A, City of Mobile Subcontracting & Major Supplier Plan and other supporting data specified, shall be contained in a

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sealed, opaque envelope, approximately 9 x 12 inches or larger and be marked on the outside with the words "SEALED BID FOR MATTHEWS PARK – SYNTHETIC TURF ATHLETIC FIELD, PR-022-21", the Bid Date, and Contractor's name, address, and City of Mobile Business License number. And, if bidding in an amount \$50,000 or greater, the State of Alabama General Contractor's License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors shall be written on the envelope.

- B. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date specified in the Invitation to Bid, or as modified by Addendum, will not be considered. Late Bids will be returned to the Bidder unopened.
- C. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- D. Oral, telephonic, facsimile or other electronically transmitted bids will not be considered.

7. MODIFICATION OR WITHDRAWAL OF BIDS:

- A. A Bid may not be modified, withdrawn, or canceled by the Bidder for a period of sixty (60) days following the time and date designated for receipt of bids, and each Bidder so agrees in submitting a Bid.

8. CONSIDERATION AND AWARD OF BIDS:

- A. At the discretion of the City, the properly identified Bids received on time will be publicly opened and will be read aloud.
- B. The City shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid security or a Bid which is in any way incomplete or irregular is subject to rejection.
- C. It is the intent of the City to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The City shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the City's judgment, is in the City's best interest.
- D. The award shall be based on the lowest Total Bid for the Base Bid and any allowances, plus any alternates and/or options that may be accepted, as listed on the Bid Form.

9. PROOF OF COMPETENCY OF BIDDER:

- A. Bidders may be required to furnish evidence satisfactory to the City of Mobile that they have sufficient means and experience in the types of work called for to assure the completion of the Contract in a satisfactory manner.

10. SIGNING OF CONTRACT:

- A. The Standard Agreement between the City of Mobile and the Contractor, included herein, shall serve as the Agreement between the City and the Contractor.
- B. The Bidder to whom the Contract is awarded shall, within ten (10) calendar days of receiving the Contract Forms, properly execute and deliver to the Owner, the following items with the signed Agreement:
  - (1). Performance Bond and Labor and Material Payment Bond (originals);
  - (2). Certificate of Insurance (original) with endorsements to City of Mobile;
  - (3). Evidence of enrollment in the E-Verify program.
  - (4). Other documentation as required by the Contract Documents.
- C. Failure or refusal to sign the Agreement or to provide Certificates of Insurance in a form satisfactory to the City of Mobile, E-Verify verification, or other required documentation, shall subject the Bidder to immediate forfeiture of Bid Security.
- D. On all documents: City of Mobile Business License, the Alabama Secretary of State Business Identity, the Alabama Secretary of State Certificate of Authority (out of state contractors), E-verify documentation, and ACORD Insurance Form, the Contractor's name shall be EXACTLY the same.

11. NONDISCRIMINATION:

- A. Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, inter alia, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

12. AMERICANS WITH DISABILITIES ACT (ADA):

- A. Bidders shall comply with the provisions of the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination against individuals with disabilities.

13. USE OF DOMESTIC PRODUCTS:

- A. Section 39-3-1, Alabama Code, 1975, provides that the Contractor agree, in the execution of this Contract, to use materials, supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this Agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500.00 nor more than twenty (20) percent of gross amount of the Contract Price.



14. NON-RESIDENT (OUT OF STATE) CONTRACTORS:

- A. Preference to Resident Contractors: Section 39-3-5, Code of Alabama, 1975, provides that a non-resident (out of State) bidder domiciled in a state which grants a preference to local Contractors is to be awarded a public contract on the same basis as the non-resident bidder's state awards contracts to Alabama bidders. Alabama bidders are given a preference to the same extent that a non-resident bidder receives a preference in his home state. A non-resident bidder must include with any written bid documents a written opinion of an attorney licensed to practice in the non-resident bidder's state declaring what preferences, if any, exists in the non-resident's state.
- B. Certificate of Authority: All non-resident (out of State) bidders shall be registered with the Alabama Secretary of State and the Alabama Department of Revenue prior to submitting a Bid. Provide the Secretary of State Business "Entity ID Number" on the Bid Form in the space provided.

15. ALABAMA IMMIGRATION ACT:

- A. The State of Alabama Immigration Law (Act No. 2011-535 as amended by Act No. 2012-491), requires that Contractors not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. In addition, Contractors are required to enroll in the federal E-Verify program and submit verification of enrollment to the City of Mobile within ten (10) days of receiving the contract forms (see Section 00600).

16. CITY OF MOBILE BUSINESS LICENSE:

- A. A City of Mobile Business License is required and must be current at time of contract award and throughout contract period.

17. CITY OF MOBILE CONTRACTOR'S BUSINESS LICENSE:

- A. A City of Mobile Contractor's Business License is required and must be current when contractor signs the contract and throughout contract period.
- B. Contractor must qualify and post a \$10,000 surety bond with the Land Use/Code Administration Department before a Contractor's Business License will be issued by the Revenue Department. Information on the City Contractor's License may be obtained by writing or calling:

Land Use/Code Administration  
P.O. Box 1827  
Mobile, Alabama 36633-1827  
Phone: 251-208-7421

Revenue Department  
P.O. Box 1827  
Mobile, Alabama 36633-1827  
Phone: 251-208-7461

18. CITY OF MOBILE BUILDING PERMIT:

- A. A City of Mobile Building Permit/Electrical Permit/Plumbing Permit/HVAC Permit/Whatever Permit is required and shall be obtained from the Land Use/Code Administration Department, but at no cost to the Contractor.
- B. Contractor is responsible for ensuring that all inspections are successfully performed in accordance with City of Mobile regulations.

19. CONSTRUCTION SCHEDULE AND ACCESS:

- A. The project shall be completed within one hundred eighty (180) calendar days from the date indicated by the Notice to Proceed.
- B. At all buildings that will remain in use throughout the Construction period, the Contractor is directed to coordinate all areas of work and scheduling of work with the Owner. Within five days of the bid opening, the Apparent Low Bidder shall meet with the Owner to discuss Owner scheduling and priorities. Apparent Low Bidder shall then provide a proposed schedule within 5 calendar days of the initial meeting for Owner review and approval.
- C. Contractor shall have access to the parks and buildings as follows typically 7:00 am to 5:00 pm.
- D. The Contractor may be allowed additional construction days due to inclement conditions ("rain days") only as such are appropriately documented and are in excess of the NOAA/National Weather Service average (previous 5 years) for the given month. A "rain day" is defined as more than a "trace" (0.10") of rain falling within a given 24 hour period. The Contractor shall provide documentation and formally request any "rain days" they feel are legitimately due. Documentation shall be submitted to the Project Manager, in writing, within ten (10) calendar days of the rain event. Claim shall include documentation of trades adversely impacted and the impacted activities of each trade.

20. SITE CONSIDERATIONS:

- A. It is the Contractor's responsibility to carefully remove and store any items not permanently installed within the work areas. We strongly recommend that the Contractor photograph, videotape or in some manner document any features to be removed and their condition, prior to removal.
- B. Noise and strong smells shall be isolated or kept to a minimum when adjacent portions of the site are occupied.
- C. Contractor shall be responsible to leave the work area and adjacent site clear of equipment and debris, etc. at the end of each work day. All final cleaning is the responsibility of the Contractor and shall be executed prior to acceptance for reuse of any portion of the site.

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- D. A dumpster and lay down area for Contractor materials and staging may be located at the site and located per the direction of the Owner. The Contractor is responsible for the removal of the dumpster, any storage containers and any security fencing, temporary erosion control (BMPs), etc. as soon as practical after their use by the Contractor or the work is complete.

21. SALES AND USE TAX EXEMPTION:

- A. As per the State of Alabama ACT 2013-205, the Alabama Department of Revenue (ADOR) has been granted the authority to issue a "Certificate of Exemption from Sales and Use Tax for Governmental Entities" on construction projects. Therefore, this project shall qualify for State of Alabama Sales and Use Tax Exemptions under this ACT. It is the responsibility of the Bidder to confirm the potential tax exempt status of their bid with the ADOR and include any such savings in their bid, as well as accounting for same on their bid form attachment Sales Tax Form C-3A.
- B. The full text of ACT 2013-205 is available on the State of Alabama Building Commission web-site at [www.bc.alabama.gov](http://www.bc.alabama.gov).

22. SUBMISSION OF LIEN WAIVERS AND DBE COMPLIANCE, UTILIZATION REPORTS:

- A. At each monthly Application for Payment submitted to the owner, the Contractor shall provide completed "City of Mobile DBE Compliance, Utilization Reports" and lien waivers, including those from Subcontractors and material suppliers.

23. NOTICE OF COMPLETION:

- A. For Contracts \$50,000 or greater:  
Contractor shall provide proof of publication of Advertisement of Completion for four consecutive weeks in a local newspaper, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama. This Advertisement shall not begin until the Project has been accepted by the City of Mobile.
- B. Notice of Completion advertisement shall read as follows:

STATE OF ALABAMA

COUNTY OF MOBILE

NOTICE OF COMPLETION

In accordance with Chapter 1, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that (COMPANY NAME) has completed the contract for MATTHEWS PARK – SYNTHETIC TURF ATHLETIC FIELD, 3700 MICHAEL BOULEVARD, MOBILE, ALABAMA 36609, PR-034-21. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P.O. Box 1827, Mobile, Alabama 36633-1827.

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- C. Advertisement shall not begin until the Project has been accepted by the City of Mobile as Substantially Complete.

24. CONTRACTOR WARRANTY AND CERTIFICATION:

- A. Upon completion of the contract, the Contractor shall certify under oath that all bills have been paid in full.
- B. Contractor shall provide a one year Labor and Materials Warranty on company letterhead in addition to other warranties required by the Bid Documents.

25. LIQUIDATED DAMAGES

- A. A time charge equal to Two Hundred Fifty Dollars (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted, or any required closeout documents are not acceptably submitted, for more than thirty (30) calendar days after the time specified for the Substantial Completion for the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained.

**END OF SECTION**

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SECTION 00400

BID FORM

Copies of the following Bid Forms shall be used. Bids submitted on alternate forms may be rejected. Fill in all blank spaces with an appropriate entry. Bid Form must be signed by an officer of the company and notarized.

**TO: City of Mobile, 205 Government St., P.O. Box 1827, Mobile, AL, 36633**

**REF: PROJECT NO.: PR-022-21**  
**PROJECT NAME: Matthews Park –**  
**Synthetic Turf Athletic Field**  
**PROJECT LOCATION: 3700 Michael Boulevard**  
**Mobile, Alabama, 36609**

thoroughly examined said documents for the subject Work prepared by the City of Mobile, Architectural Engineering Department and Espalier, LLC. dated May 18, 2022; and all Addendum (a) Number(s) \_\_\_\_\_, dated \_\_\_\_\_, 2022 (CAUTION: before submitting any bid it is the Bidder's responsibility to check with the Architectural Engineering Department for all Addenda or special instructions that may impact the Bid) thereto, receipt of which is hereby acknowledged, the premises and all conditions affecting the Work prior to making this Proposal, the Undersigned Bidder, hereby

**COMPANY NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_ **PHONE** \_\_\_\_\_

**ALABAMA GENERAL CONTRACTOR LICENSE NO.** \_\_\_\_\_

**CITY OF MOBILE BUSINESS LICENSE NO.** \_\_\_\_\_

**SECRETARY OF STATE OF ALABAMA BUSINESS IDENTITY NO.** \_\_\_\_\_

**SECRETARY OF STATE OF ALABAMA ACCOUNT NO.** \_\_\_\_\_

(Note: Secretary of State Account Number shall be filled in only by non-resident bidders)

(Check one)  A Corporation  A Partnership  An Individual Doing Business

hereby proposes to furnish all labor, materials, tools, equipment, and supplies and to sustain all the expenses incurred in performing the Work on the above captioned Project in accordance with the terms of the Contract Documents, and all applicable laws and regulations for the sum listed below. The initial term of the Contract shall extend for one hundred eighty (180) calendar days from the date of the Notice to Proceed.

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**Base Bid:** \$ \_\_\_\_\_ .00  
**Contingency Allowance:** + \$ 50,000.00  
**Total Base Bid:** \$ \_\_\_\_\_ .00  
(Fill in here and in Total Bid below)

\_\_\_\_\_ Dollars, (\$ \_\_\_\_\_ .00)  
(Amount in Words) (Amount in Figures)

**Additive Alternate #1:** Purchase and install outfield net system as specified.

\_\_\_\_\_ Dollars & No Cents \$ \_\_\_\_\_ .00  
Amount in Words (Amount in Figures)

Unit Price #1: Provide and Install on-site placement and compaction of soil (Cut/Fill) – CY, includes excavating or filling. Cut material will be placed elsewhere on-site. Fill material will be from material onsite, and all other necessary construction components for installation.

\$ \_\_\_\_\_ CY

Unit Price #2: Unsuitable Soil Material – Cubic Yards In Place, includes excavation, haul off and disposal of unsuitable material.

\$ \_\_\_\_\_ CYIP

Unit Price #3: Structural Fill – Cubic Yards In Place, Provide and Install Imported Structural Fill, spread, compaction, and all other necessary construction components for installation.

\$ \_\_\_\_\_ CYIP

Unit Price #4: Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.

\$ \_\_\_\_\_ LF

Unit Price #5: Provide and install inlet protection. Includes installation, removal, and all other necessary construction components for installation.

\$ \_\_\_\_\_ EA

Unit Price #6: Provide and install wattles. Includes installation, removal, and all other necessary construction components for installation.

\$ \_\_\_\_\_ EA

Unit Price #7: Provide and install 12" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$ \_\_\_\_\_ LF

Matthews Park  
Synthetic Turf Athletic Field  
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Unit Price #8: Provide and install 6" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

Unit Price #9: Provide and install 12" panel drain under synthetic field per detail. Include benching into subgrade, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

Unit Price #10: Provide and install 0'-4' Drop Inlet. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$\_\_\_\_\_ EA

Unit Price #11: Provide and install 12" concrete perimeter curb at synthetic field per detail. DO NOT include cost of chain link fence. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

Unit Price #12: Provide and install 4" concrete flatwork (sidewalks, fountain pads, etc) per detail. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.

\$\_\_\_\_\_ SF

Unit Price #13: Demolish and properly dispose offsite existing concrete flatwork (sidewalks) as specified on drawings. Include excavation, sawing, jack hammering, loading, haul off site, and proper disposal.

\$\_\_\_\_\_ SF

Unit Price #14: Provide and install Asphalt Patch as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

Unit Price #15: Provide and install 6' Vinyl Chain Link Fence In Perimeter Curb as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

Unit Price #16: Provide and install 6' Vinyl Chain Link Fence as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

Unit Price #17: Provide and install 7' Vinyl Chain Link Fence with privacy slats as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.

\$\_\_\_\_\_ LF

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Unit Price #18: Provide and install wall mounted drinking fountain with bottle filler as specified with sump basin specified. Include excavation, fill, compaction, grading, disposal, placement, water line connection, and all other necessary construction components for installation.

\$ \_\_\_\_\_ EA

Unit Price #19: Provide and install 8' surface mount backless bench as specified.

\$ \_\_\_\_\_ EA

Unit Price #20: Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.

\$ \_\_\_\_\_ SY

Unit Price #21: Provide and install 12" panel drain in synthetic field per detail. Include benching into subgrade, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$ \_\_\_\_\_ LF

Unit Price #22: Provide and install masonry backstop wall per detail. Include excavation, fill, compaction, grading, concrete footing, reinforcement, disposal, placement, and all other necessary construction components for installation.

\$ \_\_\_\_\_ LF

Unit Price #23: Provide and install backstop wall padding per detail. Include all materials and hardware, mounting, disposal, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ SF

Unit Price #24: Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ EA

Unit Price #25: Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ EA

Unit Price #26: Provide and install wind screen fabric as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation

\$ \_\_\_\_\_ SF

Unit Price #27: Provide and install polytube fence cap protection as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation

\$ \_\_\_\_\_ LF



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Unit Price #28: Provide and install 8" fence post padding as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation

\$ \_\_\_\_\_ LF

Unit Price #29: Provide and install compacted aggregate drive as specified. Include excavation, fill, compaction, grading, rock, disposal, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ SF

Unit Price #30: Provide and install lighting directional sign as specified. Include all materials and hardware, mounting, signs, disposal, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ EA

Unit Price #31: Provide and install scoreboard as specified. Include all materials and hardware, posts, footings, mounting, disposal, excavation, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ EA

Unit Price #32: Provide and install dugout lean railing with pad as specified. Include all materials and hardware, mounting, weld plates, disposal, placement, and all other necessary construction components for installation

\$ \_\_\_\_\_ LF

Unit Price #33: Provide and install polytube fence cap protection as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation

\$ \_\_\_\_\_ LF

(Note: Show amount in both words and figures. In case of discrepancy, the amount in words shall govern). **Bids shall be provided in whole dollar amount with no cents.**

**CONTINGENCY ALLOWANCE:** \$50,000.00 lump sum Contingency Allowance shall be included in the Total Bid for work related to unforeseen conditions as approved by the Owner.

**BID SECURITY:** The undersigned Bidder agrees that the attached Bid Security, as a Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond, made payable to the City of Mobile, in the amount of 5% of the bid amount, but in no event more than \$10,000, as the proper measure of liquidated damages which the City will sustain by the failure of the undersigned to execute the Contract. Said Bid Security shall become the property of the City of Mobile as liquidated damages as specified in the Contract Documents.

Matthews Park  
Synthetic Turf Athletic Field  
Mobile, Alabama  
PR-022-21

**AMERICANS WITH DISABILITIES ACT (ADA):** The undersigned Bidder agrees to fully comply with all requirements of the Americans with Disabilities Act of 1990 and the Amendment Act.

**NONDISCRIMINATION:** Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

**SIGNATURE:** If the undersigned Bidder is incorporated, the entire legal title of the company followed by "a corporation" should be used. If Bidder is an individual, then that individual's full legal name followed by doing business as (d/b/a) and name of firm, if any, should be used. If Bidder is a partnership, then full name of each partner should be listed followed by "d/b/a" and name of firm, if any.

Ensure that name and exact arrangement thereof is the same on all forms submitted with this Bid. If a word is abbreviated in the official company name, such as "Co.", then use that abbreviation. If not abbreviated in the official name, spell out.

Bidder agrees not to revoke or withdraw this Bid until sixty (60) calendar days following the time and date for receipt of bids. If notified in writing of the acceptance of this Bid within this time period, Bidder agrees to execute a Contract based on this Bid on the proscribed form within ten (10) calendar days of said notification and to furnish Performance Bond and Materials and Payment Bond as specified.

**COMPANY NAME:** \_\_\_\_\_  
(Printed or Typed)

**BY:** \_\_\_\_\_  
(Signature of Company Officer)

**COMPANY OFFICER:** \_\_\_\_\_  
(Printed or Typed)

**TITLE** \_\_\_\_\_ **DATE** \_\_\_\_\_, 2022  
(Printed or Typed)

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 2022

\_\_\_\_\_  
Notary Public

- Attachments: 1. Bid Security, with Power of Attorney  
2. Secretary of State Authorization (Out of state bidders only)  
3. Sales Tax Form C-3A  
4. Supplier Diversity Subcontracting & Major Supplier Plan

END OF BID FORM

**ACCOUNTING OF SALES TAX  
ATTACHMENT TO BID FORM SECTION 00400  
SALES TAX FORM C-3A**

To: City of Mobile

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

**Name of Project:** MATTHEWS PARK – SYNTHETIC TURF ATHLETIC FIELD  
**Project Number:** PR-022-21

**SALES TAX ACCOUNTING**

Pursuant to Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES TAX AMOUNT

**BASE BID:** \$ \_\_\_\_\_

**ADD ALT. #1:** \$ \_\_\_\_\_

**Failure to provide an accounting of sales tax shall render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.**

**Legal Name of Bidder** \_\_\_\_\_

Mailing Address \_\_\_\_\_

**\*By (Legal Signature)** \_\_\_\_\_

\*Name (type or print) \_\_\_\_\_ (Seal)

\*Title \_\_\_\_\_

Telephone Number \_\_\_\_\_



OFFICE OF SUPPLIER DIVERSITY  
**CITY OF MOBILE**  
Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for  
questions on completing this form.  
Via email: Archnique.kidd@cityofmobile.org  
251.208.7967  
205 Government Street, 5<sup>th</sup> Floor

**Bidders and Proposers – Please complete and submit these forms as required by your City of Mobile Bid or Proposal Specification.**

If you are submitting a proposal in response to a Request for Qualifications, Request for Proposal, or other solicitation (“Solicitations”) issued by the City of Mobile, the bid specification may require you to utilize disadvantaged business enterprise (“DBE”) subcontractors and suppliers. If DBE participation is required, you must complete and submit these forms with your proposal. If required, failure to submit this form will render your bid non-responsive. NOTE: To satisfy participation requirements for a federally funded project, you must utilize DBEs certified through the Alabama Unified Certification Program.

If DBE participation is required, and you fail to satisfy the participation requirement, you must show that you made a good faith effort to include such participation; you will be required to submit DBE Compliance Form 2 and include additional information if needed. When so required, failure to address adequately the good faith effort factors on Form 2 will render your bid or proposal non-responsive. The “good faith effort” factors on Form 2 are not intended to be a mandatory, exhaustive, or exclusive.

You are encouraged to work with the City of Mobile Supplier Diversity Manager when preparing this form. Please consult with the City Supplier Diversity Manager for a list of eligible DBEs. The “good faith effort” factors on **Form 2** are not intended to be mandatory, exhaustive, or exclusive; they are a tool to help you, and the City of Mobile, determine whether you made efforts which, by their scope, intensity, and appropriateness to the objective, would reasonably be expected to fulfill the participation requirement.

About “**DBEs**”: Disadvantaged business enterprise or DBE means a for-profit small business concern (1) That is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and (2) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

About “**Good Faith**” **Effort**: Good faith efforts means efforts to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement. The City of Mobile expects contractors holding large contracts to recruit and engage DBEs to be a part of their team.

Failure to submit this form, when so required by the bid or proposal specification, will render your bid non-responsive.



OFFICE OF SUPPLIER DIVERSITY  
**CITY OF MOBILE**  
Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for  
questions on completing this form.  
Via email: Archonique.kidd@cityofmobile.org  
251.208.7967  
205 Government Street, 5<sup>th</sup> Floor

**FORM 1: Background and Plan**

**Section I. Information about your company**

Company	
Address	
Telephone	
E-Mail	

RFP/RFQ Solicitation Number	
Project Description	
Is your company a DBE company?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Work force demographics	Male _____ Female _____ Minority _____ Non-minority _____ SDVO _____ Total #of Employees _____

**Subcontractor/Major Supplier Plan submitted by:**

Printed Name: \_\_\_\_\_

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

Title: \_\_\_\_\_

The following employee will be designated as the **DBE Liaison** for all communication regarding DBE participation including documentation for DBE participation and maintenance of records of Good Faith Efforts for this contract award:

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_



OFFICE OF SUPPLIER DIVERSITY  
**CITY OF MOBILE**  
 Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.  
 Via email: Archnique.kidd@cityofmobile.org  
 251.208.7967  
 205 Government Street, 5<sup>th</sup> Floor

**FORM 1: Background and Plan (Cont'd)**

**Section II. Subcontractors/Major Vendors Supplier Plan submitted by:**

Please Print Company \_\_\_\_\_ Your Bid/Proposal Amount \$ \_\_\_\_\_ Date: \_\_\_\_\_  
 \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Description \_\_\_\_\_  
 Name of Bidder/Proposer: \_\_\_\_\_

**I intend to use the following subcontractors:** *(Attach additional pages if necessary)*

Subcontractor or Major Supplier	Phone	Scope of Work to be performed	\$\$ Value to be Performed	% Of Your Bid Amount	DBE?	Official Verification Only



OFFICE OF SUPPLIER DIVERSITY  
**CITY OF MOBILE**  
 Subcontracting and Major Supplier Plan

**Form 2: Good Faith Effort Documentation**

Name of Bidder: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone \_\_\_\_\_ Email \_\_\_\_\_

Please complete this form if you are unable to identify DBE subcontractors or suppliers to reach 15% of the value of your bid.

YES <input type="checkbox"/>	NO <input type="checkbox"/>	<b>Did you do these suggested areas for DBE recruitment and engagement</b>
		<b>PRE-BID MEETING(S):</b> The bidder attended all pre-bid meetings scheduled by the City to inform DBEs of contracting and subcontracting opportunities.
		<b>CMDBE/ALDOT DBE LIST(S):</b> The bidder utilized the Office of Supplier Diversity's list or lists of certified through the Alabama Department of Transportation UCP DBE Listing
		<b>SMALL CONTRACT(S):</b> The bidder selected specific portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation). Consider support services, including insurance, accounting, temporary labor, and transportation, landscaping, and janitorial as potential areas for DBE use.
		<b>FOLLOW-UP:</b> The bidder followed-up initial indications of interest by DBEs by contacting those DBEs to determine with certainty if they remained interested in bidding.
		<b>GOOD FAITH NEGOTIATIONS:</b> The bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities. Bidders are not expected to engage unqualified subcontractors or subcontractors whose pricing, after negotiation, remains excessive or unreasonable. (Please document qualification deficiencies or unreasonable pricing if it prevented your engagement of specific DBE subcontractors.)
		<b>ADVERTISEMENT:</b> The bidder advertised in general circulation and/or trade association publications concerning subcontracting opportunities and allowed DBEs reasonable time to respond.
		<b>INTERNET ADVERTISING:</b> The bidder advertised DBE and/or subcontracting opportunities in the newspaper or other internet portals that are accessible to DBEs and/or potential subcontractors.



OFFICE OF SUPPLIER DIVERSITY  
**CITY OF MOBILE**  
 Subcontracting and Major Supplier Plan

		<b>INFORMATION:</b> The bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the subcontract.
		<b>WRITTEN NOTICE(S):</b> The bidder/proposer took the necessary steps to provide written notice in a manner reasonably calculated to inform DBEs of subcontracting opportunities and allowed sufficient time for them to participate effectively.
		<b>COMMUNITY RESOURCES:</b> The bidder/proposer used the services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that provided assistance in the recruitment and placement of DBE firms.

**CONTRACT RECORDS:**

The bidder/proposer has maintained the following records for each DBE that has bid on the subcontracting opportunity:

1. Name, address, email address and telephone number
2. A description of information provided by the bidder/proposer or subcontractor; and
3. A statement of whether an agreement was reached, and if not, why not, including any reasons for concluding that the DBE was unqualified to perform the job.

**Section 2(B)**

\_\_\_\_\_ There are not ways to break out 15% of the value of this contract for subcontractors / suppliers. Provide further detail in Section 2(c) if the inability to break-out 15% of the value of the contract was the reason, or a reason, you could not meet the participation requirements.

\_\_\_\_\_ Could not find sufficient DBEs to provide subcontracting or supplier services.

\_\_\_\_\_ DBEs were available but did not have sufficient qualifications or experience to meet the needs of this contract.

Please indicate additional efforts you have taken to recruit and engage DBEs. \_\_\_\_\_

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



OFFICE OF SUPPLIER DIVERSITY

**CITY OF MOBILE**

**DBE Compliance  
DBE UTILIZATION REPORT**

**Return to Office of Supplier Diversity**  
Via email: [archnique.kidd@cityofmobile.org](mailto:archnique.kidd@cityofmobile.org)  
or  
P.O. Box 1948  
Mobile, AL 36633

<b>CONTRACTOR:</b>	<b>Certified DBE:</b>	<b>YES</b>	<b>NO</b>	<b>Contract Start Date:</b>
--------------------	-----------------------	------------	-----------	-----------------------------

<b>DESCRIPTION:</b>	<b>Estimated Completion Date:</b>
---------------------	-----------------------------------

<b>This report is for the month of:</b>	<b>JAN</b>	<b>APR</b>	<b>JULY</b>	<b>OCT</b>	
<b>(CHECK ONE):</b>	<b>FEB</b>	<b>MAY</b>	<b>AUG</b>	<b>NOV</b>	<b>FINAL _____</b>
	<b>MARCH</b>	<b>JUNE</b>	<b>SEPT</b>	<b>DEC</b>	

Original Contract Amount	Total Amount of Contract Changes (change orders or amendments)	Final Contract Amount (include contract changes)	Payments to Date from City of Mobile	<b>OFFICE USE ONLY (Verification)</b>
\$	\$	\$	\$	

**Instructions:** List all DBEs utilized on the contract, whether or not the firms were originally listed for DBE goal credit. List actual amount paid to each DBE firm. If the established Percentage is not being met, please include a narrative description of the progress being made in DBE participation.

DBE SUBCONTRACTOR	DBE DESCRIPTION OF WORK	DBE SUBCONTRACT AMOUNT	DBE PAYMENTS THIS REPORT	PAYMENTS TO DATE	<b>OFFICE USE ONLY (Verification)</b>
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
<b>TOTALS</b>		\$	\$	\$	

**I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT. SUPPORTING DOCUMENTATION IS ON FILE AND IS AVAILABLE FOR INSPECTION BY CITY OF MOBILE OFFICE OF SUPPLIER DIVERSITY PERSONNEL AT ANY TIME.**

PRINT NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ /\_\_\_\_\_/\_\_\_\_\_  
(Title) (Date)

Matthews Park  
Synthetic Turf Athletic Field  
Mobile, Alabama  
PR-022-21

**SECTION 00200  
AGREEMENT BETWEEN OWNER AND CONTRACTOR  
FOR A STIPULATED SUM**

**PART 1 GENERAL**

**A. This section includes the AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR A STIPULATED SUM, AIA Document A701 to be utilized with the Owner's most recent modifications and which shall be used in conjunction with the entire Bid Documents.**



# DRAFT AIA® Document A101™ – 2017

## Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

**AGREEMENT** made as of the « » day of « » in the year « »

*(In words, indicate day, month and year.)*

**BETWEEN** the Owner:

*(Name, legal status, address and other information)*

«City of Mobile »« »

«P. O. Box 1827 »

«Mobile, Alabama 36633-1827 »

« »

and the Contractor:

*(Name, legal status, address and other information)*

« »« »

« »

« »

« »

«City of Mobile Business License Number: »

«Secretary of State Registration Number: »

for the following Project:

*(Name, location and detailed description)*

«Matthews Park – Synthetic Turf Athletic Field»

«3700 Michael Boulevard»

«Mobile, Alabama 36609»

«PR-022-21»

The Architect:

*(Name, legal status, address and other information)*

«Espalier, LLC »

«P.O. Box 1247»

«Fairhope, Alabama 36533»

«and»

«Architectural Engineering Department»

P. O. Box 1827»

Mobile, Alabama 36633-1827»

The Owner and Contractor agree as follows.

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101™-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

## TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
8	MISCELLANEOUS PROVISIONS
9	ENUMERATION OF CONTRACT DOCUMENTS, INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

### ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others (See attachment Exhibit A).

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:  
(Check one of the following boxes.)

[  ] A date set forth in a notice to proceed issued by the Owner.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

#### § 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:  
(Check one of the following boxes and complete the necessary information.)

[  ] Not later than  (  ) calendar days from the date of the Notice to Proceed for commencement of the Work.

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

**ARTICLE 4 CONTRACT SUM**

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be « [redacted] and 00/100 Dollars » (\$ « [redacted].00»), subject to additions and deductions as provided in the Contract Documents.

Base Bid: \$  
 Contingency Allowance: \$ 50,000.00  
 Total Contract Sum: \$

**§ 4.2 Alternates**

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
No. 1: Outfield Netting System	\$ [redacted]

§ 4.3 Allowances, if any, included in the Contract Sum:  
 (Identify each allowance.)

[redacted]  
 Matthews Park - Contingency Allowance: Fifty Thousand and 00/100 Dollars (50,000.00)

- A. Contingency Allowance shall cover cost of material, labor, overhead, profit and other expenses for complete installation of items of additional work as required for a complete, functional project.
- B. Contingency Allowance shall be used for unforeseen conditions not covered in the construction documents.
- C. All extra work under this section must be authorized by the Owner, in writing, prior to materials or undertaking work.
- D. Upon completion of the Work, the unused portion of the Allowance shall be credited back to the Owner in the form of a Change Order.
- E. Allowances are subject to the same provision of AIA 201 Article 7.3.7.

**§ 4.4 Unit prices, if any:**

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
Unit Price #1: Provide and Install on-site placement and compaction of soil (Cut/Fill) – CY, includes excavating or filling. Cut material will be placed elsewhere on-site. Fill material will be from material onsite, and all other necessary construction components for installation.	CY	[redacted]
Unit Price #2: Unsuitable Soil Material – Cubic Yards In Place, includes excavation, haul off and disposal of unsuitable material.	CYIP	[redacted]
Unit Price #3: Structural Fill – Cubic Yards In Place, Provide and Install Imported Structural Fill, spread, compaction, and all other necessary construction components for installation.	CYIP	[redacted]
Unit Price #4: Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.	LF	[redacted]
Unit Price #5: Provide and install inlet protection. Includes installation, removal, and all other necessary construction components for installation.	EA	[redacted]
Unit Price #6: Provide and install wattles. Includes installation, removal, and all other necessary construction components for installation.	EA	[redacted]
Unit Price #7: Provide and install 12" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	LF	[redacted]

Unit Price #8: Provide and install 6" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	LF	
Unit Price #9: Provide and install 12" panel drain under synthetic field per detail. Include benching into subgrade, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	LF	
Unit Price #10: Provide and install 0'-4' Drop Inlet. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	EA	
Unit Price #11: Provide and install 12" concrete perimeter curb at synthetic field per detail. DO NOT include cost of chain link fence. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.	LF	
Unit Price #12: Provide and install 4" concrete flatwork (sidewalks, fountain pads, etc) per detail. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.	SF	
Unit Price #13: Demolish and properly dispose offsite existing concrete flatwork (sidewalks) as specified on drawings. Include excavation, sawing, jack hammering, loading, haul off site, and proper disposal.	SF	
Unit Price #14: Provide and install Asphalt Patch as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.	LF	
Unit Price #15: Provide and install 6' Vinyl Chain Link Fence <u>In Perimeter Curb</u> as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.	LF	
Unit Price #16: Provide and install 6' Vinyl Chain Link Fence as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.	LF	
Unit Price #17: Provide and install 7' Vinyl Chain Link Fence with privacy slats as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.	EA	
Unit Price #18: Provide and install wall mounted drinking fountain with bottle filler as specified with sump basin specified. Include excavation, fill, compaction, grading, disposal, placement, water line connection, and all other necessary construction components for installation.	SY	
Unit Price #19: Provide and install 8' surface mount backless bench as specified.	LF	
Unit Price #20: Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.	LF	

Unit Price #21: Provide and install 12" panel drain in synthetic field per detail. Include benching into subgrade, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	SF	
Unit Price #22: Provide and install masonry backstop wall per detail. Include excavation, fill, compaction, grading, concrete footing, reinforcement, disposal, placement, and all other necessary construction components for installation.	EA	
Unit Price #23: Provide and install backstop wall padding per detail. Include all materials and hardware, mounting, disposal, placement, and all other necessary construction components for installation	EA	
Unit Price #24: Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation	SF	
Unit Price #25: Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation	LF	
Unit Price #26: Provide and install wind screen fabric as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation	LF	
Unit Price #27: Provide and install polytube fence cap protection as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation	SF	
Unit Price #28: Provide and install 8" fence post padding as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation.	EA	
Unit Price #29: Provide and install compacted aggregate drive as specified. Include excavation, fill, compaction, grading, rock, disposal, placement, and all other necessary construction components for installation	EA	
Unit Price #30: Provide and install lighting directional sign as specified. Include all materials and hardware, mounting, signs, disposal, placement, and all other necessary construction components for installation	LF	
Unit Price #31: Provide and install scoreboard as specified. Include all materials and hardware, posts, footings, mounting, disposal, excavation, placement, and all other necessary construction components for installation	LF	
Unit Price #32: Provide and install dugout lean railing with pad as specified. Include all materials and hardware, mounting, weld plates, disposal, placement, and all other necessary construction components for installation	EA	
Unit Price #33: Provide and install polytube fence cap protection as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation	EA	



**§ 4.5 Liquidated damages:**  
*(Insert terms and conditions for liquidated damages, if any.)*

«A time charge equal to Two Hundred Fifty and 00/100 Dollars (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted or any required closeouts documents are not acceptably submitted for more than thirty (30) days after the date specified for the substantial Completion of the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained. »

**ARTICLE 5 PAYMENTS**

**§ 5.1 Progress Payments**

**§ 5.1.1** Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

**§ 5.1.2** The period covered by each Application for Payment shall be one calendar month ending on the 25th of the month.

« »

**§ 5.1.3** Provided that an Application for Payment in acceptable format is received by the Architect not later than the first «1st » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the tenth «10th » day of the «following » month. If an Application for Payment in acceptable format is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than «forty » ( «40 » ) days after the Architect receives the Application for Payment.  
*(Federal, state or local laws may require payment within a certain period of time.)*

**§ 5.1.4** Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This accepted schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

**§ 5.1.5** Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

**§ 5.1.6** In accordance with AIA Document A201, General Conditions of the Contract for Construction (including Owner's then-current modifications), and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

**§ 5.1.6.1** The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing and insured as specified;
- .3 Completed work shall be determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values.

**§ 5.1.6.2** The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.3 Any Progress Payment shall include partial release of liens for material and labor for previous application for payment amount approved and paid. The DBE Utilization Report shall be included with the pay application.

### § 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

*(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)*

«Five percent (5%) of the first fifty percent (50%) of the completed work and after fifty percent (50%) completion has been accomplished, no further retainage shall be held from the original Contract Sum. Increases in the contract sum by Change Order shall also be subject to retainage.»

§ 5.1.7.1.1 The following items are not subject to retainage:

*(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)*

«N/A »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

*(Insert any other conditions for release of retainage upon Substantial Completion.)*

«The net amount of the Retainage shall be equal to two and one half percent (2.5%) of total Contract Sum, as increased or decreased by Change Order. »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

### § 5.2 Final Payment

§ 5.2.1 Final monthly progress payment, constituting the entire unpaid balance of the Contract Sum, less retainage, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201 (including Owner's then-current modifications which may be obtained from the Owner or, alternatively, a copy of which is incorporated in the Project Manual and incorporated by reference herein as a part thereof), and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a Certificate of Substantial Completion has been issued by the Architect/Owner and the project accepted.

§ 5.2.2 The Owner's final payment to the Contractor of retainage shall be made as follows:

« The final two and one half percent (2.5%) of the total Contract Sum retained will not be paid until proof of publication is submitted and all written claims paid in full. Contractor to submit the following:

- Contractor's Affidavit of Payment of Debts and Claims (AIA form G706, included in contract documents) with
  - a.) Contractor's Release or Waiver of Liens
  - b.) Releases or Waivers of Liens from Subcontractors and Material and Equipment Suppliers;
- Contractor's Affidavit of Release of Liens (AIA form G706A, included in contract documents);

- Consent of Surety, if any, to final payment (AIA form G707, included in contract documents);
- Any additional close out requirements per the contract documents; and
- Notarized Affidavit of Notice of Completion advertisement from publisher.

Contractor shall provide proof of publication of Notice of Completion in a local newspaper once per week for four (4) consecutive weeks, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama quoted below. “The Contractor shall, immediately after the completion of the contract, give notice of Completion by an advertisement in a newspaper of general circulation published within the city or county in which the work has been done, for a period of four (4) consecutive weeks. A final settlement shall not be made upon the contract until the expiration of thirty (30) days after the completion of the notice. Proof of publication of the notice shall be made by the contractor to the authority by whom the contract was made by affidavit of the publisher and a printed copy of the notice published. If no newspaper is published in the county in which the work is done, the notice may be given by the contract.” (Acts 1927, No. 39, 9.37; Acts 1935, No. 39, 9. 70; Code 1940, T. 50, Section 16; Acts 1983, No. 83-737, 9.1203; Acts 1989, No. 89-650m 9. 1284, Section 1; Acts 1994, No. 94-207, p, 270, Section 1; Acts 1997, No. 97-225, p. 348, Section 1.)

The Notice of Completion shall read as follows:

STATE OF ALABAMA  
 COUNTY OF MOBILE  
 NOTICE OF COMPLETION

In accordance with Chapter I, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that ( ) has completed the contract for Matthews Park – Synthetic Turf Athletic Field, 3700 Michael Boulevard, Mobile, Alabama 36609, PR-022-21. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P. O. Box 1827, Mobile, Alabama 36633-1827.

Publication of the Notice of Completion shall not begin until the Project has been accepted as Substantially Complete by the City of Mobile. »

**ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 Initial Decision Maker**

The Engineer will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker. *(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

«N/A »

**§ 6.2 Binding Dispute Resolution**

For any Claim, the method of binding dispute resolution shall be as follows:  
*(Check the appropriate box.)*

[  ] Litigation in a court of competent jurisdiction

**§ 6.3 Governing Law and Venue**

This Agreement shall be governed by the laws of the State of Alabama, and the appropriate venue of any actions arising out of this Agreement shall be a court of proper jurisdiction in Mobile, Alabama.

**ARTICLE 7 TERMINATION OR SUSPENSION**

**§ 7.1** The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner’s then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents. A copy of such amended, revised or supplemental provision is incorporated in the contract documents and hereby incorporated by reference herein as a part thereof.

§ 8.2 The Owner's representative:  
(Name, address, email address, and other information)

«Director, Real Estate and Assess Management »  
«P. O. Box 1827 »  
«Mobile, Alabama 36633-1827 »

§ 8.3 The Contractor's representative:  
(Name, address, email address, and other information)

« »  
« »

« » § 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten (10) days' prior notice to the other party.

## § 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth below:  
The Contractor shall purchase and maintain from a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18 of the General Conditions of the Contract for Construction.

The Contractor shall take out and maintain during the life of the Contract no less than the following amounts of insurance with the City of Mobile named as an additional insured. Contractor shall submit a Certificate of Insurance. Insurance companies listed as the "Companies Affording Coverage" shall be authorized by the Secretary of the State of Alabama. Insurance produced out of the State of Alabama must be signed or counter signed by a licensed Agent of Alabama, with the Agent's name, address and telephone number typed or printed on the face of the Certificate of Insurance.

- .1 Workmen's Compensation Insurance: - Statutory-amount and coverage as required by all applicable laws, rules or regulations of the State of Alabama and the United States of America, Including the U. S. Longshore and Harbor Workers Act and the Jones Act, if applicable.
- .2 Employee's Liability Insurance shall be provided for limits of liability not less than:

- A. Bodily Injury by Accident \$1,000,000 each accident
  - B. Bodily Injury by Disease \$1,000,000 each employee
  - C. Bodily Injury by Disease \$1,000,000 each policy
- .3 United States Longshoreman’s Harbor Worker’s Act.
- .4 Jones Act Coverage (if applicable) placed either in the Workers Compensation or through the Marine General Liability.
- .5 The Contractor shall provide Broad Form (commonly termed Comprehensive) General Liability Insurance (including premises-product-completed operations, independent contractors, and blanket contractual liability), specifically covering the obligations assumed by the Contractor for limits of liability not less than:
- A. Bodily Injury \$1,000,000 each person  
\$1,000,000 each occurrence
  - B. Property Damage \$1,000,000 each occurrence; or
  - C. Bodily Injury and Property Damage \$1,000,000 combined single limit
- .6 Such comprehensive policy shall include the following:
- A. All liability of the Contractor, for the Contractor’s Direct Operations.
  - B. Subcontractor’s Operations.
  - C. Completed Operations Cover, thereby meaning any loss which shall occur after the contract has been completed, but which can be traced back to the Contract.
  - D. General Aggregate Limit of \$2,000,000 shall apply on a "Per Project" Basis.
  - E. Contractual Liability, meaning thereby; any risk assumed by the Contractor under Hold Harmless Agreements or any other assumption of liability, but specifically items 11.1.1.8.3G herein below
  - F. Broad Form Property damage Coverage, including Completed Operations.
  - G. Personal Injury Liability, with employee’s exclusions removed.
  - H. Explosion and Collapse Hazard:  
Included or  Not Applicable.
  - I. Underground Hazard:  
Included or  Not Applicable.
  - J. Marine General Liability shall include Premises and Operations, Personal and Advertising Injury, Products and Completed Operations, Protection and Indemnity including vessel and crew (if applicable).
  - K. Deletion of watercraft exclusion with respect to non-owned vessels and contractual Liability for watercraft exposure not covered by Protection and Indemnity policy.
  - L. The Marine General Liability policy must include an endorsement to cover “Sudden And Accidental Pollution.”
- .7 The Contractor shall carry for himself and shall require that all Subcontractors and all Owners of Automobiles or trucks rented or hired on the contract carry, until the Contracts is completed, Comprehensive Automobile Liability Coverage for Bodily Injury and property. Damage for any auto in amounts not less than the minimum amounts as indicated. The Contractor and Subcontractor shall also carry for themselves insurance for all non-owned and hired automobile at the limits of liability as indicated below:
- A. Bodily Injury \$1,000,000 each person  
\$1,000,000 each occurrence

- B. Property damage \$1,000,000 each occurrence; or,  
 C. Bodily Injury and Property damage \$1,000,000 combined single limit
- .8 Umbrella/Excess Liability: \$2,000,000 combined single limit each occurrence for bodily injury and/or property damage
- .9 Builder's Risk Coverage (Property Insurance): The Contractor shall carry for the Owner, himself, and all Subcontractors a Builder's Risk Policy to cover the full amount of the Contract during construction, fabrication or erection of any equipment.
- A. The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors, Sub-subcontractors, and the Design Professionals in the Project.
- B. Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.
- C. If the property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles. Deductibles shall be limited to a maximum of \$2,500.00 unless the loss is caused by windstorm; then deductible shall be a maximum of three percent (3%) of the insured value.
- D. This property insurance shall cover the full value of equipment, material, and other portions of the Work stored off the site, and also portions of the Work in transit. There shall be no limits on the value of loss per occurrence.
- E. A named storm endorsement is required. The deductible shall be a maximum of three percent (3%) of the insured value.
- .10 A Surety authorized to do business in the State of Alabama shall furnish the required Insurance.
- .11 The standard ACORD™ format shall be provided. The ACORD™ Certificate must be signed or countersigned by a Licensed Resident Agent of the State of Alabama and the agent's name, address and telephone number must appear on the face of the certificate.
- .12 The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc. if the bid price exceeds \$50,000.00.
- .13 "In Rem" endorsement.

The insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

Certificates of insurance acceptable to the Owner shall be filed with the Owner within ten (10) calendar days from date of issuance of contract forms for execution. Contractor shall deliver to the City of Mobile, certificates of insurance certifying the existence and limits of the insurance coverages along with separate policy endorsements. Contractor shall also be responsible for delivering policy renewal certificates to the City of Mobile, and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies shall contain a provision that coverages afforded under the policies will not be cancelled subject to non-renewal nor material change, or allowed to expire without at least thirty (30) days' (except ten (10) days from non-payment) prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the time. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

All policies of insurance, except worker's compensation, shall be endorsed to provide that all such insurances are primary and non-contributing with any other insurance maintained by the City of Mobile and endorsed to waive rights of subrogation in favor of the City of Mobile.

The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

**§ 8.5.2** The Contractor shall provide bonds as set forth below:

Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

The Labor and Material Payment Bond and the Performance Bond shall each be for one hundred percent (100%) of the Contract Sum.

1. Bond shall be submitted with the executed agreement on provided form(s).
2. Power of Attorney is required for both bonds.
3. A Surety authorized to do business in the State of Alabama shall furnish both bonds.
4. A Surety licensed to do business in the State of Alabama must execute the bonds.
5. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00.
6. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment being made to the Contractor.

**§ 8.6** Indemnification:

The Consultant shall indemnify and hold harmless City and its officers, elected officials, agents, representatives, and

employees for any and all claims, injuries, losses, diminution in value, damages, liabilities, whether or not currently due, and related expenses to the extent caused by any negligence, recklessness, intentional tort, intellectual property infringement, or failure to pay a subconsultant or supplier that is committed by Consultant or the Consultant's agent, consultant under contract, or other entity for which Consultant is legally liable. Consultant shall defend the City, its officials, agents, representatives, and employees against any and all claims arising out of the rendering of or failure to render professional services by Consultant or its agents covered by Consultant's policy of professional liability insurance in accord with named minimum requirements. The parties acknowledge and agree that this contract requires Consultant to procure and maintain professional liability insurance that satisfies the named requirements. Consultant shall reimburse the City for its reasonable attorney fees, damages, losses, injuries, or other litigation costs in proportion to Consultant's liability, or in proportion to the extent Consultant participates in resolution of a claim also made against the City. The parties acknowledge and agree that nothing in the foregoing shall be construed to require Consultant to indemnify, hold harmless or defend the City except as permissible under Acts of Alabama 2021-318, or subsequent codifications thereof.

**§ 8.7 Other Provisions:**

«Contractor shall provide a minimum one (1) year warranty from the date of substantial completion of all Labor and Materials for the Work covered by this contract, unless otherwise specified. Labor and Material warranties required by other sections of the construction document shall not conflict with this provision. The most stringent warranty provision shall apply. »

**§ 8.8 Force Majeure:**

In the event that either party hereto shall be delayed or hindered in or prevented from the performance of any act required hereunder by reason of strikes, lockouts, labor troubles, inability to procure materials, failure of power, restrictive governmental laws or regulations, riots, insurrection, war, Act of God, or other reason of a like nature not the fault of the party delayed in performing work or doing acts required under the terms of this Agreement, then performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.

**ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS**

**§ 9.1** This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.
- .3 Drawings

Number	Title	Date
1.0	Cover Sheet	
1.1	Existing Conditions / Demolition	
1.2	Survey	
C01	Grading & Drainage Plan	
C02	Erosion & Sediment Control Plan	
C03	Civil Details	
C04	Civil Details	
E01	Electrical Notes & Legend	
E02	Electrical Demolition Plan	
E03	Electrical Site Plan	
E04	Electrical Details	
L-1.1	Field Site Plan	
L-1.2	Infield Enlargement	
L-2.1	Field Subdrainage Plan	
L-3.1	Painting Plan	
L-4.1	Landscape Plan	
L-5.1	Field Details	
L-5.2	Field Details	
L-5.3	Field Details	
L-5.4	Field Details	
S1	Structural Notes & Elevations	



.4 Specifications

Section	Title	Date
Division 01:		
Section 01010	Summary of Work	
Section 01210	Allowances	
Section 01220	Unit Prices	
Section 01230	Alternative Bid Items	
Section 01310	Project Management & Co-ordination	
Section 01320	Construction Progress Documentation	
Section 01330	Submittal Procedures	
Section 01635	Substitution Procedures	
Section 01700	Execution Requirements	
Section 01770	Close out Procedures	
Section 017839	Project Record Documents	
Section 017823	Operation and Maintenance Data	
Division 02:	SITE CONSTRUCTION	
Section 02230	Site Clearing	
Section 02300	Earthwork	
Section 02630	Storm Drainage	
DIVISION 03:	CONCRETE	
Section 033000	Cast in Place Concrete	
DIVISION 04:	MASONRY	
Section 042200	Concrete Unit Masonry	
DIVISION 09:	FINISHES	
Section 09900	Painting	
DIVISION 11:	EQUIPMENT	
Section 116833	Athletic Field Equipment	
Section 116843	Exterior Scoreboards	
DIVISION 32:	EXTERIOR IMPROVEMENTS	
Section 321313	Cement Concrete Pavement	
Section 321373	Concrete Paving Joint Sealants	
Section 323113	Chain Link Fence & Gates	
Section 323113.33	Backstop Netting Systems	
Section 323300	Site Furnishings	
Section 329200	Lawns and Grasses	
DIVISION 33:	TURF BASE CONSTRUCTION	
Section 334600	Synthetic Turf Base Construction	

.5 Addenda, if any:

Number	Date

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.6 Other Exhibits:

*(Check all boxes that apply and include appropriate information identifying the exhibit where required.)*

§ 9.2

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
N/A			

§ 9.2.1 Other documents, if any, listed below:

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)*

«BIDDING AND CONTRACT REQUIREMENTS	
Section 00100	Invitation to Bid
Section 00200	Instructions to Bidders-AIA Document A701-2018
Section 00300	Supplementary Instructions to Bidders
Section 00400	Bid Form
	Accounting of Sales Tax Form C-3A
	Supplier Diversity Subcontracting and Major Supplier Plan
Section 00500	Standard Form of Agreement Between Owner and Contractor AIA Document A101
Section 00600	Bonds, Certificates and Affidavits
	Performance Bond
	Labor and Material Payment Bond
	E-Verify Documentation (Sample)
	Application and Certificate for Payment-AIA Document G702 and G703 with DBE Utilization Report
	Certificate of Substantial Completion-AIA Document G704
	Contractor's Affidavit of Payment of Debts and Claims- AIA Document G706
	Contractor's Affidavit of Release of Liens-AIA Document G706A
	Consent of Surety to Final Payment-AIA Document G707
	Request for Taxpayer Identification Number and Certification W9 Tax Form and City of Mobile Vendor Information Form
Section 00700	General Conditions of the Contract for Construction- AIA Document A201»

§ 9.2.2 Best Management Practices (BMPs):

The Contractor shall be responsible for providing, implementing and maintaining BMPs for sediment and erosion control in full compliance with all applicable Local, State and Federal Codes and Ordinances throughout the contract period. All Work shall be in accordance with the Clean Water Act; the Alabama Water Pollution Control Act; the current version of the Alabama Handbook for Erosion Control, Sediment Control Stormwater Management on Construction sites and Urban Areas; and the current version of the Mobile, Alabama City Code Chapter 17 Stormwater Management and Flood Control. All Waste water with oils, grease, paint, mortar, etc., shall be properly contained and disposed of.

§ 9.2.3 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

§ 9.2.4 By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

§ 9.2.5 Public Contracts with Entities Engaging in certain Boycott Activities:

By signing this contract, the Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

**§ 9.2.6 Severability Clause:**

In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement, but this Agreement shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the court or other tribunal making such determination is authorized and instructed to modify this Agreement so as to effect the original intent of the parties as closely as possible so that the transactions and agreements contemplated herein are consummated as originally contemplated to the fullest extent possible.

**§ 9.2.7 Non-Agency Clause:**

Contractor, in the performance of its operations and obligations hereunder, shall not be deemed to be an agent of City but shall be deemed to be an independent Contractor in every respect and shall take all steps at its own expense, as City may from time to time request, to indicate that it is an independent Contractor. City does not and will not assume any responsibility for the means by which or the manner in which the services by Contractor provided for herein are performed, but on the contrary, Contractor shall be wholly responsible therefore.

**REMAINDER OF PAGE INTENTIONALLY LEFT BLANK**

This Agreement entered into as of the day and year first written above.

City of Mobile

Legal Name of Party to Contract:  
Contractor:

\_\_\_\_\_  
**OWNER** (Signature)

\_\_\_\_\_  
**CONTRACTOR** (By Signature)

\_\_\_\_\_  
William S. Stimpson, Mayor  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

ATTEST:

\_\_\_\_\_  
City Clerk

STATE OF ALABAMA  
COUNTY OF MOBILE

Before me, the undersigned a Notary Public in and for said County and State, personally appeared \_\_\_\_\_ as \_\_\_\_\_ of \_\_\_\_\_ and after being duly sworn, did depose and say that he, as such officer and with full authority, signed the above and foregoing voluntarily as the act of said corporation on the day the same bears date. Sworn to and subscribed for me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

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

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



## SECTION 00600

### BONDS, CERTIFICATES AND AFFIDAVITS

#### **PART 1 GENERAL**

This section includes the Bond Forms and Certificates that are to be used on this Project. No other forms will be accepted. Forms may be obtained from the Architectural Engineering Department, City of Mobile, telephone number 251-208-7454.

##### 1.1 FORMS

- A. PERFORMANCE BOND. Owner's modified Performance Bond form.
- B. LABOR AND MATERIAL PAYMENT BOND. Owner's modified Payment Bond form.
- C. E-Verify Documentation (Sample)
- D. APPLICATION AND CERTIFICATION FOR PAYMENT - AIA Document G702 and AIA Document G703 and DBE Utilization Report
- E. CERTIFICATE of SUBSTANTIAL COMPLETION – AIA Document G704-2017
- F. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS - AIA Document G706
- G. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS - AIA Document G706A.
- H. CONSENT OF SURETY TO FINAL PAYMENT - AIA Document G707
- I. Request for Taxpayer Identification Number and Certification, W-9 Form, and City of Mobile Vendor Information Form

# PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other Party shall be considered plural where applicable.

**KNOW ALL MEN BY THESE PRESENTS:** That the Contractor, \_\_\_\_\_, hereinafter called the Principal, and \_\_\_\_\_, hereinafter called the Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633**, hereinafter called the Owner, in the penal sum of \_\_\_\_\_ and xx/100 Dollars (\$\_\_\_\_\_.00) for payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns for the faithful performance of a certain written Contract dated the \_\_\_\_ day of \_\_\_\_\_, 2022 entered into between the Principal and the City of Mobile for furnishing all labor, material, equipment and insurance and performing all Work required to properly complete Matthews Park – Synthetic Turf Athletic Field, 3700 Michael Boulevard, Mobile, Alabama, 36609, PR-022-21 a copy of which said Contract is incorporated herein by reference and is made a part hereof as if fully copied herein.

**NOW, THEREFORE**, the condition of this obligation is such that if the Principal shall faithfully perform the terms and conditions of the Contract in all respects on its part and shall fully pay all obligations incurred in connection with the performance of such Contract on account of labor and materials used in connection therewith, and all such other obligations of every form, nature and character, and shall save harmless the Owner from all and any liability of every nature, kind and character which may be incurred in connection with the performance or fulfillment of such Contract or other such and liability resulting from negligence or otherwise on the part of such Principal and further save harmless the Owner from all cost and damage which may be suffered by reason of the failure to fully and completely perform said contract and shall fully reimburse and repay the Owner for all expenditures of every kind, character, and description which may be incurred by the Owner in making good any and every default which may exist on the part of the Principal in connection with the performance of said Contract; and further that the Principal shall pay all lawful claims of all persons, firms, partnerships, or corporations for all labor performed and material furnished in connection with the performance of the Contract, and that the failure to do so with such persons, firms, partnerships or corporations shall give them a direct obligation; and provided, however, that no suit, action, or proceedings by reason of any default whatever shall be brought on this bond after two years from the date on which the final payment on the Contract falls due, and provided, further, that if any alterations or additions which may be made under the Contract, or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the Contract or any other forbearance being expressly waived. This obligation shall remain in full force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety. This Bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

## EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this \_\_\_\_ day of \_\_\_\_\_, 2022.

**CONTRACTOR AS PRINCIPAL**

Company: \_\_\_\_\_  
(Corporate Seal)

By: \_\_\_\_\_  
(Signature)

Name and Title: \_\_\_\_\_

**SURETY**

Company: \_\_\_\_\_  
(Corporate Seal)

By: \_\_\_\_\_  
(Signature)

Name and Title: \_\_\_\_\_

Resident Agent: \_\_\_\_\_  
(Signature)

Name and Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone and Fax: \_\_\_\_\_

Owner's Representative: Cassie Boatwright

REAM Director  
PO Box 1827  
Mobile, AL 36633  
251-208-7454





Company ID Number:

Approved by:

Employer	
Name (Please Type or Print)	
Signature	Date
Department of Homeland Security, Division	
Name (Please Type or Print)	Title
Signature	Date

**SAMPLE**

Company ID Number:

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	
Company Facility Address	
Company Alternate Address	
County or Parish	
Employer Identification Number	
North American Industry Classification Systems Code	
Parent Company	
Number of Employees	
Number of Sites Verified for	

**SAMPLE**

TO OWNER City of Mobile  
 P. O. Box 1827  
 Mobile, AL 36633-1827

PROJECT: Matthews Park - Synthetic Turf APPLICATION NO:  
 Athletic Field  
 3700 Michael Boulevard  
 Mobile, Alabama 36609

Distribution to:

<input type="checkbox"/>	OWNER
<input type="checkbox"/>	ARCHITECT
<input type="checkbox"/>	CONTRACTOR
<input type="checkbox"/>	
<input type="checkbox"/>	

PERIOD TO:

FROM CONTRACTOR:

VIA ARCHITECT: Espalier, LLC  
 P.O. Box 1247  
 Fairhope, Alabama 36533

PROJECT NO: PR-022-21

CONTRACT FOR:

CONTRACT DATE:

**CONTRACTOR'S APPLICATION FOR PAYMENT**

Application is made for payment, as shown below, in connection with the Contract.  
 Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, application and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

- 1. ORIGINAL CONTRACT SUM \$ \_\_\_\_\_
- 2. Net change by Change Orders \$ \_\_\_\_\_
- 3. CONTRACT SUM TO DATE (Line 1 ± 2) \$ \_\_\_\_\_
- 4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ \_\_\_\_\_
- 5. RETAINAGE:
  - a. \_\_\_\_\_ % of Completed Work (Column D + E on G703) \$ \_\_\_\_\_
  - b. \_\_\_\_\_ % of Stored Material (Column F on G703) \$ \_\_\_\_\_
  - Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$ \_\_\_\_\_
- 6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total) \$ \_\_\_\_\_
- 7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ \_\_\_\_\_
- 8. CURRENT PAYMENT DUE \$ \_\_\_\_\_
- 9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$ \_\_\_\_\_

CONTRACTOR:

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

State of: \_\_\_\_\_ County of: \_\_\_\_\_  
 Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_  
 Notary Public:  
 My Commission expires: \_\_\_\_\_

**ARCHITECT'S CERTIFICATE FOR PAYMENT**

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED . . . . . \$ \_\_\_\_\_

*(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)*  
 ARCHITECT:

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

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
<b>TOTALS</b>		
NET CHANGES by Change Order		

# CONTINUATION SHEET

AIA DOCUMENT G703

PAGE OF PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

APPLICATION NO:

APPLICATION DATE:

In tabulations below, amounts are stated to the nearest dollar.

PERIOD TO:

Use Column I on Contracts where variable retainage for line items may apply.

ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G		H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)		
<b>GRAND TOTALS</b>									

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity

 **AIA® Document G704® – 2017****Certificate of Substantial Completion**

---

<b>PROJECT:</b> <i>(name and address)</i>	<b>CONTRACT INFORMATION:</b> Contract For: Date:	<b>CERTIFICATE INFORMATION:</b> Certificate Number: 001 Date:
<b>OWNER:</b> <i>(name and address)</i>	<b>ARCHITECT:</b> <i>(name and address)</i>	<b>CONTRACTOR:</b> <i>(name and address)</i>

---

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate.  
*(Identify the Work, or portion thereof, that is substantially complete.)*

---

<b>ARCHITECT</b> <i>(Firm Name)</i>	<b>SIGNATURE</b>	<b>PRINTED NAME AND TITLE</b>	<b>DATE OF SUBSTANTIAL COMPLETION</b>
-------------------------------------	------------------	-------------------------------	---------------------------------------

**WARRANTIES**

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:  
*(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)*

**WORK TO BE COMPLETED OR CORRECTED**

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows:  
*(Identify the list of Work to be completed or corrected.)*

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within ( ) days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:  
*(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)*

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

---

<b>CONTRACTOR</b> <i>(Firm Name)</i>	<b>SIGNATURE</b>	<b>PRINTED NAME AND TITLE</b>	<b>DATE</b>
<b>OWNER</b> <i>(Firm Name)</i>	<b>SIGNATURE</b>	<b>PRINTED NAME AND TITLE</b>	<b>DATE</b>



**AIA**<sup>®</sup>

# Document G706™ – 1994

## Contractor's Affidavit of Payment of Debts and Claims

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER:

ARCHITECT:

TO OWNER: *(Name and address)*

CONTRACT FOR: General Construction

CONTRACTOR:

CONTRACT DATED:

SURETY:

OTHER:

STATE OF:

COUNTY OF:

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

### EXCEPTIONS:

#### SUPPORTING DOCUMENTS ATTACHED HERETO:

- Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment  Yes  No

CONTRACTOR: *(Name and address)*

BY:

*(Signature of authorized representative)*

*(Printed name and title)*

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

- Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- Contractor's Affidavit of Release of Liens (AIA Document G706A).

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



# AIA<sup>®</sup> Document G706A<sup>™</sup> – 1994

## Contractor's Affidavit of Release of Liens

PROJECT: <i>(Name and address)</i>	ARCHITECT'S PROJECT NUMBER:	OWNER: <input type="checkbox"/>
	CONTRACT FOR: General Construction	ARCHITECT: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i>	CONTRACT DATED:	CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF:  
COUNTY OF:

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

### EXCEPTIONS:

#### SUPPORTING DOCUMENTS ATTACHED HERETO:

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

CONTRACTOR: *(Name and address)*

BY:

\_\_\_\_\_  
*(Signature of authorized representative)*

\_\_\_\_\_  
*(Printed name and title)*

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



# AIA<sup>®</sup> Document G707<sup>™</sup> – 1994

## Consent Of Surety to Final Payment

PROJECT: <i>(Name and address)</i>	ARCHITECT'S PROJECT NUMBER:	OWNER: <input type="checkbox"/>
	CONTRACT FOR: General Construction	ARCHITECT: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i>	CONTRACT DATED:	CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the  
*(Insert name and address of Surety)*

on bond of  
*(Insert name and address of Contractor)*

, SURETY,

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

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:  
*(Insert in writing the month followed by the numeric date and year.)*

\_\_\_\_\_  
*(Surety)*

\_\_\_\_\_  
*(Signature of authorized representative)*

Attest:  
 (Seal):

\_\_\_\_\_  
*(Printed name and title)*



**CITY OF MOBILE, AL  
VENDOR INFORMATION FORM**

*Company Information:*

1. City Vendor Number:

2. Name of Company:

3. Company D.B.A. Name, if any:

4. Mailing Address:

5. Remittance Address:

6. Telephone:

7. Fax

8. Main Email:

*Primary Contact:*

9. Contact Name and Title:

10. Contact Phone:

11. Contact Fax:

12. Contact Email:

*Alternate Contact (if applicable):*

13. Alt. Contact Name and Title:

14. Alt. Contact Phone:

15. Alt. Contact Fax:

16. Alt. Contact Email:

*City of Mobile Business License Information:*

17. City of Mobile Business License No. (if required):

*Please attach additional sheets if necessary.*

## Request for Taxpayer Identification Number and Certification

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

Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return)	
	Business name/disregarded entity name, if different from above	
	Check appropriate box for federal tax classification: <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate  <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____  <input type="checkbox"/> Other (see instructions) ▶ _____	
	<input type="checkbox"/> Exempt payee	
	Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
City, state, and ZIP code		
List account number(s) here (optional)		

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number								

**Note.** If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Employer identification number								

### Part II Certification

Under penalties of perjury, I certify that:

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

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

<b>Sign Here</b>	Signature of U.S. person ▶	Date ▶
------------------	----------------------------	--------

### General Instructions

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

#### Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

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

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

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

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



Matthews Park  
Synthetic Turf Athletic Field  
Mobile, Alabama  
PR-022-21

## SECTION 00700

### GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA DOCUMENT A201 - 2007

#### **PART 1 GENERAL**

This section includes the GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA Document A-201, that is to be used for this Project. The document has been electronically modified to meet the City of Mobile's requirements and shall be used for the project.





**AIA**<sup>®</sup>

# Document A201<sup>™</sup> – 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

*(Name and location or address)*

Matthews Park  
Synthetic Turf Athletic Field  
Mobile, Alabama

PR-022-21

**THE OWNER:**

*(Name, legal status and address)*

City of Mobile  
Architectural Engineering Department  
P. O. Box 1827  
Mobile, Alabama 36633-1827

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

**THE ARCHITECT:**

*(Name, legal status and address)*

Espalier, LLC  
8390 Gavfer Road Extension  
Fairhope, Alabama 36532

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## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 BASIC DEFINITIONS

#### § 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

#### § 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### § 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### § 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

#### § 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

#### § 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### § 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, Project Manual, specifications, and other similar materials.

#### § 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

### § 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### § 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

### § 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

### § 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

### § 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

## ARTICLE 2 OWNER

### § 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

### § 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or

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the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site, site, as may be required. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 ~~Unless otherwise provided in the Contract Documents, the~~ The Owner shall furnish to the Contractor ~~one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2, up to ten copies of the drawings and specifications as required for Contractor's execution of the Work. Any additional sets of documents that the contractor desires for construction of the Project will be issued to contractor at actual printing and handling costs.~~

### § 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

### § 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

## ARTICLE 3 CONTRACTOR

### § 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

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## § 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

## § 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

3.3.4 Three (3) days after the opening of the Bids, the Contractor shall furnish for written approval, an outline of the education, experience and character of the Contractor's project manager, superintendent and engineer. Any future substitution must have prior written approval of the Architect.

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### § 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to ~~them~~them.

3.4.4 The Contractor's or his Subcontractor's supervisors and workmen engaged on special work or skilled Work in any supervisory position or trade shall be qualified and have had sufficient education, training and experience as a recognized professional or master mechanic in such Work to perform it properly and satisfactorily as prescribed in the Contract Documents.

3.4.5 Any project manager, superintendent, engineer, foreman or workman employed by the Contractor or by a subcontractor who, in the sole opinion of the Architect, does not perform his Work in a proper and skillful manner or becomes party to disrespectful, intemperate, disorderly, intoxicated, or dishonest behavior, or uses foul language, fights, commits criminal act(s) falsifies records and construction, covers-up faulty Work or materials, does not comprehend or follow instructions, does not get along with the Architect or Owner's representative, or is otherwise objectionable, shall, at the written request by the Architect, be discharged 24 hours by the Contractor or Subcontractor employing such project manager, superintendent, engineer, foreman or workman, and shall not be employed again or any portion of the Work without the written consent of the Architect.

3.4.6 Should the Contractor fail to remove such person or persons specified in Article 3.4.5 hereinabove or fail to furnish suitable and sufficient machinery, equipment, materials or qualified labor force for the proper execution of the Work, the Architect may withhold all payments which are or may become due the Contractor or may suspend the Work until such orders are complied with.

3.4.7 Contractor shall abide by provisions of Section 14-1 and Section 14.2, Code of the City of Mobile, originally adopted December 10, 1991. Prohibiting Discrimination in Employment by Contractors, Subcontractors and Vendors performing Work and providing materials and supplies for the City of Mobile. A copy of said Code is located in the City's Projects Architectural Engineering Department. Certification of compliance with this requirement shall be made for all persons involved in the Work by the signature of the General Contractor on the Bid Form (Section 00410).

### § 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### § 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

~~§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS~~  
**PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS**

~~§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for City of Mobile building permit without cost, and shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.~~

~~3.7.1.1 The Contractor shall secure building and other permits customarily obtained from the City of Mobile at no cost.~~

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

**§ 3.8 ALLOWANCES**

~~§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.~~

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- ~~1 Allowances-allowances~~ shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- 2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- 3 ~~Whenever whenever~~ costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### § 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### § 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly within ten (10) business days after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### § 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### § 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals

upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents ~~in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule,~~ with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action. Wherever Shop Drawings are required in these Specifications, Shop Drawings shall be submitted for approval before materials are fabricated. Drawings shall show complete details. The General Contractor shall check and approve them either in writing or by stamp before forwarding to the Architect. The Architect will mark copies "Approved" if correct; or "Approved As Noted" if only minor corrections are necessary. If major corrections are necessary they will be noted on the Shop Drawings and they will be returned to the Contractor for correction and resubmission. Submit four (4) copies for Architect's and Owner's use plus the number of copies the contractor requires for his own use.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor

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shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

### § 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### § 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

### § 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

### § 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

### § 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

### § 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity ~~that which~~ would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be

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liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

3.19 As applicable, the Contractor shall be responsible at the appropriate time during construction of the Project to have all permanent meters installed (electrical, water, gas, etc.) and all utilities connected prior to the time of Final Inspection. The Contractor shall pay all utilities costs until the Project is accepted by the City of Mobile.

#### ARTICLE 4 ARCHITECT

##### § 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number. "Architect" may also designate the Licensed Designer of the Project and may be an Engineer or Landscape Architect.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

##### § 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative ~~during construction until the date the Architect issues the final Certificate for Payment.~~ (1) during construction (2) until all conditions necessary for the final completion and payment have been fulfilled and (3) with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

##### § 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

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§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 ~~Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, The apparent low bidder, within (3) days after bids are opened shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day-14 day period shall constitute notice of no reasonable objection.~~

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 ~~If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsibly in submitting names as required.~~

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

### § 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### § 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

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- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall may be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. ~~If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.~~

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

### § 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### § 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. The total of all Change Orders on each contract shall not exceed ten percent (10%) of the contract price for each project and shall be subject to at least one of the following criteria:

- 1 Minor changes for a total monetary value less than required for competitive bidding under the State Competitive Bid Laws.
- 2 Changes for matters relatively minor and incidental to the original contract necessitated by unforeseen circumstances arising during the course of the Work.
- 3 Emergencies arising during the course of the Work on the Contract.
- 4 Changes or Alternates provided for in the original bidding where there is no difference in price on the Change Order from the original best bid on the Alternate.
- 5 Changes of relatively minor items not contemplated when the plans and specifications were prepared and the project was bid which are in the public interest.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

### § 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- 1 The change in the Work;
- 2 The amount of the adjustment, if any, in the Contract Sum; and
- 3 The extent of the adjustment, if any, in the Contract Time.
- 4 There shall be attached to each Change Order a signed statement from the Architect containing the following:
  - A. A statement of what the Change Order covers and who instituted the Change Order and why it is necessary or desired.
  - B. A statement setting forth the reasons for using the Change Order method rather than taking new competitive bids.
  - C. A statement that all prices have been reviewed and found reasonable, fair and equitable and recommending approval of the same.

### § 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes

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in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- 1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- 2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- 3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- 4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices ~~shall~~ may be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount, allowance of 10% mark-up on Subcontractor's direct cost (actual cost of Labor & Materials) and 15% mark-up on a Contractor's direct (actual cost of Labor & Materials). In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- 1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- 2 Costs of materials, supplies and equipment, including cost of transportation, ~~whether incorporated or consumed; actually incorporated or consumed in the work;~~
- 3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented ~~from~~ by the Contractor or others;
- 4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- 5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be

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reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### § 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

### ARTICLE 8 TIME

#### § 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### § 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

1. No Work shall commence and no materials ordered until the Owner issues the written Notice to Proceed.
2. The Work shall be commenced within ten (10) days of the date of a written Notice to Proceed.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

#### § 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; ~~Owner~~; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

#### § 8.4 LIQUIDATED DAMAGES

8.4.1 Time is the essence of the Contract. Any delay in the completion of the Work as provided for in the Contract Documents will cause inconvenience to the public and loss and damage to the Owner in interest, and in additional administrative, architectural, inspection, and supervision charges.

Therefore, a time charge equal to \$250.00 per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted or any required closeouts documents are not acceptably submitted for more than 30 days after the time specified for the Substantial Completion of the Work, the amount of which shall be deducted by the Owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained.

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

### § 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

.1 Unit Prices and Allowances, if stated in the Contract Documents, shall be identified within the Schedule of Values.

### § 9.3 APPLICATIONS FOR PAYMENT

~~§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the on the first of each month; for Work done through the 25<sup>th</sup> of the preceding month, four (4) original, itemized Applications for Payment for Work completed in accordance with the accepted schedule of values, if required under Section 9.2, 9.2., for completed portions of the Work. Such application shall be notarized, if required, notarized and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents and documents as follows:~~

.1 Until the final payment is made, the Owner shall pay ninety-seven and one half percent (97.5%) of the amount due the Contractor on account of progress payments (note: the 2-1/2% retainage is calculated by withholding the first 5% of the first 50% of the work completed); and

.2 The Contractor shall provide documentation substantiating that test, inspections and approvals for portions of Work included in an Application for Payment and required by the Contract Documents, or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction were made at the appropriate time.

~~§ 9.3.1.1 As provided in Section 7.3.9, such Such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders. Work, which have been authorized and approved by properly executed Change Order(s).~~

~~§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay. Such applications may include requests for payment on account of changes in the Work, which have been authorized and approve by properly executed Change Order(s).~~

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

**§ 9.4 CERTIFICATES FOR PAYMENT**

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

**§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION**

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the



Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

#### § 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

#### § 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, ~~Architect~~, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time ~~shall~~ may be extended appropriately and the Contract Sum ~~shall~~ may be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

#### § 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. Work.

#### § 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

#### § 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed

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to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees payment. (5), contractors Affidavit of Release of Liens, (6) separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers (7) written warranty on Contractor's letterhead covering materials and labor for one year, and (8) the advertisement of completion. The Contractor shall provide proof of publication of Advertisement of completion in a local newspaper for four (4) consecutive weeks, as required in Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama. The final 2.5% retained will not be paid until proof of publication is submitted and all written claims paid in full. This advertisement shall not begin until the City of Mobile has accepted the Project.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, Contractor, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

1. Liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
2. failure of the Work to comply with the requirements of the Contract Documents; or
3. terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

### § 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

### § 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall comply with all Federal, State and Local law regarding safety including the requirements of the Occupational Safety and Health Act of 1970, Public Law #91-596, latest revision. Contractor shall take all other reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

1. employees on the Work and other persons who may be affected thereby;
2. the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
3. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
4. The Contractor shall be responsible for damage done to buried cables and other utilities by its equipment and shall contact the appropriate offices prior to construction for information depth, etc., of utilities in the area.

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§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss ~~(other than damage or loss insured under property insurance required by the Contract Documents)~~ loss to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

#### § 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

#### § 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and ~~start-up~~ start-up, except to the extent that any such delay is attributable to the Contractor's objection to the persons or entities whom Owner shall have furnished to perform the task of removal or safe containment of such material or substance.

~~§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.~~

~~§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances for materials or substances brought to the site by the Contractor regardless of whether such materials or substances were required by the Contract Documents.~~

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence or wantonness on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify ~~may reimburse~~ the Contractor for all reasonable cost and expense thereby incurred.

#### § 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall ~~may~~ be determined only as provided in Article 15 and Article 7.

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, ~~other than to the Work itself,~~ because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

The Contractor shall take out and maintain during the life of the Contract no less than the following amounts of insurance with the Owner named as an additional insured. Contractor shall submit a Certificate of Insurance and a supplemental Attachment for Certificate of Insurance 25-2 (7/90), AIA Document G715, Insurance companies listed as the "Companies Affording Coverage"

shall be authorized by the Secretary of the State of Alabama. Insurance produced out of the State of Alabama must be signed or counter signed by a Resident Agent of Alabama, with the Resident Agent's name, address and telephone number typed or printed on the face of the Certificate of Insurance.

1 Workmen's Compensation and Employer's Liability Insurance: - Statutory-amount and coverage as required by law of place in which the Work is performed.

2 Employee's Liability Insurance shall be provided for limits of liability not less than:

A. Bodily Injury by Accident \$1,000,000 each accident

B. Bodily Injury by Disease \$1,000,000 each employee

3 The Contractor shall provide Broad Form (commonly termed Comprehensive) General Liability Insurance (including premises-product-completed operations) for limits of liability not less than:

A. Bodily Injury \$1,000,000 each person

\$1,000,000 each occurrence

B. Property Damage \$1,000,000 each occurrence; or

C. Bodily Injury & Property Damage \$1,000,000 combined single limit

4 Such comprehensive policy shall include the following:

A. All liability of the Contractor, for the Contractor's Direct Operations.

B. Subcontractor's Operations.

C. Completed Operations Cover, thereby meaning any loss which shall occur after the contract has been completed, but which can be traced back to the Contract.

D. Contractual Liability, meaning thereby, any risk assumed by the Contractor under Hold Harmless Agreements or any other assumption of liability, but specifically Items 11.1.1.8.3G herein below

E. Broad Form Property damage Coverage, including Completed Operations.

F. Personal Injury Liability, with employee's exclusions removed.

G. The Contractor shall indemnify and save harmless the Owner against all loss, cost, or damaged on account of injuries to persons or property occurring in the performance of the Contract, including all reasonable attorney's fees incurred by the Owner, on account thereof.

H. Explosion and Collapse Hazard:  
Included or  Not Applicable.

I. Underground Hazard:  
Included or  Not Applicable.

5 The Contractor shall carry for himself and shall require that all Subcontractors and all Owners of Automobiles or trucks rented or hired on the contract carry until the Contract is completed. Comprehensive Automobile Liability Coverage for Bodily Injury and property Damage in amounts not less than the minimum amounts as indicated. The Contractor and Subcontractor shall also carry for themselves insurance for all non-owned and hired automobile at the limits of liability as indicated below:

A. Bodily Injury \$1,000,000 each person  
\$1,000,000 each occurrence

B. Property damage \$1,000,000 each occurrence; or

C. Bodily Injury & Property damage \$1,000,000 combined single limit

6. Excess Liability: \$2,000,000 limit

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7. Builder's Risk Coverage. The Contractor shall carry for the Owner, himself, and all Subcontractor's a Builder's Risk Policy to cover the full amount of the Contract during construction, fabrications or erection of any equipment.

8. A Surety authorized to do business in the State of Alabama shall furnish the required insurance.

9. The ACCORD™ Certificate must be signed or countersigned by a Licensed Resident Agent of the State of Alabama and the agent's name, address and telephone number must appear on the face of the certificate.

10. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's ~~consultants~~ Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

#### § 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

#### § 11.3 PROPERTY INSURANCE

§ 11.3.1 ~~Unless otherwise provided, the Owner~~ The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional ~~deductibles~~ deductibles (See 11.1.1 Supplement Builder's Risk Coverage). Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the ~~Owner~~ Contractor shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

~~§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.~~

#### ~~§ 11.3.2 BOILER AND MACHINERY INSURANCE~~

~~The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.~~

#### ~~§ 11.3.3 LOSS OF USE INSURANCE~~

~~The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.~~

~~§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.~~

~~§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.~~

~~§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable~~

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conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

#### **§ 11.3.7 WAIVERS OF SUBROGATION**

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

~~§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.~~

~~§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.~~

~~§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.~~

#### **§ 11.4 PERFORMANCE BOND AND PAYMENT BOND**

~~§ 11.4.1 The Owner shall have the right to require the Contractor to Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract thereunder.~~

~~§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.~~

~~11.4.3. The Labor and Material Payment Bond and Performance Bond shall each be for one hundred percent (100%) of the Contract price if the Contract Price is greater than \$10,000.00~~

- ~~1. Cost of the bonds shall be included in the bid.~~
- ~~2. Bonds shall be submitted with the executed agreement on provided form(s).~~

3. Power of Attorney is required for both bonds.
4. A Surety authorized to do business in the State of Alabama shall furnish both bonds.
5. A Surety licensed to do business in the State of Alabama must execute the bonds.
6. Each bond must be signed or countersigned by a Resident Agent of the State of Alabama.
7. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00.
8. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment being made to the Contractor.

**ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

**§ 12.1 UNCOVERING OF WORK**

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

**§ 12.2 CORRECTION OF WORK**

**§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION**

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

**§ 12.2.2 AFTER SUBSTANTIAL COMPLETION**

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

### § 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### § 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

State of Alabama.

### § 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

13.2.3 No assignment of the Contract shall be made without the written permission of Surety providing bonding and the City of Mobile.

### § 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

### § 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

### § 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public

authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.5.7 Test, inspections or approvals made in addition to the Architects normal design and contract administration services caused by the Contractor shall be paid for by the Contractor. The normal service schedule is contained in Article 2.8.1 of AIA B102-2007 as amended by the Owner and is available to Contractor on request.

13.5.8 The Contractor must call the Urban Development Department of the City of Mobile for their inspections and approval at the times required by the Urban Development Department, as well as notify the Architect, Consulting Engineer, and/or Test Laboratory, for inspection and approval of sub-grade conditions, under slab and footing Conditions, vapor barrier placement, reinforcing steel placement, all structural connections, electrical, mechanical, etc. None of the above will be accepted that have been covered up before receiving approval of the Architect or his Consultant.

### § 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

### § 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

### 13.8 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

#### 13.8.1 As between the Owner and Contractor:

1. Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

2. Between Substantial Completion and Final Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to the final payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all event not later than the date of issuance of the final Certificate for Payment; and
3. After Final Payment. As to acts or failures to act occurring after the relevant date of the final Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

### 13.9 SUBSTITUTION OF MATERIALS AND EQUIPMENT

13.9.1 Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturer's or vendor's names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a standard, and any material, article, or piece of equipment of other manufacturers or vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equal substance, appearance and function. It shall not be purchased or installed by the Contractor without the Architect's written approval.

## **ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

### **§ 14.1 TERMINATION BY THE CONTRACTOR**

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
2. An act of government, such as a declaration of national emergency that requires all Work to be stopped;
3. Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
4. The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages executed.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

## § 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

## § 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time ~~shall~~ may be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

## § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, ~~along with reasonable overhead and profit on the Work not executed.~~ termination.

## ARTICLE 15 CLAIMS AND DISPUTES

### § 15.1 CLAIMS

#### § 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

#### § 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. ~~Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes acting with due diligence, reasonable should have first recognized the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Architect and the other party.~~

#### § 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

#### § 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the ~~Work-Work~~ giving rise to such claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### § 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

#### § 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### § 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been

rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 ~~The Initial Decision Maker Architect~~ will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the ~~Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, Architect reasonably concludes that,~~ it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; ~~therefore;~~ and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties ~~but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.~~

~~§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.~~

~~§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.~~

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### § 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall not be subject to mediation as a condition precedent to binding dispute resolution.

~~§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in~~

Init.

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User Notes:

(1383216234)



writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

~~§ 15.3.3~~ The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

#### ~~§ 15.4 ARBITRATION~~

~~§ 15.4.1~~ If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

~~§ 15.4.1.1~~ A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

~~§ 15.4.2~~ The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

~~§ 15.4.3~~ The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

#### ~~§ 15.4.4 CONSOLIDATION OR JOINDER~~

~~§ 15.4.4.1~~ Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

~~§ 15.4.4.2~~ Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

~~§ 15.4.4.3~~ The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

Matthews Park  
Synthetic Turf Athletic Field  
Mobile, Alabama  
PR-022-21

DOCUMENT 003132 - GEOTECHNICAL DATA

1.1 GEOTECHNICAL DATA

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information. This Document and its attachments are not part of the Contract Documents.
- B. Because subsurface conditions indicated by the soil borings are a sampling in relation to the entire construction area, and for other reasons, the Owner, the Architect, the Architect's consultants, and the firm reporting the subsurface conditions do not warranty the conditions below the depths of the borings or that the strata logged from the borings are necessarily typical of the entire site. Any party using the information described in the soil borings and geotechnical report shall accept full responsibility for its use.
- C. Soil-boring data for Project, obtained by Geotechnical Engineering-testing, Inc. dated March 29, 2022, is available as appended to this Document.
- D. Related Requirements:
  - 1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.

END OF DOCUMENT 003132



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## INTRODUCTION

Geotechnical Engineering-Testing, Inc. (GET) has completed the authorized soils explorations and geotechnical engineering studies for proposed direct embed light poles at Matthews Park Field A in Mobile, Alabama. Our services were generally performed as set forth in our proposal of February 2, 2021. The services were authorized by email from Joe Comer IV, ASLA of Espalier, LLC dated February 24, 2022.

The soils explorations included three soil borings to depths of 40 ft, visual descriptions of the soils encountered, and laboratory tests on selected soil samples recovered from the boring operations. The engineering study has included the planning, coordination, and supervision of the soils explorations program, evaluations of the results of the soils explorations, development of geotechnical design recommendations, and the preparation of this report. The report includes recommendations for design soil parameters, for allowable lateral earth pressures with depth, and for allowable bearing pressures at various depths for the direct embed poles.

Details of the soils explorations and geotechnical engineering studies are presented in the following sections of this report.

## SOILS EXPLORATIONS PROGRAM

The procedures for the field exploration and laboratory testing programs utilized on this project are summarized in the following sections of this report.

### Boring Locations

Field A is located at the northeast corner of Matthews Park and serves as the home field for Davidson High School baseball. The field is oriented so that the line from home plate through second base runs in the northeast direction. We understand the refurbished field will maintain the same orientation as shown on a “review” drawing provided by Espalier, LLC. The “review” drawing, which shows the proposed light pole locations (A-1, A-2, B-1, B-2, C-1, C-2), is included in Appendix B of this report.

Three soil boring locations were selected by our firm at locations estimated to provide a reasonable representation of the subsurface soil conditions in the area. The borings were located around the perimeter of the existing field such they were about equal distances from each other. The approximate soil boring locations are shown on a copy of the Google Earth® aerial image included in Appendix B.

### Field Explorations

Boring B-2, behind the existing center field fence was performed using our truck-mounted SIMCO 2400 drill rig. Borings B-1 and B-3 were performed with our track-mounted Mobile B-37 drill rig. Each of the boreholes was advanced using the rotary wash method. In the rotary wash method, a bentonite slurry drilling fluid is circulated through the borehole to stabilize the walls and bottom and to transport soil cuttings to the surface. Standard penetration tests were generally performed and split spoon soil samples collected continuously to a depth of 7.5 ft, at 2.5-ft center-to-center intervals from 7.5 ft to 20 ft, and then at the standard 5-ft interval to the boring termination depths. Within boring B-3, an undisturbed tube sample was collected within a cohesive soil stratum near a depth of 22 ft. Depths where samples were collected and the results of the standard penetration tests are shown on the Logs of Boring included in Appendix C of this report.

Split spoon soil samples collected during the boring operations were visually described, logged, placed in moisture tight plastic bags, and, along with the sealed undisturbed tube sample, transported to the laboratory. At the laboratory, the samples were visually examined by the project engineer to confirm or adjust field classifications.

The soil boring logs provided with this report are representative of subsurface conditions at their respective locations and for their respective vertical reaches. However, local variations characteristic of the subsurface materials of the region may be encountered during construction. The boring logs and related information are based on the driller's logs and visual examination of soil samples in the laboratory. The delineation between soil types shown on the logs is approximate and the description represents the interpretation of subsurface conditions at the designated boring location on the date drilled.

### Laboratory Testing

Selected samples were subjected to laboratory tests to aid the engineering evaluations. These tests included natural moisture content, Atterberg limits, and percent finer than a number 200 sieve. Tests were performed in general accordance with standard laboratory soil testing procedures. Test results are shown on the Logs of Boring opposite the samples tested and on report forms that follow the logs.

### **SUBSURFACE CONDITIONS**

The soil borings encountered predominately granular (sand) soils throughout the exploration depths. However, strata of medium to soft consistency cohesive soils were encountered from about 15 to 23 ft deep at boring B-3. The relative density of the granular soils was generally loose from the ground surface to depths of about 5 ft and then firm to the boring termination depths. Details of the soils encountered are presented by the Logs of Boring.

Several days after drilling, ground water was measured in the boreholes at depths of 1 to 2 ft below surface.

### **GEOTECHNICAL RECOMMENDATIONS**

Based on the results of field tests, laboratory tests, industry literature, and on our experience, recommendations have been developed for design soil parameters for the subsurface conditions indicated by the soils explorations. The recommended parameters are presented in Tables I-A and I-B in Appendix A of this report. Lateral pressure coefficients presented in the table are based on the Rankine earth pressure theory. It is noted that recommendations for borings B-1 and B-2 have been combined since the subsurface conditions were so similar.

Using the CWALSHT computer program developed by the U.S. Army Corps of Engineers that incorporates the Coulomb theory of lateral earth pressures, we also estimated minimum (active) and maximum (passive) lateral earth pressures with depth for conditions indicated at each boring location. Our calculated ultimate lateral pressures and recommended resisting lateral earth pressures (based on a factor of safety of about 2.0) at 2-ft depth increments and at stratum changes are shown in Tables II-A and II-B in Appendix A. It should

be noted that no effort was made to estimate deflections required to mobilize the recommended resisting soil pressures.

We also performed evaluations to estimate soil bearing capacities at varying depths for each subsurface condition. Bearing capacities are affected by soil strength and foundation embedment depth, as well as, in some cases, foundation width. For our evaluations it was assumed that the pole foundations would have diameters of 3 ft. "Pole foundations" refers to the butt diameter of the light poles if they bear directly on the in-situ soils. "Pole foundations" refers to the diameter of the pole installation holes if the holes are overdrilled and backfilled with gravel to the pole bearing depth. Our recommended allowable soil bearing pressures at approximate 2-ft intervals from depths of 10 ft to 32 ft below surface are also presented in Tables II-A and II-B. The recommended allowable bearing pressures are not presented below a depth of 32 ft because they may be affected by the soil conditions below the 40-ft boring termination depth. The recommended allowable bearing pressures are the result of application of a factor of safety of about 3.0 applied to the calculated ultimate bearing capacities.

It is noted that after the annulus around each pole is backfilled with quartzite gravel, skin friction will contribute a significant amount of vertical support for the poles. Skin friction has not been considered in the recommended allowable bearing pressures discussed above.

Design of pole foundations, along with development of installation specifications, should be provided by the project structural engineer. From a geotechnical perspective, the subsurface conditions at boring locations B-1 and B-2 (Table I-A and Table II-A) should be used to design the foundations for poles A-1, A-2, B-2, and C-2. We recommend the subsurface conditions at boring location B-3 (Table I-B and Table II-B) be used to design foundations for poles B-1 and C-1. In reality, light pole foundations from the two subsurface conditions may be so similar that only one design is needed.

Because of the high ground water level and the predominate granular soils, it should be anticipated that foundation excavations will have to be stabilized by use of drilling slurry and/or casings.

## LIMITATIONS

Our professional services for this project have been performed, findings obtained, and recommendations prepared in accordance with generally accepted engineering principles and practices. The services identified herein were completed in a manner consistent with the level of



care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions as this project. No other representation, expressed or implied, is included or intended, and no warranty or guarantee is included or intended in this report or any other instrument of service.

# **APPENDIX A**

**RECOMMENDED DESIGN SOIL PARAMETERS AND  
LATERAL EARTH AND BEARING PRESSURE  
RECOMMENDATIONS**

**RECOMMENDED DESIGN SOIL PARAMETERS  
ATHLETIC FIELD LIGHT POLES  
MATTHEWS PARK FIELD A IN MOBILE, ALABAMA  
(GET PROJECT NO. 22-126)**

**TABLE I-A - BORINGS B-1 & B-2**

Depth Below Surface, Ft	Predominate Soil Type	Effective Unit Weight, PCF	Internal Angle of Friction, Degrees	Cohesion, PSF	Passive Pressure Coefficient	Active Pressure Coefficient	Net Pressure Coefficient
5	Sand	50	29	-	2.88	0.35	2.53
5 - 40	Sand	60	34	-	3.54	0.28	3.26

**TABLE I-B - BORING B-3**

Depth Below Surface, Ft	Predominate Soil Type	Effective Unit Weight, PCF	Internal Angle of Friction, Degrees	Cohesion, PSF	Passive Pressure Coefficient	Active Pressure Coefficient	Net Pressure Coefficient
0 - 3	Sand	50	29	-	2.88	0.35	2.53
3 - 5	Sand	30	25	-	2.46	0.41	2.05
5 - 8	Sand	50	28	-	2.77	0.36	2.41
8 - 15.5	Sand	60	32.5	-	3.35	0.3	3.05
15.5 - 26	Clay	45	-	500	-	-	-
26 - 32	Sand	60	31	-	3.12	0.32	2.80
32 - 40	Sand	65	36	-	3.85	0.26	3.59

**TABLE II - A**  
**LATERAL EARTH AND BEARING PRESSURE RECOMMENDATIONS**  
**ATHLETIC FIELD LIGHT POLES AT MATTHEWS PARK FIELD A IN MOBILE, ALABAMA**  
**BORINGS B-1 AND B-2**  
 (GET PROJECT NO. 22-126)

Depth Below Ground Surface, Ft	Calculated Passive Pressure, PSF	Calculated Active Pressure, PSF	Recommended Allowable Resisting Lateral Pressure*, PSF	Recommended Allowable Bearing Pressure**, PSF
0	0	0	0	-
2	274	33	121	-
4	549	66	242	-
4.99	686	83	302	-
5.01	842	67	388	-
6	1046	84	481	-
8	1453	116	669	-
10	1861	149	856	3390
12	2268	181	1044	3860
14	2676	214	1231	4330
16	3083	246	1419	4810
18	3490	279	1606	5280
20	3898	312	1793	5760
22	4305	344	1981	6230
24	4713	377	2168	6700
26	5120	409	2356	7020
28	5528	442	2543	7110
30	5935	474	2731	7110
32	6343	507	2918	7110
34	6750	540	3105	-
36	7158	572	3293	-
38	7565	605	3480	-
40	7973	637	3668	-

\* Factor of safety = 2.0

\*\* Factor of safety = 3.0

**TABLE II - B**  
**LATERAL EARTH AND BEARING PRESSURE RECOMMENDATIONS**  
**ATHLETIC FIELD LIGHT POLES AT MATTHEWS PARK FIELD A IN MOBILE, ALABAMA**  
**BORING B-3**  
 (GET PROJECT NO. 22-126)

Depth Below Ground Surface, Ft	Calculated Passive Pressure, PSF	Calculated Active Pressure, PSF	Recommended Allowable Resisting Lateral Pressure*, PSF	Recommended Allowable Bearing Pressure**, PSF
0	0	0	0	-
2	274	33	121	-
2.99	412	50	181	-
3.01	352	58	147	-
4	420	69	176	-
4.99	488	80	204	-
5.01	548	72	238	-
6	680	89	296	-
7.99	944	123	411	-
8.01	1132	103	515	-
10	1515	137	689	2110
12	1898	172	863	1920
14	2281	207	1037	1570
15.49	2568	233	1168	1500
15.51	1773	0	887	1500
16	1794	0	897	1500
18	1879	0	940	1500
20	1965	0	983	1500
22	2050	50	1000	1550
24	2135	135	1000	1670
25.99	2220	220	1000	1750
26.01	3812	391	1711	1750
28	4172	427	1873	5810
30	4531	464	2034	9860
31.99	4891	501	2195	10660
32.01	6031	407	2812	10660
34	6513	439	3037	-
36	6995	472	3262	-
38	7478	504	3487	-
40	7960	537	3712	-

\* Factor of safety = 2.0

\*\* Factor of safety = 3.0

# **APPENDIX B**

**REVIEW DRAWING AND  
AERIAL IMAGE WITH SOIL BORING LOCATIONS**



**ESPALIER**  
landscape architecture

Espalier, LLC  
P.O. Box 1247  
Fairhope, Alabama 36533  
P: 251-494-3500  
espalierdesign.com

**MATTHEWS PARK**  
3700 Michael Blvd. - Mobile, AL 36606  
**SYNTHETIC TURF FIELD A**  
PROJECT# PR-022-21

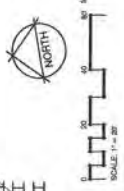
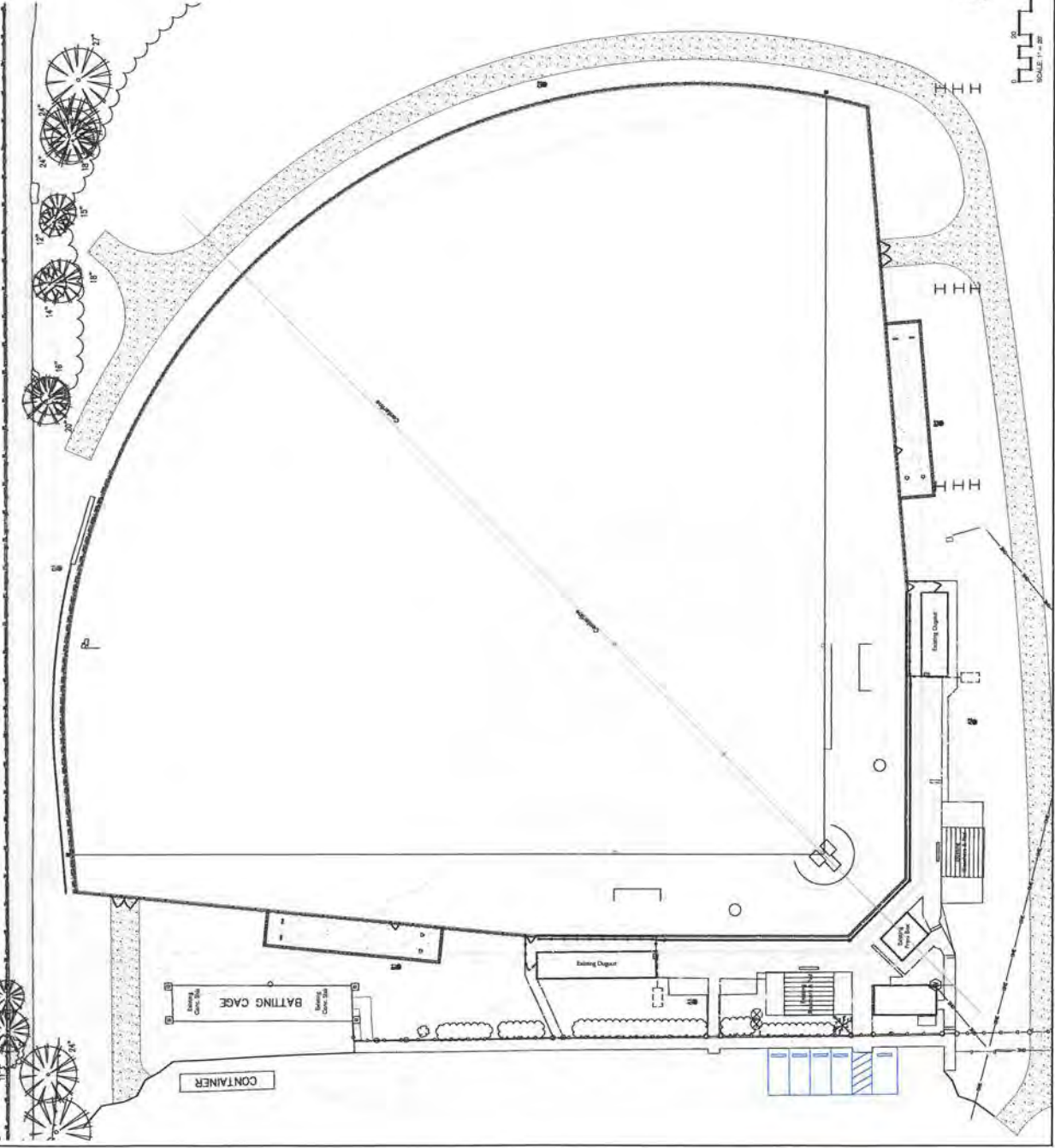
Prepared for:  
The City of Mobile Alabama  
Architectural Engineering Department  
P.O. Box 1827 - Mobile, AL 36633-1827

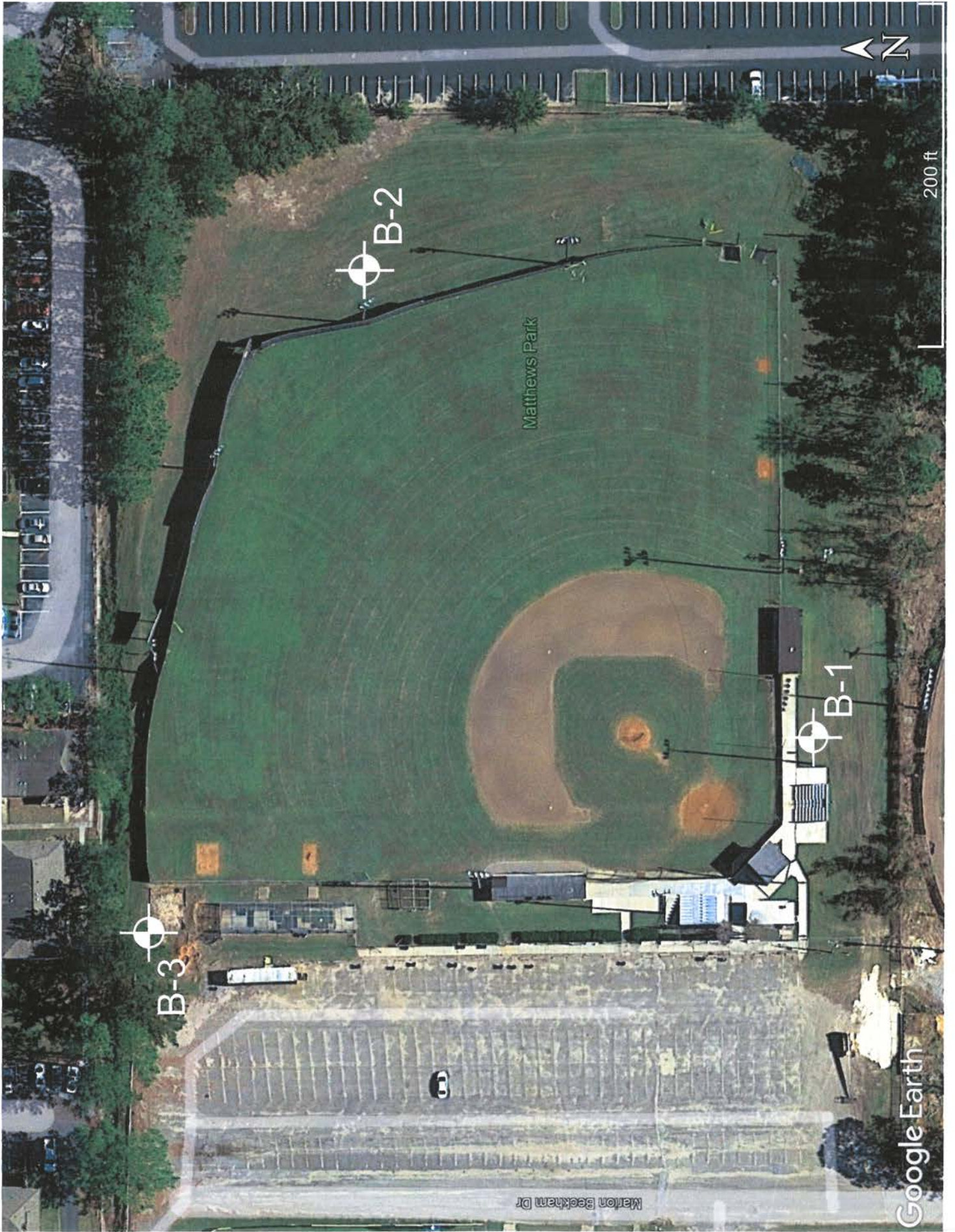
Landscape Architect:  
Espalier Landscape Architecture  
P.O. Box 1247 - Fairhope, AL 36533  
251-454-3500



Conceptual Layout 6/3/21  
30% Review 2/3/22

**DRAFT - FOR REVIEW ONLY**  
**NOT FOR CONSTRUCTION**





200 ft

Google Earth

Marlon Beckham Dr

Matthews Park

B-3

B-2

B-1



# **APPENDIX C**

## **LOGS OF BORING**

PROJECT NAME:

DATE DRILLED:



G.E.T. PROJ. NUMBER:

BORING DEPTH: 0 FT.

BORING ELEV.:

PROJECT LOCATION:

DATUM:

BORING NUMBER: LEGEND

DRILL RIG:

WATER DEPTH:

BORING LOCATION:

DRILL METHOD:

REMARKS:

DRILL CREW:

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
				N <sub>r</sub>	N <sub>c</sub>		L.L.	P.I.				
0		TOPSOIL										
5		SAND										
10		CLAY										
15		SILT										
20		GRAVEL										
25		ORGANICS										
30		PEAT										
35		SILTY SAND (EXAMPLE OF A SOIL MIXTURE)										
40		SPLIT-SPOON SAMPLE (STANDARD PENETRATION TEST)										
45		UNDISTURBED TUBE SAMPLE										
50		SAMPLE NOT RECOVERED										
55		VANE SHEAR										
		B.T. @ 0 FT										

N<sub>r</sub> - Standard penetration test value determined in the field - ASTM D1586 (WOH indicates penetration of sampler under weight of 104 lb hammer)

N<sub>c</sub> - Standard penetration test value of sand corrected for overburden by Peck-Hansen-Thornburn, 1974

w.c. % - Percent water content based on dry soil weight

L.L. - Liquid Limit

P.I. - Plasticity Index

Unit Wt., pcf - Dry unit weight of soil, pounds per cubic ft

% Minus #200 - Percent by weight of soils finer than #200 sieve

c - Cohesion, tons per square ft  
 Φ - Angle of internal friction, degrees  
 s - Vane shear strength, tons per square ft  
 c\* - Values measure with a pocket penetrometer

Classification according to the Unified Classification System

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

**PROJECT NAME:** MATTHEWS PARK FIELD  
A LIGHT POLES

**DATE DRILLED:** 3/9/22



**G.E.T. PROJ. NUMBER:** 22-126

**BORING DEPTH:** 40 FT.

**BORING ELEV.:**

**PROJECT LOCATION:** 3700 MICHAEL  
BOULEVARD, MOBILE, AL

**DATUM:**

**WATER DEPTH:** 0.8 FT.  
measured 3-24-22

**BORING NUMBER:** B-1

**DRILL RIG:** MOBILE B37

**REMARKS:**

**BORING LOCATION:** SEE AERIAL  
IMAGE

**DRILL METHOD:** MUD ROTARY

**DRILL CREW:** ES, BT, RS(LOGGER)

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
				N <sub>i</sub>	N <sub>c</sub>		LL	P.I.				
0		Silty sand, dark brown	1	5								
		Sand, fine, loose, light gray & gray w/ silty lenses & w/ pocket of dark brown silty sand	2	4								
			3	7		21				21.5		
5			4	10								
			5	27								
		Sand, fine, firm, light gray to gray, silty lenses, w/ clay	6	24								
10			7	10		22				10.0		
			8	13								
15		Sand, fine to medium, firm, gray, trace coarse sand	9	19								
			10	21		12				27.1		
20			11	25								
		Clayey sand, fine, firm, light gray	12	27		19				16.1		
25			13	20								
			14	18		22				18.2		
35		Silty sand, fine, firm, light brown & light gray, trace medium to coarse sand below 35'										
40		B.T. @ 40 FT										
45												
50												

MOD DEEP BORING LOG W/O NC VALUES 22-126 MATTHEWS PARK LIGHT POLES.GPJ GETI AL.GDT 3/25/22

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

PROJECT NAME: MATTHEWS PARK FIELD  
A LIGHT POLES

DATE DRILLED: 3/7/22



G.E.T. PROJ. NUMBER: 22-126

BORING DEPTH: 40 FT.

BORING ELEV.:

PROJECT LOCATION: 3700 MICHAEL  
BOULEVARD, MOBILE, AL

DATUM:

WATER DEPTH: 1.8 FT.  
measured 3-24-22

BORING NUMBER: B-2

DRILL RIG: SIMCO 2800

REMARKS:

BORING LOCATION: SEE AERIAL  
IMAGE

DRILL METHOD: MUD ROTARY

DRILL CREW: ES, BT, RS(LOGGER)

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
				N <sub>i</sub>	N <sub>c</sub>		L.L.	P.I.				
0		Silty sand, loose, dark brown	1	9								
		Sand, fine, firm, light brown, trace clay in lenses	2	11								
		Silty sand, loose, gray & light gray	3	7								
5			4	22		12			26.4			
		Silty sand, fine, firm, light gray, trace medium sand near 10'	5	26								
			6	24								
10			7	24								
		Sand, fine to medium to coarse, firm, gray trace fine gravel, w/ silt	8	27		18			5.1			
			9	34								
		Sand, fine, dense, light gray, trace clay & trace coarse sand	10	35								
			11	29		15			3.3			SP
			12	11								
		Sand, fine to medium, firm, light gray & light brown, with coarse sand & fine gravel near 30'	13	19		21			2.5			SP
			14	22								
40		B.T. @ 40 FT										
45												
50												

MOD DEEP BORING LOG W/O NC VALUES 22-126 MATTHEWS PARK LIGHT POLES.GPJ GETI AL GDT 3/25/22

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

PROJECT NAME: MATTHEWS PARK FIELD  
A LIGHT POLES

DATE DRILLED: 3/9/22



G.E.T. PROJ. NUMBER: 22-126

BORING DEPTH: 40 FT.

BORING ELEV.:

PROJECT LOCATION: 3700 MICHAEL  
BOULEVARD, MOBILE, AL

DATUM:

WATER DEPTH: 1.5 FT.  
measured 3-24-22

BORING NUMBER: B-3

DRILL RIG: MOBILE B37

REMARKS:

BORING LOCATION: SEE AERIAL  
IMAGE

DRILL METHOD: MUD ROTARY

DRILL CREW: ES, BT, RS(LOGGER)

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T.		W.C. %	ATTERBERG LIMITS		DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
				N <sub>r</sub>	N <sub>c</sub>		LL	P.I.				
0		Silty sand, dark brown	1	7								
		Sand, fine to medium, loose, light reddish brown to light brown, with thin lenses of organic clay	2	5								
		Clayey sand, very loose, gray & dark gray, trace organics	3	WOH		19				41.2		
5		Clayey sand, firm gray	4	12								
		Sand, fine, loose, gray	5	4								
			6	10								
10		Silty sand, fine, firm, gray	7	22		15				17.5		
			8	23								
15		Sandy clay, medium consistency, light grayish brown	9	5		24						
			10	WOH		24	23	13		61.1		CL
20		Clay, lean, very soft, light grayish brown, with sand lenses	T-1	-		38						
			11	11		18				31.5		
25		Clayey sand, firm, light gray	12	16								
30			13	30		23				12.0		
35		Sand, fine, dense, light gray, with silt lenses	14	34								
40		B.T. @ 40 FT										
45												
50												

MOD DEEP BORING LOG W/O NC VALUES 22-126 MATTHEWS PARK LIGHT POLES G.P.I. GETI, AL, GDT 3/25/22

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

## SECTION 01010

### SUMMARY OF THE WORK

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Summary of Work: Contract, contractor use of premises.
- B. Contract Considerations: Contingency allowance, schedule of values, applications for payment, change procedures, alternates.
- C. Coordination and Meetings: Coordination, field engineering, meetings, progress meetings, examination, preparation, E-Builder.
- D. Submittals: Submittal procedures, construction progress schedules, proposed products list, shop drawings, product data, samples, manufacturers' installation instructions, manufacturers' certificates.
- E. Quality Control: Quality assurance - control of installation, Tolerances, References, Mock-ups, Manufacturers' field services and reports.
- F. Construction Facilities and Temporary Controls: Electricity, temporary lighting for construction purposes, heat, temporary ventilation, telephone service, water service, temporary sanitary facilities, barriers and fencing, exterior enclosures, protection of installed work, security, access roads, parking, progress cleaning and waste removal, project identification, field offices and sheds, removal of utilities, facilities, and controls.
- G. Material and Equipment: Products, transportation, handling, storage, and protection, products options, substitutions.
- H. Contract Closeout: Contract closeout procedures, final cleaning, adjusting, project record documents, operation and maintenance data, spare parts and maintenance materials, warranties. loss

##### 1.2 CONTRACT

- A. Summary of Work:  
Matthews Park Base Bid: The work of this contract consists of converting an existing natural turf athletic field to a synthetic turf athletic field.
- B. Contract Description: Stipulated sum.

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### 1.3 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow continued Owner occupancy. All facilities shall remain in use except the immediate work area for this project. Obey all Facility Regulations and coordinate access and schedule of work with Project Manager.

### 1.4 CONTINGENCY ALLOWANCE

- A. Include in the Contract the stipulated amount for use upon Owner's instruction.
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit are included in Change or Field Orders authorizing expenditure of funds from this Contingency Allowance.

### 1.5 SCHEDULE OF VALUES

- A. Submit Schedule of Values on AIA Form G703 within five (5) calendar days of notification of project award.

### 1.6 APPLICATIONS FOR PAYMENT

- A. Submit two signed and notarized originals of each application on AIA Form G702 and AIA Form G703 for each project location. Submit Lien Release Waivers, including from subcontractors and major suppliers, with each pay application.
- B. Content and Format: Utilize Schedule of Values, AIA Form G703, for listing items in Application for Payment.
- C. Payment Period: Monthly, except for final payment of retainage after all Close Out documents are submitted and approved.

### 1.7 CHANGE ORDER PROCEDURES

- A. All contract changes involving a change in scope, payment and/or time shall be made by change order.
- B. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Owner.

### 1.8 ALTERNATE BID ITEMS

- A. Alternates quoted on Bid Form, if any, will be reviewed and accepted in the order listed.
- B. Coordinate related Work and modify surrounding Work as required.

- C. Schedule of Alternates: Listed on bid form, as applicable.

#### 1.9 COORDINATION

- A. Coordinate scheduling, submittals, and Work at the facility to ensure an efficient and orderly sequence and to facilitate the continued uninterrupted use of the Facility.
- B. Request Utility interruptions at least 72 hours in advance. Note that due to scheduling in the facility, utility interruptions must be approved.

#### 1.10 FIELD ENGINEERING

- A. Establish elevations, lines, and levels and certify that elevations and locations of the Work conform to the Contract Documents. Verify existing conditions.
- B. Contractor shall field verify all measurements and quantities required for a complete installation.

#### 1.11 PRECONSTRUCTION MEETINGS

- A. Owner will schedule a pre-construction meeting after contract award for all affected parties.

#### 1.12 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at pre-approved intervals.
- B. Preside at meetings, record minutes, and distribute copies within two days to those affected by decisions made.

#### 1.13 E-BUILDER

- A. E-Builder is a construction program management to help facilitate project cost, schedule, and documents.
- B. Owner shall provide access and training to E-Builder.
- C. Contractor shall utilize the program to communicate with Architect and Owner for the following:
  - a. Email Communication
  - b. Construction Schedules
  - c. Submittals
  - d. Pay Applications and Schedule of Values



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- e. Request for Information
- f. Field Reports
- g. Architectural Supplemental Information
- h. Change Orders
- i. Contract and Notice to Proceed Documents
- j. Testing Documents
- k. Photos

#### 1.13 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within five (5) calendar days after date of notice of award of project for Project Manager's review.
- B. Submit revised schedules with each Application for Payment, identifying changes since previous version. Indicate estimated percentage of completion for each item of Work at each submission.

#### 1.14 SHOP DRAWINGS

- A. Shop Drawings for Review: Submit to Project Manager/Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit four copies for use by the owner plus the number of copies that Contractor requires. Electronic submittals may be acceptable with prior approval of the Project Manager and Engineer. Close Out documents shall include electronic and hard copies of all submittals.

#### 1.15 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' written instructions.
- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- D. Supply certification from manufacturer that the installed Work meets or exceeds all manufacturers' requirements.

#### 1.16 EXAMINATION

- A. Verify that existing site conditions and subsurfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing

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conditions.

- B. Verify that utility services are available, of the correct characteristics, and in the correct location.

#### 1.17 PREPARATION

- A. Prepare surfaces prior to applying next material installation.

#### 1.18 TOLERANCES

- A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate. Comply fully with manufacturers' tolerances.

#### 1.19 REFERENCES

- A. Conform to reference standards by date of issue current as of date of Contract Documents.
- B. Should specified reference standard conflict with Contract Documents, request clarification from Project Manager before proceeding.

#### 1.20 ELECTRICITY

- A. Unless otherwise provided for, Contractor shall be allowed to utilize power from the facility in moderate amounts.
- B. Provide power outlets for construction operations, branch wiring, distribution boxes, and flexible power cords as required.

#### 1.21 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain temporary lighting for construction operations as may be required.
- B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

#### 1.22 WATER SERVICE

- A. Owner shall provide suitable potable water in moderate quantities without cost to the Contractor.

### 1.23 TEMPORARY SANITARY FACILITIES

- A. Contractor may use sanitary facilities located at the facility in lieu of contractor provided temporary facilities. Facilities will also continue to be used by the public and shall be maintained clean and in a sanitary condition.

### 1.24 BARRIERS AND FENCING

- A. Provide barriers and fencing as needed to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from dust, debris and damage.

### 1.25 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections. Prohibit traffic or storage upon grass or paving surfaces.

### 1.26 SECURITY

- A. Provide security and facilities to protect Work and existing facilities from unauthorized entry, vandalism, or theft.

### 1.27 ACCESS ROADS & HAULING

- A. Maintain temporary access routes through the public thoroughfare and parking areas to serve the construction area as required without obstructing traffic or blocking access for facility staff or participants. Provide drive pads as required.
- B. Restore site to pre-construction condition. Fill ruts, replace broken or damaged amenities, sod disturbed areas.

### 1.28 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel on site. Do not block traffic.

### 1.29 PROGRESS CLEANING AND WASTE REMOVAL

- A. Collect and maintain work areas free of waste materials, debris, and rubbish on a daily basis. Maintain site in a clean and orderly condition. Provide refuse containers and dispose of construction debris legally off site. The Owner may request load tickets from landfills permitted to accept construction debris.

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### 1.30 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials, prior to Substantial Completion review.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

### 1.31 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

### 1.32 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Transport, handle, store, and protect Products in accordance with manufacturers' instructions.

### 1.33 PRODUCT OPTIONS

- A. Products Specified by Naming One Manufacturer or equal: Products of manufacturer named approved as "Basis of Design". Equal alternate products to be approved by Owner as Substitutions. Submit product data as required in SUBSTITUTIONS.

### 1.34 SUBSTITUTIONS

- A. Architect will consider requests for Substitutions only within 10 days after date established in Notice to Proceed. For Pre-Bid approved Substitutions, submit request 7 calendar days or more before bid date with all back up data to show that all characteristics of the Basis of Design product are met with the substituted product or material.
- B. Document each request with complete backup data substantiating compliance of proposed Substitution with all characteristics of the materials specified in the Contract Documents.
- C. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
- D. Substitution shall indicate all product properties and show that they are equal to that Specified.

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- E. Acceptance or Rejection of Pre-Bid Substitution Requests will be issued by Addendum.

### 1.35 FINAL CLEANING

- A. Execute final cleaning prior to final inspection of work area. User may occupy portions of the work incrementally as the work is completed and accepted. Entire project to be ready for use by User once all areas of work are completed.
- B. Clean debris from site and drainage systems.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the facility and the site. Leave site in raked and smooth condition.

### 1.36 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of Contract Documents to be utilized only for record documents.
- B. Record actual revisions to the Work. Record information concurrent with construction progress.
- C. Specifications: Legibly mark and record at each Product section a description of actual Products installed.
- D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.
- E. Submit documents to Project Manager with claim for final Application for Payment.
- F. Submit 1 paper copy in binder and 1 thumb drive with pdf copies to include:
  - a. Completed AIA Document G706, Contractor's Affidavit of Payment of Debts and Liens (notarized)
  - b. Completed AIA Document G706A, Contractor's Affidavit of Release of Liens (notarized)
  - c. Releases or Waivers of Liens from all Subcontractors and Material and Equipment Suppliers (notarized).
  - d. Completed AIA Document G707-1994, Consent of Surety to Final Payment.
  - e. Written warrantee on Contractor's letterhead covering materials and labor for one year.
  - f. Advertisement of Completion (4 consecutive weeks)
  - g. Closeout of Permits (provide closed documentation)
  - h. Completion of all items on the Punch List.
  - i. Operations and Maintenance Manuals
  - j. Reviewed submittals
  - k. Retainage Pay Application

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I. Project Record Documents (Printed 24x36)

1.37 WARRANTIES

- A. Product and Manufacturer's Warranties shall be provided per specifications.
- B. In addition, all materials and labor shall be warranted for a minimum of one year after Substantial Completion of the entire project. Contractor to promptly repair all deficiencies within that time. A warranty inspection shall be scheduled by the Owner, with the Contractor and Owner's representative, before the end of the warranty period, in order to review the work and note deficiencies for the Contractor to correct. Said meeting may be waived if no deficiencies are noted.

PART 2 PRODUCTS  
Not Used.

PART 3 EXECUTION  
Not Used.

END OF SECTION



## SECTION 01210

### ALLOWANCES

#### PART 1 GENERAL

##### 1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

A. Allowances will be utilized to:

1. Defer selection of certain items until more information is available.
2. Provide for discretionary installation of materials where exact and specific conditions cannot be determined in advance.
3. Provide for the discretionary use of labor where tasks and time frames cannot be determined in advance.

B. Include in Total Bid a stipulated lump sum allowance amount as specified in this Section.

##### 1.3 ALLOWANCE

A. Include in the Total Base Quote a stipulated allowance(s) as indicated on the Quote Form for the use upon Owner's instruction. Upon Contractor inspection and Owner approval, any additional work that may be required, but not covered in the original Scope of Work (Base Scope Quote), shall be added to the scope and cost charged against the Contingency Allowance. Contractor's cost for products, delivery, installation labor, insurance, payroll, bonding, equipment rental and overhead and profit will be included in the Allowances. Contractor's markups on allowances are limited to 10% for subcontractor's work and 15% for his own forces.

B. Use of Contingency Allowance(s) shall be approved in writing by the Owner before any materials are ordered or work performed.

C. Upon completion of the Work, any unused portion of the Allowances shall be credited back to the City of Mobile in the form of a Change Order.

D. Contractor shall provide a detailed proposal of the work with overhead and profit broken out. Such proposals shall include proposals from subcontractors, also showing their detailed proposal with overhead and profit broken out.



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#### 1.4 SELECTION AND PURCHASE

- A. Advise the Project Manager when final selection and purchase of allowance item must be complete to avoid delay.

#### 1.5 SUBMITTALS

- A. Request for Use of Allowance: Submit proposals for approval that detail and break out costs for contractors and subcontractor's markups.
- B. After Use of Allowance: Submit invoices to show quantity delivered to the site for each allowance.

#### PART 2 PRODUCTS

Not used

#### PART 3 EXECUTION

##### 3.1 INSPECTION

- A. Promptly inspect all Allowance items upon delivery. Immediately report any shortage, damage, or defects to Project Manager.

##### 3.2 PREPARATION

- A. Coordinate materials and installation to assure that each item is integrated with related construction activities.

##### 3.3 ALLOWANCE SCHEDULE

- A. Include as a Matthews Park Contingency Allowance the lump sum amount of fifty thousand and xx/100 Dollars (\$50,000.00).

END OF SECTION

SECTION 01220

UNIT PRICES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
1. Measurement.
  2. Payment.

1.3 UNIT PRICES

- A. Provide unit prices for items listed, for inclusion in Contract, guaranteed to apply for duration of Project as basis for additions to or deductions from Contract Sum.
- B. Actual quantities and measurements supplied or placed in the Work will determine payment.
- C. Payment includes full compensation for all required labor, Products, tools, equipment, services, and incidentals, and for erection, application, or installation of an item of the Work.

PART 2 PRODUCTS Not used

PART 3 EXECUTION

3.1 UNIT PRICE SCHEDULE

- A. Provide Unit Price to: Provide and Install on-site placement and compaction of soil (Cut/Fill), includes excavating or filling. Cut material will be placed elsewhere on-site or hauled off as required. Fill material will be from material onsite, and all other necessary construction components for installation.
1. Unit of measure: Cubic Yards - CY
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity

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- B. Provide a Unit Price for: Unsuitable Soil Material – Excavate, haul off and properly dispose of unsuitable materials.
  - 1. Unit of measure: Cubic Yards In Place - CYIP
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed
  
- C. Provide a Unit Price for: Structural Fill - Provide and Install Imported Structural Fill, spread, compaction, and all other necessary construction components for installation.
  - 1. Unit of measure: Cubic Yards In Place - CYIP
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- D. Provide a Unit Price to: Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.
  - 1. Unit of measure: Linear Feet - LF
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- E. Provide a Unit Price to: Provide and install Inlet protection. Includes installation, removal, and all other necessary construction components for installation.
  - 1. Unit of measure: Linear Feet - LF
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- F. Provide a Unit Price to: Provide and install wattles. Includes installation, removal, and all other necessary construction components for installation.
  - 1. Unit of measure: Linear Feet - LF
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.

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- G. Provide a Unit Price to: Provide and install 12" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.
1. Unit of measure: Linear Feet - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- H. Provide a Unit Price to: Provide and install 6" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.
1. Unit of measure: Linear Feet - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- I. Provide a Unit Price to: Provide and install 0'-4' Drop Inlet. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.
1. Unit of measure: Each - EA
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- J. Provide a Unit Price to: Provide and install 12" concrete perimeter curb at synthetic field per detail with chain link fence centered in curb. DO NOT include cost of chain link fence. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.

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- K. Provide a Unit Price to: Provide and install 4" concrete flatwork (sidewalks, etc) per details. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Square Foot - SF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- L. Provide a Unit Price to: Demolish and properly dispose offsite existing concrete flatwork (sidewalks, etc). Include excavation, sawing, jack hammering, loading, haul off site, and proper disposal.
1. Unit of measure: Square Foot - SF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- M. Provide a Unit Price to: Provide and install asphalt pavement patch per detail. Include excavation, fill, compaction, grading, asphalt, reinforcement, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Square Foot - SF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- N. Provide a Unit Price to: Provide and install 6' Vinyl Chain Link Fence In Perimeter Curb as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- O. Provide a Unit Price to: Provide and install 6' Vinyl Chain Link Fence as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:

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- a. Contract Sum to be based on quantities of material provided and installed.
  - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- P. Provide a Unit Price to: Provide and install 7' Vinyl Chain Link Fence with privacy slats as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.
  - 1. Unit of measure: Linear Foot - LF
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- Q. Provide a Unit Price to: Provide and install wall mounted drinking fountain with bottle filler as specified with sump basin specified. Include excavation, fill, compaction, grading, disposal, placement, water line connection, and all other necessary construction components for installation.
  - 1. Unit of measure: Each - EA
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- R. Provide a Unit Price to: Provide and install 8' surface mount backless bench as specified.
  - 1. Unit of measure: Each - EA
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- S. Provide a Unit Price to: Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.
  - 1. Unit of measure: Square Yard - SY
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.

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- T. Provide a Unit Price to: Provide and install 12" panel drain in synthetic field per detail. Include benching into subgrade, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- U. Provide a Unit Price to: Provide and install masonry backstop wall per detail. Include excavation, fill, compaction, grading, concrete footing, reinforcement, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- V. Provide a Unit Price to: Provide and install masonry backstop wall per detail. Include excavation, fill, compaction, grading, concrete footing, reinforcement, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- W. Provide a Unit Price to: Provide and install backstop wall padding per detail. Include all materials and hardware, mounting, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Square Foot - SF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- X. Provide a Unit Price to: Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Each - Ea
  2. Basis of payment:

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- a. Contract Sum to be based on quantities of material provided and installed.
  - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- Y. Provide a Unit Price to: Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation
  - 1. Unit of measure: Each - Ea
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- Z. Provide a Unit Price to: Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation
  - 1. Unit of measure: Each - Ea
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- AA. Provide a Unit Price to: Provide and install wind screen fabric as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation
  - 1. Unit of measure: Square Foot - SF
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
  
- BB. Provide a Unit Price to: Provide and install polytube fence cap protection as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation
  - 1. Unit of measure: Linear Foot - LF
  - 2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.



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- CC. Provide a Unit Price to: Provide and install 8" fence post padding as specified. Include all materials and hardware, mounting, and all other necessary construction components for installation
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- DD. Provide a Unit Price to: Provide and install compacted aggregate drive as specified. Include excavation, fill, compaction, grading, rock, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Square Foot - SF
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- EE. Provide a Unit Price to: Provide and install lighting directional sign as specified. Include all materials and hardware, mounting, signs, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Each - Ea
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- FF. Provide a Unit Price to: Provide and install scoreboard as specified. Include all materials and hardware, posts, footings, mounting, disposal, excavation, placement, and all other necessary construction components for installation
1. Unit of measure: Each - Ea
  2. Basis of payment:
    - a. Contract Sum to be based on quantities of material provided and installed.
    - b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.
- GG. Provide a Unit Price to: Provide and install dugout lean railing with pad as specified. Include all materials and hardware, mounting, weld plates, disposal, placement, and all other necessary construction components for installation
1. Unit of measure: Linear Foot - LF
  2. Basis of payment:

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- a. Contract Sum to be based on quantities of material provided and installed.
- b. Adjustments to Contract Sum (both adds and deducts) will be made based on actual quantity installed.

HH.

### 3.1 FINAL ADJUSTMENT TO CONTRACT SUM

- A. Upon completion of the Work, any unused portion or the total amount of the Allowance shall be credited back to the City of Mobile in the form of a Change Order.

END OF SECTION



SECTION 01230  
ALTERNATIVE BID ITEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section identifies each Alternate and describes basic changes to Work only when that Alternate is made a part of the Work
- B. Base Bid and Alternates include costs of all supporting elements required, so that the combination of Base Bid and any Alternates are complete.
- C. The scope of work for Alternates shall be in accordance with applicable Drawings and Specifications.
- D. Except as otherwise indicated, complete work described in Alternates with no increase in Subcontract Time.
- E. This section includes non-technical descriptions of Alternates. Refer to specific sections of the Specifications and to Drawings for technical descriptions of Alternates.
- F. Submit bids for Base Bid and all Alternates listed on Bid Form. Failure to quote an amount, or insertion of the words "no bid," "none" or words of similar meaning, will be considered as not completing the proposal and may constitute disqualification of entire bid, at City's discretion. When there is no change in base bid due to using the Alternate, use the words "No Change". The words "No Change" will be interpreted to mean that work described in the Alternate shall be completed at no adjustment or change in cost of Base Bid.

1.3 PROCEDURES

- A. Alternates will be exercised at the option of Owner, and in number order.
- B. Coordinate related work and modify surrounding work as required to complete the work, including changes under each Alternate, when acceptance is designated in Owner/Contractor Agreement.

1.4 DESCRIPTION OF ALTERNATES

- A. Alternate #1 (Additive): Outfield netting system as specified.

PART 2 PRODUCTS Not used

PART 3 EXECUTION Not used

END OF SECTION



## SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General project coordination procedures.
  - 2. Administrative and supervisory personnel.
  - 3. Coordination drawings.
  - 4. Requests for Information (RFIs).
  - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Sections:
  - 1. Division 1 Section "Execution Requirements"
  - 2. Division 1 Section "Project Record Drawings" for coordinating closeout of the Contract.

#### 1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.

#### 1.4 COORDINATION

- A. Contractor shall be responsible for coordinating all trades of his contract, Owners Contractors, coordinating construction sequences and schedules, and coordinating actual installed location and interface of work.

- B. Contractor shall supervise and direct the development of coordination drawings showing comprehensive coordination and integration of all Work of this project including, but not limited to, structural, architectural mechanical, plumbing, fire protection, electrical disciplines, and Owners Contractors.
- C. Coordination drawings are intended to assist Contractor and all trades during construction and may be used to supplement shop drawings, record drawings, and other required submittals.
- D. Coordination: Each contractor shall supervise and direct construction operations with those of subcontractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- E. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- F. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Preinstallation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.
  - 9. Project closeout activities.

## 1.5 KEY PERSONNEL

- A. Key Personnel Names: Within 5 days of Notice to Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list at site. Keep list current at all times.

## 1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

## 1.7 PROJECT MEETINGS

- A. General: Attendance of subcontractors and superintendent at a weekly progress meeting is required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01310





SECTION 01320  
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Start-up construction schedule.
  - 2. Contractor's construction schedule.
  - 3. Field condition reports.
  - 4. Special reports.

1.3 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
  - 1. PDF electronic file.
- B. Start-up construction schedule.
  - 1. Approval of cost-loaded start-up construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- D. Field Condition Reports: Submit at time of discovery of differing conditions.
- E. Special Reports: Submit at time of unusual event.
- F. Existing Condition Photos: Submit prior to onsite mobilization to record existing conditions. If, during construction, damage occurs by others, notify Project Manager right away.

## PART 2 - PRODUCTS

### 2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.
- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Show the following:
  - 1. Activity Duration
  - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  - 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
  - 4. Startup and Testing Time: Include not less than 15 days for startup and testing.
  - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
  - 1. Phasing: Arrange list of activities on schedule by phase.
  - 2. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use of premises restrictions.
    - f. Provisions for future construction.
    - g. Seasonal variations.
    - h. Environmental control.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
  - 1. Unresolved issues.
  - 2. Unanswered RFIs.

3. Rejected or unreturned submittals.
4. Notations on returned submittals.

## 2.2 START-UP CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit start-up horizontal bar-chart-type construction schedule within seven days of date established for the Notice to Proceed .
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 days of construction.

## 2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

- A. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the start-up network diagram, prepare a skeleton network to identify probable critical paths.
  1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Mobilization and demobilization.
    - c. Purchase of materials.
    - d. Delivery.
    - e. Fabrication.
    - f. Utility interruptions.
    - g. Installation.
    - h. Work by Owner that may affect or be affected by Contractor's activities.
    - i. Testing and commissioning.
    - j. Punch list and final completion.
    - k. Activities occurring following final completion.
  2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
  3. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
- B. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.
- C. Initial Issue of Schedule: Identify critical activities. Prepare tabulated reports showing the following:
  1. Contractor or subcontractor and the Work or activity.

2. Description of activity.
3. Principal events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.

D. Schedule Updating: Submit at each weekly coordination meeting.

1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

Note: The Contractor may be allowed additional construction days due to inclement conditions ("rain days") only as such are appropriately documented and are in excess of the NOAA/National Weather Service average (previous 5 years) for the given month. A "rain day" is defined as more than a "trace" (0.10") of rain falling within a given 24 hour period. The Contractor shall provide documentation and formally request any "rain days" they feel are legitimately due. Documentation shall be submitted to the Project Manager, in writing, within ten (10) calendar days of the rain event.

## 2.4 REPORTS

- A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

## 2.5 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

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PART 3 - EXECUTION

Not Used

END OF SECTION



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## SECTION 01330 SUBMITTAL PROCEDURES

### PART 1 GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Section, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Submittal Procedure
  - 2. Submittal Schedule
  - 3. Shop Drawings
  - 4. Product Data
  - 5. Samples

#### 1.3 SUBMITTAL PROCEDURES

- A. Number each submittal with Project Manual specification Section number and sequential number within each section. Number resubmittals with original number and an alphabetic suffix.
- B. Identify Project, Contractor, Subcontractor or supplier, pertinent Drawing sheet and detail numbers, and specification Section number, as appropriate.
- C. Submit all submittals simultaneously for each Produce or Specification Section. Where multiple Products function as an assembly, group submittals for all related Products into single submittal.
- D. Project Manager will not review incomplete submittals.
- E. Apply Contractor's stamp, signed or initialed certifying that:
  - 1. Submittal was reviewed.
  - 2. Products, field dimensions, and adjacent construction have been verified.
  - 3. Information has been coordinated with requirements for Work and Contract Documents.
- F. Schedule submittals to expedite the Project, and deliver to Project Manager. Coordinate submittal of related items.



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- G. For each submittal, allow 10 days for Project Manager's review, excluding delivery time to and from Contractor. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of completed Work.
- H. Revise and resubmit submittals when required; identify all changes made since previous submittals.
- I. Distribute copies of reviewed submittals to concerned parties and to Project Record Documents file. Instruct parties to promptly report any inability to comply with provisions.

#### 1.4 SUBMITTAL SCHEDULE

- A. Submit a submittal schedule showing all submittals proposed for project, including:
  - 1. Submittals for Review
  - 2. Closeout Submittals.
- B. Include for each submittal:
  - 1. Specification section number.
  - 2. Description of submittal.
  - 3. Type of submittal.
  - 4. Anticipated submittal date.
- C. Submit three (3) hard copies and one (1) PDF copy, concurrently.

#### 1.5 SHOP DRAWINGS

- A. Present information in clear and thorough manner.
- B. Identify details by reference to sheet and detail numbers or areas shown on Drawings.
- C. Reproductions of details contained in Contract Documents are not acceptable.
- D. Submit four (4) hard copies and one (1) PDF copy (concurrently). One hard copy and a PDF copy will be returned to Contractor for printing and distribution.

#### 1.6 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options, and other data.

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- B. Supplement manufacturers' standard data to provide information unique to this Project.
- C. Submit 3 copies. Project Manager will return one copy to Contractor for printing and distribution.

#### 1.7 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment of devices. Coordinate sample submittals for interfacing work.
- B. Where so indicated, submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Project Manager's selection.
- C. Include identification for each sample, with full Project information.
- D. Project Manager will notify Contractor of approval or rejection of samples, or of selection of color, texture or pattern if full range is submitted.

END OF SECTION



SECTION 01635  
SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
  - 1. Divisions 2 through 16 Sections for specific requirements and limitations for substitutions and pre-bid approvals.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced.
  - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner

and separate contractors that will be necessary to accommodate proposed substitution.

- c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - d. 6"x12" Samples of each finish material in proposed pattern and color.
  - e. Certificates and qualification data.
  - f. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - g. Cost information, including a proposal of change, if any, in the Contract Sum (not applicable for pre-bid Submittals).
  - h. Impact of substitution on construction schedule.
  - i. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - j. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. Project Manager's Action: If necessary, Project Manager will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Project Manager will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Project Manager Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Project Manager does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION



SECTION 01700  
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Environmental concerns.
  - 2. Installation of the Work.
  - 3. Cutting and patching.
  - 4. Progress cleaning.
  - 5. Starting and adjusting.
  - 6. Protection of installed construction.
  - 7. Correction of the Work.
- B. Related Sections:
  - 1. Division 1 Sections "Summary of the Work", "Project Record Documents", or "Closeout Procedures", if included in Project Manual, for submitting closeout documents and final cleaning.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

- A. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
  - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
  - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.



3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate how long services and systems will be disrupted. Prior approval of Utility outages is required. Notify Owner of intent at least 72 hours in advance.

## 1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
  2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present

where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - a. Description of the Work.
  - b. List of detrimental conditions, including substrates.
  - c. List of unacceptable installation tolerances.
  - d. Recommended corrections.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 1 Section "Project Management and Coordination."
- D. Surface and Substrate Preparation: Comply with manufacturer's recommendations for preparation of substrates to receive subsequent work.

### 3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  1. Make vertical work plumb and make horizontal work level.
  2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.

4. Maintain minimum headroom clearance of 96 inches, but in no case shall the new piping be lower than the existing piping.
  - B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
  - C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
  - D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
  - E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
  - F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
  - G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
    1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
    2. Allow for building movement, including thermal expansion and contraction.
    3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
  - H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
  - I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous, and meet environmental requirements.
- 3.4 CUTTING AND PATCHING
- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
    1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 1 Section "Summary."
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. [Concrete] [and] [Masonry]: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 5. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
  - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space.

Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

- a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
  3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    - a. Utilize containers intended for holding waste materials of type to be stored.
  4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
  2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- F. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- H. Clean completed construction as frequently as necessary through the remainder of the construction period.

### 3.6 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in other Division 2 -16 Sections."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in other Division 2-16 Sections.

### 3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

### 3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.

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- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

### 3.9 ENVIRONMENTAL CONCERNS

- 1. Provide protection and conduct construction in ways that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

### 3.10 STORMWATER CONTROL AND DISCHARGE

- 1. Comply with City of Mobile and Alabama Department of Environmental Management requirements. Pay particular attention to Water Regulations and Allowable Discharges.
- 2. See City of Mobile Code, Chapter 17, Storm Water Management and Flood Control.
- 3. Obtain any necessary permits that may be required due to discharges.

END OF SECTION 01700

SECTION 01710  
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at final completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.



- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
    - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
  5. Submit testing, adjusting, and balancing records.
  6. Submit sustainable design submittals not previously submitted.
  7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment.
  4. Perform preventive maintenance on equipment used prior to Substantial Completion.

5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
6. Advise Owner of changeover in utility services.
7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
8. Complete final cleaning requirements.
9. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

#### 1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
3. Submit final completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
2. Include the following information at the top of each page:
  - a. Project name.
  - b. Date.
  - c. Name of Architect.
  - d. Name of Contractor.
  - e. Page number.
3. Submit list of incomplete items in the following format:
  - a. MS Excel electronic file. Architect will return annotated file.
  - b. PDF electronic file. Architect will return annotated file.

#### 1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Warranties in Paper Form:

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- E. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site, and grounds, in areas disturbed by construction and delivery activities, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

- c. Remove tools, construction equipment, machinery, and surplus material from Project site.
- d. Clean interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- e. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- f. Sweep concrete floors broom clean in unoccupied spaces.
- g. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
- h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
- i. Remove labels that are not permanent.
- j. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- k. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- l. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- m. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
- n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
- o. Leave Project clean and ready for occupancy.

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

- B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION



SECTION 017839  
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
  - 3. Record Product Data.
- B. See Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
- C. See Divisions 01 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Final Submittal: Submit one full set of marked-up Record Prints, showing all dimensional locations, materials changes, any changes via addendum or change order. Pay particular attention to noting underground utilities.
- B. Record Specifications: Submit two copies of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit two copies of each Product Data submittal.
- D. Submit PDF's of Record Drawings, Record Specifications, Record Change Orders, Requests for Proposal, Documentation of use of Allowances, Product and Contractor's Warrantees, Product Test Reports, Final Surveys, Record Product Data, etc on 2 discs.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.



1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
  2. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
  3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
  3. Record CAD Drawings: Organize CAD information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each CAD file.
  4. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect and Engineer.
    - e. Name of Contractor.

## 2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

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2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

### 2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

### 2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Completed Test Reports.

## PART 3 - EXECUTION

### 3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 017839



SECTION 017823  
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation manuals for systems, subsystems, and equipment.
  - 2. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
- B. See Divisions 01 through 16 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.2 SUBMITTALS

- A. Manual: Submit two copies of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 10 days after final inspection.
  - 1. Correct or modify each manual to comply with Architect's comments. Submit **2** copies of each corrected manual within 10 days of receipt of Architect's comments.
  - 2. Provide PDF copies on 2 discs. Submit with the corrected manual.

PART 2 - PRODUCTS

2.1 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
  - 1. Subject matter included in manual.
  - 2. Name and address of Project.
  - 3. Name and address of Owner.
  - 4. Date of submittal.
  - 5. Name, address, and telephone number of Contractor.

6. Name and address of Architect and Engineer.
  7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
  2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
  3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
  4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
    - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

## 2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
- B. Descriptions: Include the following:
1. Product name and model number.
  2. Manufacturer's name.
  3. Equipment identification with serial number of each component.

4. Equipment function.
  5. Operating characteristics.
  6. Limiting conditions.
  7. Performance curves.
  8. Engineering data and tests.
  9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include start-up, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

## 2.3 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
  2. Manufacturer's name.
  3. Color, pattern, and texture.
  4. Material and chemical composition.
  5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

## 2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment:
- D. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions, and demonstration and training videotape if available, that detail essential maintenance procedures.
- E. Submit demonstration and training video for all lighting control systems.
- F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

## PART 3 - EXECUTION

### 3.1 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

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- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
  - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
- E. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823





## SECTION 02230 - SITE CLEARING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Removing existing vegetation.
  - 2. Clearing and grubbing.
  - 3. Stripping and stockpiling topsoil.
  - 4. Removing above- and below-grade site improvements.
  - 5. Disconnecting, capping or sealing, and removing site utilities.
  - 6. Temporary erosion- and sedimentation-control measures.

#### 1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

#### 1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

## 1.5 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
  - 1. Use sufficiently detailed photographs or videotape.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

## 1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.

## 1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify One Call for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.
- D. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 02300 "Earthwork."
  - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.
- B. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.

1. Use coating with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Protect existing site improvements to remain from damage during construction.
  1. Restore damaged improvements to their original condition, as acceptable to Owner.

### 3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion and sedimentation control Drawings and requirements of authorities having jurisdiction.
- B. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

### 3.3 EXISTING UTILITIES

- A. Locate, identify, utilities in the construction area. Notify the Engineer immediately on any discrepancies and conflicts.

### 3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
  1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
  2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
  3. Remove tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

### 3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.
  1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
  1. Limit height of topsoil stockpiles to 72 inches.
  2. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity required for landscaped areas.

### 3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
  1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
  2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

### 3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 02230

## SECTION 02300 - EARTHWORK

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

1. Preparing subgrades for slabs-on-grade, walks, pavements, turf and grasses, and plants.
2. Excavating and backfilling for buildings and structures.
3. Subbase course for concrete walks and pavements.
4. Subbase course and base course for asphalt paving.
5. Subsurface drainage backfill for walls and trenches.
6. Excavating and backfilling trenches for utilities and pits for buried utility structures.
7. Excavating well hole to accommodate elevator-cylinder assembly.
8. Preparing and grading for synthetic playing field areas sub-grade.

- B. Related Sections:

1. Section 02230 "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.

#### 1.3 UNIT PRICES

- A. Refer to Section 01270 "Unit Prices" for a list of Unit Prices for work in addition to the contract documents.

#### 1.4 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
  1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
  2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
  - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
  - 2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
  - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- H. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- I. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
  - 1. Geotextiles.
  - 2. Controlled low-strength material, including design mixture.
  - 3. Warning tapes.
- B. Samples for Verification: For the following products, in sizes indicated below:
  - 1. Geotextile: 12 by 12 inches.
  - 2. Warning Tape: 12 inches long; of each color.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
  2. Laboratory compaction curve according to ASTM D 698.
- C. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.
- D. Quality assurance verification of the sub-grade prior to sub-base materials installation, should include the following:
1. Conformance Survey of Sub-Grade: The Contractor shall perform a conformance survey by a licensed surveyor, before any placement of the drainage stone, on a 25-foot grid over the sub-grade of the entire playing field. Owner's Representative will require three (3) working days to review survey. After review, the survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to base drainage stone.
  2. Tolerance for Sub-Grade: Sub-grade shall be verified using laser-operation survey instruments. Subgrade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the sub-grade shall be measured so that no point within the 25-foot grid deviates more than 1/4 of an inch from any other point within the 25-foot grid.

#### 1.7 QUALITY ASSURANCE

- A. Preexcavation Conference: Conduct conference at Project site.

#### 1.8 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify "One Call" for area where Project is located before beginning earth moving operations.
- C. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Section 02230 "Site Clearing," are in place.



## PART 2 - PRODUCTS

### 2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: As defined within the geotechnical report.
- C. Unsatisfactory Soils: As defined within the geotechnical report.
  - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: ALDOT Section 230 Modified Roadbed.
- E. Base Course: ALDOT Section 825 Crushed Aggregate Base – Type A or B.
- F. Structural Fill: As defined within the geotechnical report.
- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- H. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.
- I. Sand: ASTM C 33; fine aggregate.
- J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

### 2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
  - 1. Survivability: Class 2; AASHTO M 288.
  - 2. Grab Tensile Strength: 157 lbf; ASTM D 4632.
  - 3. Sewn Seam Strength: 142 lbf; ASTM D 4632.
  - 4. Tear Strength: 56 lbf; ASTM D 4533.
  - 5. Puncture Strength: 56 lbf; ASTM D 4833.
  - 6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
  - 7. Permittivity: 0.2 per second, minimum; ASTM D 4491.
  - 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

- B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
  2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
  3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
  4. Tear Strength: 90 lbf; ASTM D 4533.
  5. Puncture Strength: 90 lbf; ASTM D 4833.
  6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
  7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
  8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

### 2.3 CONTROLLED LOW-STRENGTH MATERIAL

- A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:
1. Portland Cement: ASTM C 150, Type I.
  2. Fly Ash: ASTM C 618, Class C or F.
  3. Normal-Weight Aggregate: ASTM C 33, 3/4-inch nominal maximum aggregate size.
  4. Water: ASTM C 94.
  5. Air-Entraining Admixture: ASTM C 260.
- B. Produce conventional-weight, controlled low-strength material with 80-psi compressive strength when tested according to ASTM C 495.

### 2.4 GEOFOAM (Not Used)

### 2.5 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
1. Red: Electric.
  2. Yellow: Gas, oil, steam, and dangerous materials.
  3. Orange: Telephone and other communications.
  4. Blue: Water systems.
  5. Green: Sewer systems.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

### 3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

### 3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

### 3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

### 3.5 EXCAVATION FOR SYNTHETIC PLAYING FIELDS

- A. Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1/4 inch over 25 feet. Do not disturb bottom of excavations intended for bearing surface. Grades shall be uniformly sloped as indicated on the plans. A conformance survey will be required prior to acceptance and further work being authorized to proceed.

### 3.6 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
  - 1. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

### 3.7 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

### 3.8 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
  - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
  - 1. Clearance: As indicated.
- C. Trench Bottoms: Excavate trenches 6 inches deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.
  - 1. Excavate trenches deeper per geotechnical engineer's recommendation in areas of rock or other unyielding bearing material to allow for bedding course.

### 3.9 EXCAVATION FOR ELEVATOR CYLINDER (Not Used)

### 3.10 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
  2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Refer to Section 334600 Synthetic Turf Base Construction for additional requirements for approval of sub-grade.
- E. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- F. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

### 3.11 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 1500 psi, may be used when approved by Engineer.
1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Engineer.

### 3.12 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

### 3.13 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
  2. Surveying locations of underground utilities for Record Documents.
  3. Testing and inspecting underground utilities.
  4. Removing concrete formwork.
  5. Removing trash and debris.
  6. Removing temporary shoring and bracing, and sheeting.
  7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

### 3.14 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with structural fill; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03300 "Cast-in-Place Concrete".
- D. Backfill voids with structural soil while removing shoring and bracing.
- E. Place and compact initial backfill of structural fill, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.
  - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Place and compact final backfill of structural fill to final subgrade elevation.
- G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

### 3.15 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
  - 1. Under grass and planted areas, use satisfactory soil material.
  - 2. Under walks and pavements, use structural fill.
  - 3. Utility Trenches under pavements or buildings, use structural fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

### 3.16 GEOFOAM FILL (Not Used)

### 3.17 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
  - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

### 3.18 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 10 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of the Modified Proctor maximum dry density according to ASTM D 1557:
  1. Under structures and pavements: 95 percent. The top 12 inches of fill beneath the building pad and flexible pavement areas should be compacted to 98 percent.
  2. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
  3. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent. Beneath pavement areas, the top 12 inches of backfill should be compacted to at least 98 percent.
  4. Under Synthetic Playing Field areas: compact the top 6 inches below sub-grade and each layer of backfill or fill material at 95 percent maximum dry density OR as set forth by the Synthetic Turf Surface manufacturer.

### 3.19 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  1. Provide a smooth transition between adjacent existing grades and new grades.
  2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  1. Turf or Unpaved Areas: Plus or minus 1 inch.
  2. Walks: Plus or minus 1 inch.
  3. Pavements: Plus or minus 1/2 inch.

### 3.20 SUBSURFACE DRAINAGE

- A. Subdrainage Pipe: Specified in Section 02630 "Storm Drainage."

- B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 4-inch (100-mm) course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 14 inches (350 mm) of filter material, placed in compacted layers 6 inches (150 mm) thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
  - 1. Compact each filter material layer with a minimum of two passes of a plate-type vibratory compactor.

### 3.21 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
  - 1. Place base course material over subbase course under hot-mix asphalt pavement.
  - 2. Shape subbase course and base course to required crown elevations and cross-slope grades.
  - 3. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
  - 4. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
  - 5. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 98 and 100 percent of maximum dry unit weight according to ASTM D 698 respectfully.

### 3.22 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE (Not Used)

### 3.23 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
  - 1. Pavement Areas: One density test every 500 linear feet per lift for roadway sections or 10,000 square feet per lift for parking lots or two tests per lift, whichever is greater.
  - 2. Trench Backfill: One density test every 75 linear feet per lift or two tests per lift, whichever is greater.
  - 3. Synthetic Playing Field Areas: At sub-grade and at each compacted fill and backfill layer, perform at least one field in-place density test for every 10,000 sq. ft. or less of



playing field, but in no case fewer than three tests, per layer and per day of fill/backfill placement.

- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

### 3.24 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
  - 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
  - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

### 3.25 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 02300

## SECTION 02630 - STORM DRAINAGE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Pipe and fittings.
  - 2. Cleanouts.
  - 3. Manholes.
  - 4. Drop inlets.
  - 5. Stormwater inlets.
  - 6. Outlet control structures.
  - 7. Pipe outlets.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings:
  - 1. Manholes, drop inlets, and stormwater inlets: Include plans, elevations, sections, details, frames, covers, and grates.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not store plastic manholes, pipe, and fittings in direct sunlight.
- B. Protect pipe, pipe fittings, and seals from dirt and damage.
- C. Handle catch basins, stormwater inlets, and stormwater detention structures according to manufacturer's written rigging instructions.

## PART 2 - PRODUCTS

### 2.1 PE PIPE AND FITTINGS

- A. Corrugated PE Drainage Pipe and Fittings NPS 3 to NPS 10: AASHTO M 252M, Type S, with smooth waterway for coupling joints.
  - 1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with tube and fittings.
  - 2. Solid Pipe
- B. Corrugated PE Pipe and Fittings NPS 12 to NPS 60 (DN 300 to DN 1500): AASHTO M 294M, Type S, with smooth waterway for coupling joints.
  - 1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
  - 2. Soiltight Couplings: AASHTO M 294M, corrugated, matching pipe and fittings.

### 2.2 CONCRETE

- A. General: Cast-in-place concrete according to ACI 318, ACI 350/350R (ACI 350M/350RM), and the following:
  - 1. Cement: ASTM C 150, Type II.
  - 2. Fine Aggregate: ASTM C 33, sand.
  - 3. Coarse Aggregate: ASTM C 33, crushed gravel.
  - 4. Water: Potable.
- B. Portland Cement Design Mix: 3000 psi minimum, with 0.45 maximum water/cementitious materials ratio.
  - 1. Reinforcing Fabric: ASTM A 185, steel, welded wire fabric, plain.
  - 2. Reinforcing Bars: ASTM A 615, Grade 60 deformed steel.

### 2.3 MANHOLES

- A. Designed Precast Concrete Catch Basins: ASTM C 913, precast, reinforced concrete; designed according to ASTM C 890 for A-16 (ASSHTO HS20-44), heavy-traffic, structural loading; of depth, shape, and dimensions indicated, with provision for joint sealants.
  - 1. Joint Sealants: ASTM C 990, bitumen or butyl rubber.
  - 2. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch-diameter frame and grate.
  - 3. Steps: ASTM A 615, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to

16-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 48 inches.

B. Manhole Frames and Covers:

1. Description: Ferrous; 24-inch (610-mm) ID by 7- to 9-inch (175- to 225-mm) riser with 4-inch- (102-mm-) minimum width flange and 26-inch- (660-mm-) diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."
2. Material: ASTM A 536, Grade 60-40-18 ductile iron unless otherwise indicated.

2.4 DROP INLETS (Not Used)

2.5 CATCH BASIN (Not Used)

2.6 OUTLET CONTROL STRUCTURE (Not Used)

2.7 PIPE OUTLETS (Not Used)

### PART 3 - EXECUTION

#### 3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 02300 "Earthwork."

#### 3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install storm structures for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install gravity-flow, nonpressure drainage piping according to the following:
1. Install piping pitched down in direction of flow.
  2. Install PE corrugated sewer piping according to ASTM D 2321.

### 3.3 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping according to the following:
  - 1. Join corrugated PE piping according to ASTM D 3212 for push-on joints.
  - 2. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
- B. Join force-main pressure piping according to the following:
  - 1. Join PVC water-service piping according to ASTM D 2855 for solvent-cemented joints.

### 3.4 CLEANOUT INSTALLATION

- A. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Use pvc soil pipe fittings in sewer pipes at branches for cleanouts and pvc soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
  - 1. Use Light-Duty, top-loading classification cleanouts in earthen areas.
  - 2. Use Medium-Duty, top-loading classification cleanouts in paved foot-traffic areas.
- B. Set cleanout frames and covers in earth in cast-in-place concrete block, 12"x12"x6" deep. Set with tops 1/2" above surrounding earth grade.
- C. Set cleanout frames and covers in concrete pavement and roads with tops flush with pavement surface.

### 3.5 MANHOLE INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames, grates, and covers to elevations indicated.

### 3.6 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318.

### 3.7 CONNECTIONS

- A. Make connections to existing piping and underground manholes.
  - 1. Make branch connections into existing underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches (76 mm) of concrete to be packed around entering connection. Cut end of connection pipe passing through structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering

connection in 6 inches (150 mm) of concrete for minimum length of 12 inches (300 mm) to provide additional support of collar from connection to undisturbed ground.

- a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi (20.7 MPa) unless otherwise indicated.
  - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
2. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.

### 3.8 IDENTIFICATION

- A. Materials and their installation are specified in Section 02300 "Earthwork." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
  1. Use warning tape over ferrous piping.

### 3.9 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
  1. Submit separate reports for each system inspection.
  2. Defects requiring correction include the following:
    - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
    - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
    - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
    - d. Infiltration: Water leakage into piping.
    - e. Exfiltration: Water leakage from or around piping.
  3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
  4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
  1. Do not enclose, cover, or put into service before inspection and approval.
  2. Test completed piping systems according to requirements of ALDOT.
  3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
  4. Submit separate report for each test.
- C. Test failures constitute defects that must be repaired.

Matthews Park  
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- D. Replace defective piping using new materials, and repeat testing until testing is within allowances specified.

3.10 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.

END OF SECTION 02630

## SECTION 02751 - CEMENT CONCRETE PAVEMENT

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Curbs and gutters.
- 2. Walks.

- B. Related Sections:

- 1. Section 02764 "Pavement Joint Sealants" for joint sealants in expansion and contraction joints within concrete paving and in joints between concrete paving and asphalt paving or adjacent construction.

#### 1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Other Action Submittals:

- 1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified ready-mix concrete manufacturer.

- B. Material Certificates: For the following, from manufacturer:

- 1. Cementitious materials.



2. Steel reinforcement and reinforcement accessories.
3. Admixtures.
4. Curing compounds.
5. Applied finish materials.
6. Epoxy adhesive.
7. Joint fillers.

C. Material Test Reports: For each of the following:

1. Aggregates. Include service-record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

D. Field quality-control reports.

## 1.6 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.

B. ACI Publications: Comply with ACI 301 unless otherwise indicated.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to concrete paving, including but not limited to, the following:
  - a. Concrete mixture design.
  - b. Quality control of concrete materials and concrete paving construction practices.
2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:
  - a. Contractor's superintendent.
  - b. Independent testing agency responsible for concrete design mixtures.
  - c. Concrete paving subcontractor.

## 1.7 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

## PART 2 - PRODUCTS

### 2.1 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
  - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

### 2.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A 615, Grade 60; deformed.
- C. Joint Dowel Bars: ASTM A 615, Grade 60 plain-steel bars. Cut bars true to length with ends square and free of burrs.
- D. Tie Bars: ASTM A 615, Grade 60, deformed.
- E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
  - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

### 2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:
  - 1. Portland Cement: ASTM C 150, gray portland cement Type I. Supplement with the following:
    - a. Fly Ash: ASTM C 618, Class C or Class F.
- B. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source.
  - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: Potable and complying with ASTM C 94.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

1. Water-Reducing Admixture: ASTM C 494, Type A.

## 2.4 FIBER REINFORCEMENT

A. Synthetic Fiber: Monofilament or fibrillated polypropylene fibers engineered and designed for use in concrete paving, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches (13 to 38 mm) long.

## 2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Anti-Hydro International, Inc.; A-H Curing Compound #2 DR WB.

b. ChemMasters; Safe-Cure Clear.

c. Conspec by Dayton Superior; [D.O.T. Resin Cure] [DSSCC Clear Resin Cure].

d. Dayton Superior Corporation; Day-Chem Rez Cure (J-11-W).

e. Edoco by Dayton Superior; [DSSCC Clear Resin Cure] [Resin Emulsion Cure V.O.C. (Type I)].

f. Euclid Chemical Company (The), an RPM company; Kurez W VOX.

g. Kaufman Products, Inc.; Thinfilm 420.

h. Lambert Corporation; AQUA KURE - CLEAR.

i. L&M Construction Chemicals, Inc.; L&M CURE R.

j. Meadows, W. R., Inc.; 1100-CLEAR SERIES.

k. Nox-Crete Products Group; Resin Cure E.

- l. SpecChem, LLC; PaveCure Rez.
- m. Symons by Dayton Superior; Resi-Chem Clear.
- n. Tamms Industries, Inc., Euclid Chemical Company (The); TAMMSCURE WB 30C.
- o. TK Products, Division of Sierra Corporation; [TK-2519 WB] [TK-2519 DC WB].
- p. Vexcon Chemicals Inc.; Certi-Vex Enviocure 100.

## 2.6 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork in preformed strips.
- B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements, and of the following types:
  1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

## 2.7 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
  1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
  2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that meet or exceed requirements.
- B. Proportion mixtures to provide normal-weight concrete with the following properties:
  1. Compressive Strength (28 Days): Curbs and Sidewalks – 3000 psi
  2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
  3. Slump Limit: General Use - 4 inches, Curbs and Sidewalks – 2 inches. Tolerance of plus or minus 1 inch.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
  1. Air Content: 3-1/2 percent plus or minus 1.5 percent for 3/4-inch nominal maximum aggregate size.
- D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

## 2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Furnish batch certificates for each batch discharged and used in the Work.
  - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
  - 1. Completely proof-roll subbase in one direction. Limit vehicle speed to 3 mph.
  - 2. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 15 tons, with a maximum weight of 45 tons.
  - 3. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch according to requirements in Section 02300 "Earthwork."
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

### 3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

### 3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap of adjacent mats.

### 3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
  - 1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
  - 1. Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
  - 2. Provide tie bars at sides of paving strips where indicated.
  - 3. Butt Joints: Use epoxy bonding agent at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
  - 4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.
  - 5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
  - 1. Locate expansion joints at intervals of 50 feet unless otherwise indicated.
  - 2. Extend joint fillers full width and depth of joint.
  - 3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface for joint sealant.
  - 4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
  - 5. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
  - 1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/4-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
    - a. Tolerance: Ensure that sawed joints are within 3 inches either way from centers of dowels.
  - 2. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/8-inch radius. Repeat tooling of edges after applying surface finishes.

### 3.6 CONCRETE PLACEMENT

- A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.
- B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- G. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
  - 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- H. Screed paving surface with a straightedge and strike off.

- I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- J. Curbs and Gutters: Use design mixture for automatic machine placement. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing.
- K. Cold-Weather Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
  - 1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
  - 2. Do not use frozen materials or materials containing ice or snow.
  - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
- L. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
  - 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
  - 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

### 3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
  - 1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

### 3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.



- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these as follows:
  - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period using cover material and waterproof tape.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas that have been subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

### 3.9 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
  - 1. Elevation: 1/2 inch.
  - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
  - 3. Surface: Gap below 10-foot- long, unlevelled straightedge not to exceed 1/2 inch.
  - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches of tie bar.
  - 5. Lateral Alignment and Spacing of Dowels: 1 inch.
  - 6. Vertical Alignment of Dowels: 1/4 inch.
  - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches of dowel.
  - 8. Joint Spacing: 3 inches.
  - 9. Contraction Joint Depth: Plus 1/4 inch, no minus.
  - 10. Joint Width: Plus 1/8 inch, no minus.

### 3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
  - 1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
    - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
  - 2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
  - 3. Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
  - 4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when it is 80 deg F and above, and one test for each composite sample.
  - 5. Compression Test Specimens: ASTM C 31; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
  - 6. Compressive-Strength Tests: ASTM C 39; test one specimen at seven days and two specimens at 28 days.
    - a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.
- C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
- D. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer.
- G. Concrete paving will be considered defective if it does not pass tests and inspections.

- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- I. Prepare test and inspection reports.

### 3.11 REPAIRS AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Engineer.
- B. Drill test cores, where directed by Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
- C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751

## SECTION 042200 - CONCRETE UNIT MASONRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Decorative concrete masonry units.
  - 2. Mortar and grout.
  - 3. Steel reinforcing bars.
  - 4. Masonry-joint reinforcement.
  - 5. Miscellaneous masonry accessories.

#### 1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Initial Selection:
  - 1. Decorative CMUs, in the form of small-scale units.
  - 2. Colored mortar.
- C. Samples for Verification: For each type and color of the following:
  - 1. Decorative CMU, in full size units.
  - 2. Mortar color sample.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For each type and size of the following:
  - 1. Masonry units.

- a. Include material test reports substantiating compliance with requirements.
  - b. Include data and calculations establishing average net-area compressive strength of units.
- B. Mix Designs: : For each type of mortar and grout. Include description of type and proportions of ingredients.
- C. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined in accordance with TMS 602/ACI 530.1/ASCE 6.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

#### 1.7 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  1. Extend cover a minimum of 24 inches (600 mm) down both sides of walls, and hold cover securely in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed. Immediately remove grout, mortar, and soil that come in contact with such masonry.
  1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.

2. Protect sills, ledges, and projections from mortar droppings.
  3. Protect surfaces of door frames, as well as similar products with painted and integral finishes, from mortar droppings.
  4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is **40 deg F (4 deg C)** and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

### 2.2 PERFORMANCE REQUIREMENTS

- A. Provide reinforced unit masonry that develops indicated net-area compressive strengths at 28 days.
  1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) in accordance with TMS 602/ACI 530.1/ASCE 6.

### 2.3 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6 except as modified by requirements in the Contract Documents.

- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work when viewed from adjacent walking surfaces.

## 2.4 CONCRETE MASONRY UNITS

- A. Decorative CMUs: ASTM C90.

Basis of Design Products: Subject to compliance with requirements, provide the products listed as follows:

1. Block USA-Gray Block – Split Face
  2. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2800 psi (19.3 MPa)
  3. Density Classification: Normal weight.
  4. Size (Width): Manufactured to dimensions specified in "CMUs" Paragraph.
  5. Pattern and Texture:
    - a. Standard pattern, split-face finish. Provide sample for architect approval.
  6. Colors: Gray
  7. Special Aggregate: Provide units made with aggregate matching aggregate in Architect's sample.
  8. CMU: All exposed to view cmu shall be Decorative CMU.
- B. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
  - C. Integral Water Repellent: Provide units made with integral water repellent.
    1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested in accordance with ASTM E514/E514M as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 24 hours, show no visible water or leaks on the back of test specimen.

## 2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
  1. Alkali content is not more than 0.1 percent when tested in accordance with ASTM C114.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

- D. Masonry Cement: ASTM C91/C91M.
- E. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C979/C979M. Use only pigments with a record of satisfactory performance in masonry mortar.
- F. Colored Cement Products: Packaged blend made from portland cement and hydrated lime or masonry cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
  - 1. Formulate blend as required to produce color selected from manufacturer's standard colors and matching cmu provided.
- G. Aggregate for Mortar: ASTM C144.
  - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
- H. Aggregate for Grout: ASTM C404 and as indicated on Structural Drawings.
- I. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C494/C494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
  - 1. For use only after special approval by the CMU manufacturer, mortar manufacturer and the Architect.
- J. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent from same manufacturer.
- K. Water: Potable.

## 2.6 REINFORCEMENT

- A. Uncoated Steel Reinforcing Bars: ASTM A615/A615M or ASTM A996/A996M, **Grade 60 (Grade 420)**.
- B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from **0.148-inch (3.77-mm)** steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.
- C. Masonry-Joint Reinforcement, General: Ladder type complying with ASTM A951/A951M.
  - 1. All Walls: Hot-dip galvanized carbon steel.
  - 2. Wire Size for Side Rods: **0.148-inch (3.77-mm)** diameter.
  - 3. Wire Size for Cross Rods: **0.148-inch (3.77-mm)** diameter.
  - 4. Spacing of Cross Rods: Not more than **16 inches (407 mm)** o.c.
  - 5. Provide in lengths of not less than **10 feet (3 m)**, with prefabricated corner and tee units.



## 2.7 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

## 2.8 MORTAR AND GROUT MIXES

- A. General: As indicated on the Structural Drawings and as follows.
  - 1. Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
  - 2. Do not use calcium chloride in mortar or grout.
  - 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Mortar for Unit Masonry: Comply with ASTM C270, either Proportion or Property Specification. Provide the types of mortar for applications as indicated on the Structural Drawings.
- C. Grout for Unit Masonry: Comply with ASTM C 476.
  - 1. Use grout of type indicated or, if not otherwise indicated, of type coarse that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
  - 2. Proportion grout in accordance with ASTM C 476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi (14 MPa).
  - 3. Provide grout with a slump of 8 to 11 inches (203 to 279 mm) as measured according to ASTM C 143/C 143M.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
  - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
  - 2. Verify that foundations are within tolerances specified.
  - 3. Verify that reinforcing dowels are properly placed.
  - 4. Verify that substrates are free of substances that would impair mortar bond.

- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping.
  - 1. Do not install grout into reinforced cells until all piping and conduit have been removed from the reinforced cells.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying. Install cut units with cut surfaces and, where possible, cut edges concealed.

### 3.3 TOLERANCES

#### A. Dimensions and Locations of Elements:

- 1. For dimensions in cross section or elevation, do not vary by more than plus **1/2 inch (12 mm)** or minus **1/4 inch (6 mm)**.
- 2. For location of elements in plan, do not vary from that indicated by more than plus or minus **1/2 inch (12 mm)**.
- 3. For location of elements in elevation, do not vary from that indicated by more than plus or minus **1/4 inch (6 mm)** in a story height or **1/2 inch (12 mm)** total.

#### B. Lines and Levels:

- 1. For bed joints and top surfaces of bearing walls, do not vary from level by more than **1/4 inch in 10 feet (6 mm in 3 m)**, or **1/2-inch (12-mm)** maximum.
- 2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than **1/8 inch in 10 feet (3 mm in 3 m)**, **1/4 inch in 20 feet (6 mm in 6 m)**, or **1/2-inch (12-mm)** maximum.
- 3. For vertical lines and surfaces do not vary from plumb by more than **1/4 inch in 10 feet (6 mm in 3 m)**, **3/8 inch in 20 feet (9 mm in 6 m)**, or **1/2-inch (12-mm)** maximum.
- 4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than **1/8 inch in 10 feet (3 mm in 3 m)**, **1/4 inch in 20 feet (6 mm in 6 m)**, or **1/2-inch (12-mm)** maximum.
- 5. For lines and surfaces, do not vary from straight by more than **1/4 inch in 10 feet (6 mm in 3 m)**, **3/8 inch in 20 feet (9 mm in 6 m)**, or **1/2-inch (12-mm)** maximum.
- 6. For vertical alignment of exposed head joints, do not vary from plumb by more than **1/4 inch in 10 feet (6 mm in 3 m)**, or **1/2-inch (12-mm)** maximum.
- 7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than **1/16 inch (1.5 mm)**.

#### C. Joints:

- 1. For bed joints, do not vary from thickness indicated by more than plus or minus **1/8 inch (3 mm)**, with a maximum thickness limited to **1/2 inch (12 mm)**.

2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than **1/8 inch (3 mm)**.
3. For head and collar joints, do not vary from thickness indicated by more than plus **3/8 inch (9 mm)** or minus **1/4 inch (6 mm)**.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus **1/8 inch (3 mm)**.

### 3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal **4-inch (100-mm)** horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4-inches. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal **4-inch (100-mm)** horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections and shown on the Drawings. Fill in solidly with masonry around built-in items.
- F. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.

### 3.5 MORTAR BEDDING AND JOINTING

- A. Lay hollow CMUs as follows:
  1. Bed face shells in mortar and make head joints of depth equal to bed joints.
  2. Bed webs in mortar in all courses of piers, columns, and pilasters.
  3. Bed webs in mortar in grouted masonry, including starting course on footings.
  4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
- B. Lay solid CMUs with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

- D. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

### 3.6 MASONRY-JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of **5/8 inch (16 mm)** on both interior and exterior walls. Lap reinforcement a minimum of **6 inches (150 mm)**.
  - 1. Space reinforcement not more than **16 inches (406 mm)** o.c.
  - 2. Provide reinforcement not more than **8 inches (203 mm)** above and below wall openings and extending **12 inches (305 mm)** beyond openings in addition to continuous reinforcement.
- B. Interrupt joint reinforcement at control joints.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.

### 3.7 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

### 3.8 REINFORCED UNIT MASONRY

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
  - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
  - 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
  - 1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
    - a. Provide grouting using methods that do not require cleanouts.

2. Limit height of vertical grout pours to not more than 60 inches.
3. Do not place grout until all cells are free of all obstructions.
4. Do not place grout into reinforced cells until all plumbing or electrical construction has been removed from cells to be grouted.

### 3.9 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: Provide final cleaning in accordance decorative cmu manufacturer's written recommendations and as follows:
  1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.

### 3.10 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Excess Masonry Waste: Remove excess clean masonry waste and legally dispose of off Owner's property.

END OF SECTION 042200

SECTION 116833 – ATHLETIC FIELD EQUIPMENT

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. Baseball Foul Poles
2. Batting Cage System
3. Home Plate Forming System & Plate
4. Baseball Base Anchor Access Frames & Bases
5. Dual Anchor Access Frame & Pitching Rubber
6. Wall & Post Padding
7. Windscreen Fabric
8. Polytube Fence Cap

1.02 RELATED WORK

A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. American Sports Builders Association (ASBA)
3. Manufacturer's Data and Recommended Installation Requirements

1.04 SUBMITTALS

A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and engineered foundation requirements prior to actual field installation work, for Architects or Owners representatives review.
2. **Provide engineered footing design by a Alabama Licensed Engineer for Architects or Owners review and records for foul poles & batting cage frame.**

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

**2.01 Plate Mount High School Baseball Foul Pole & Accessories**

A. MODEL:

1. FP630PL Plate Mount Baseball Foul Pole as manufactured and/or Supplied by:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481  
[www.sportsfieldspecialties.com](http://www.sportsfieldspecialties.com)  
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. Foul Pole Upright:
  - a. 6" Schedule 40 Aluminum Pipe (6.625"O.D. x .280" Wall)
  - b. 30' Height Above Finish Grade of Perimeter Curb.
  - c. Super Durable Powder Coated Finish

Matthews Park  
Synthetic Turf Field 'A'  
Mobile, AL - PR-022-21

- i. Color: Yellow
- d. Base Plate Mount
- 2. Base Plate Mounting Kit
- 3. Assembly Hardware

**2.03 Batting Cage System & Accessories**

A. MODEL:

- 1. NC-BC1 Single Batting Cage System & Net Tunnel as Manufactured and/or Supplied by:

Net Connection, LLC  
7355 Gadsden Hwy.  
Trussville, AL 35173  
p. 205-508-5902  
c. 205-948-7504  
[www.netconnectionllc.com](http://www.netconnectionllc.com)  
(Basis of Design)

OR Approved Equal

**2.04 HPFS – Home Plate Forming System**

A. MODEL:

- 1. HPFS – Home Plate Forming System & Plate as Manufactured & Supplied by:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
[www.sportsfield.com](http://www.sportsfield.com)  
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

- 1. Home Plate Forming System:
  - a. Measures 2'-8"L x 2'-8"W x 5"H
  - b. Welded Construction, Fabricated of 1/8" Aluminum Sheet with Two (2) 1/2" Sch.40 Aluminum Drainage Pipes and Three (3) 3/4" Aluminum Round Stock Threaded Studs with 3/8" Stainless Steel Bolts for Home Plate Tray Height Adjustment
  - c. Removable and Height Adjustable Home Plate Tray, Fabricated of 3/16" Aluminum Sheet



- d. **Includes Replaceable SHSRHP Schutt® Hollywood Bury All Home Plate**
- e. Includes Synthetic Infill Turf Attachment Ledge

**2.05 Base Anchor Access Frame for Infill Turf & Bases**

A. MODEL:

- 1. SHAFIT / SHIBL – Schutt/Hollywood Anchor Access Frame for Infill Turf & Set of Three (3) SHIBL Schutt Hollywood Impact Bases as Manufactured and Supplied by:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
[www.sportsfield.com](http://www.sportsfield.com)  
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

- 1. SHAFIT – Schutt/Hollywood Anchor Access Frame for Infill Turf (see below for bases to be included):
  - a. Dimensions: 8-1/16"W x 8-1/16"L x 10"H
  - b. Box: 1/8" (0.125") Aluminum Construction, Welded Frame with Open Bottom Having the Following Attributes:
    - i. 1/8" (0.125") Aluminum Construction
    - ii. Integrated Synthetic Infill Turf Attachment Ledge
    - iii. Infill Retainer System with 1-1/4" (1.25") Flexible Gasket Seals Specifically Designed for Synthetic Infill Turf Applications
    - iv. Anchor Base, Anchor Bolts and Anchor Spacer
    - v. 1" PVC Drain Stub for Positive Drainage Connection
  - c. Solid Cover: 1/8" (0.125") Aluminum Construction with the Following Attributes:
    - i. Infill Retainer System with 1-1/4" (1.25") Flexible Gasket Seals Specifically Designed for Synthetic Infill Turf Applications
    - ii. Designed to Allow Synthetic Turf Material to be Adhered Directly to the Aluminum Surface with Appropriate Adhesive and/or Mechanical Fasteners as Determined by Others
  - d. Assembly Hardware
- 2. SHIBL – Schutt/Hollywood Impact Bases.
  - a. **Include a set of three (3) Schutt Hollywood Impact Bases.**

Matthews Park  
Synthetic Turf Field 'A'  
Mobile, AL - PR-022-21

- b. Regulation size 15"x15"x2.5"

**2.06 Dual Anchor Access Frame for Infill Turf & Dual Stanchion Pitching Rubber**

- A. SHAFPRIT / SHLBMPR224 - Schutt/Hollywood Dual Anchor Access Frame for Infill Turf & Dual Stanchion Pitching Rubber as Manufactured and Supplied by:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
[www.sportsfield.com](http://www.sportsfield.com)  
(Basis of Design)

OR Approved Equal

- B. COMPONENTS:

- 1. SHAFPRIT- Schutt/Hollywood Dual Anchor Access Frame for Infill Turf:
  - a. Dimensions: 6-1/16"W x 22-15/16"L x 10"H
  - b. Box: 1/8" (0.125") Aluminum Construction, Welded Frame with Open Bottom Having the Following Attributes:
    - i. 1/8" (0.125") Aluminum Construction
    - ii. Integrated Synthetic Infill Turf Attachment Ledge
    - iii. Infill Retainer System with 1-1/4" (1.25") Flexible Gasket Seals Specifically Designed for Synthetic Infill Turf Applications
    - iv. Dual Anchor Base, Anchor Bolts and Anchor Spacers
    - v. 1" PVC Drain Stub for Positive Drainage Connection
  - c. Solid Cover: 1/8" (0.125") Aluminum Construction with the Following Attributes:
    - i. Infill Retainer System with 1-1/4" (1.25") Flexible Gasket Seals Specifically Designed for Synthetic Infill Turf Applications
    - ii. Designed to Allow Synthetic Turf Material to be Adhered Directly to the Aluminum Surface with Appropriate Adhesive and/or Mechanical Fasteners as Determined by Others
  - d. Assembly Hardware
- 2. SHLBMPR224 – Schutt/Hollywood Dual Stanchion Pitching Rubber
  - a. Dimensions: 6"x24" Regulation Size
  - b. Assembly Hardware

**2.07 Wall Padding & Accessories**

- A. MODEL:

Matthews Park  
Synthetic Turf Field 'A'  
Mobile, AL - PR-022-21

1. ACSWP - Aer-Flo Aer-Cushion Stadium Wall Pad As Manufactured and/or Supplied by:

Net Connection, LLC  
7355 Gadsden Hwy.  
Trussville, AL 35173  
p. 205-508-5902  
c. 205-948-7504  
[www.netconnectionllc.com](http://www.netconnectionllc.com)  
(Basis of Design)

OR Approved Equal

COMPONENTS:

- a. Backing: ¾" BC Grade Exterior Plywood
- b. Vinyl Covering: 18.5 Oz/ Sq. Yd. fully COATED Vinyl on Base Fabric Scrim of 1000 Denier x 1300 Denier Polyester. Fabric shall meet the following tests:
  - a. Tear Strength Tests: Warp 100 lbs., Fill 100 lbs
  - b. Grab Tensile Strength: Warp 410 lbs., Fill 410 lbs.
  - c. Weft Insertion: 18x17
  - d. Vinyl compounded w UV Inhibitors & Mold Inhibitors
  - e. Cold Crack: Minus 40 Degrees F or C
  - f. Vinyl is wrapped fully around plywood & foam to fully cover front, back, and all edges.
  - g. Full vinyl wrapping is fastened only on backside using Stainless Steel staples.
  - h. Vinyl Color: Per drawings. Approve sample with Owner.
- c. Filler Foam: 4" Thick Polyurethane High Impact Foam securely glued to backing.
- d. Adhesive: Synthetic resin based demonstrating High Flexibility, Excellent Water and Heat/Cold Resistance, and Superior Bonding Factor.
- e. Attachment: Extruded Aluminum profile, 2.5" x.125" Thickness, attached to wall panel using Hex Head Masonry Screws, and to pad's plywood backing using 1" Hex Head Wood Screws.
- f. Warranty – 24 months

**2.08 Post Padding & Accessories**

A. MODEL:

1. Aer-Flo Aer-Cushion Flat Rail Pad As Manufactured and/or Supplied by:

Matthews Park  
Synthetic Turf Field 'A'  
Mobile, AL - PR-022-21

Net Connection, LLC  
7355 Gadsden Hwy.  
Trussville, AL 35173  
p. 205-508-5902  
c. 205-948-7504  
[www.netconnectionllc.com](http://www.netconnectionllc.com)  
(Basis of Design)

OR Approved Equal

COMPONENTS:

- a. Vinyl Covering: 18.5 Oz/ Sq. Yd. fully COATED Vinyl on Base Fabric Scrim of 1000 Denier x 1300 Denier Polyester. Fabric shall meet the following tests:
  - a. Tear Strength Tests: Warp 100 lbs., Fill 100 lbs
  - b. Grab Tensile Strength: Warp 410 lbs., Fill 410 lbs.
  - c. Weft Insertion: 18x17
  - d. Vinyl compounded w UV Inhibitors & Mold Inhibitors
  - e. Cold Crack: Minus 40 Degrees F or C
  - f. Vinyl Color: Per drawings, Approve sample with Owner.
- b. Filler Foam: 1" Thick Standard Polyurethane High Impact
- c. Attachment: 1-3/4" Vinyl Flaps w #2 brass grommets
- d. Warranty – 24 months

**2.09 Windscreen Fabric**

A. MODEL:

1. Aer-Flo Tuffy Windscreen As Manufactured and/or Supplied by:

Net Connection, LLC  
7355 Gadsden Hwy.  
Trussville, AL 35173  
p. 205-508-5902  
c. 205-948-7504  
[www.netconnectionllc.com](http://www.netconnectionllc.com)  
(Basis of Design)

OR Approved Equal

COMPONENTS:

- a. Construction: 1,000 denier x 800 denier Vipol® Matrix Mesh (18 x 14 ends/inch).

- b. Fabric Weight: 10oz./sq. yd. Shading: 78% Shading. Tensile Strength: 360 x 320 lbs.
- c. Sewn Hems: Three-Ply hem with ends and corners sewn and finished with two rows of lock stitched thread.
- d. Thread: High heat bonded polyester with UV inhibitors built into yarn. Grommets: #2 brass Grommets every 12".
- e. Seams: 6' Screens are a solid panel with no horizontal seams. 9' Screens are two panels prayer seamed together with a reinforced weld and one row of black UV treated thread at the center of the screen. They include grommets every 12".
- f. Colors: As specified on drawings.
- g. Warranty- 5 Year Prorated

**2.10 Saf-Top Fence Top Guard**

A. MODEL:

1. Saf-Top Fence Guard As Manufactured and/or Supplied by:

Net Connection, LLC  
7355 Gadsden Hwy.  
Trussville, AL 35173  
p. 205-508-5902  
c. 205-948-7504  
[www.netconnectionllc.com](http://www.netconnectionllc.com)  
(Basis of Design)

- a. Color: As specified on drawings.
- b. 1 year Warranty

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All field furnishing, equipment, and accessories shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings.
- B. Concrete foundation design by a Alabama licensed engineer and installation shall be provided by this installer.**
- C. Installer should have a minimum of five (5) football goal post, foul pole, & backstop net systems installations or similar experience in the previous three (3) years.

END OF SECTION

## SECTION 11480 –SCOREBOARD

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Single-face electronic wireless scoreboard display for outdoor use, packaged with control console and other accessories.

#### 1.02 REFERENCES

- A. Standard for Electric Signs, UL 48, 15th Edition.
- B. Standard for Electric Sign Components, UL 879, 9th Edition.
- C. Federal Communications Commission Regulation Part 15.
- D. National Electric Code.

#### 1.03 SUMMARY

- A. Provide the equipment specified and denoted on the drawings per the manufacturer's recommendations.

#### 1.04 SUBMITTALS

- A. Submit product literature for approval prior to ordering materials for fabrication, modification and subsequent delivery to job site.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Product delivered to site.
- B. Scoreboard and equipment to be housed in a clean, dry environment
- C. Special precautions for the scoreboard face.
  - 1. The face of the scoreboard display will be protected during shipment by a layer of cardboard or other sheet material. Avoid removing this protective sheet until the installation begins.
  - 2. Never lay a scoreboard cabinet face down or stack other objects on top of it.
  - 3. Avoid sliding objects (like another scoreboard) along the plane of the scoreboard face, even if the protective sheet is in place. This can result in LEDs being sheared.

#### 1.06 QUALITY ASSURANCE

- A. For outdoor use
- B. Obtain each type of scoring equipment and displays through one source from a single manufacturer.
- C. ETL listed to UL Standards 48 and 879
- D. Scoreboards shall meet all FCC requirements
- E. NEC Compliant

- F. Manufacturer Qualifications:
1. Specialization in manufacturing electronic equipment.
  2. Minimum of ten (10) years of experience.

#### 1.07 WARRANTY/SERVICE

- A. Warranty against defects in materials and workmanship for a period of five (5) years from the date of invoice. This includes factory repair service for parts covered under warranty. Complete warranty details are included in the Instruction Manual shipped with each unit.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURER

- A. Electro-Mech Scoreboard Co.  
72 Industrial Blvd.,  
Wrightsville, GA 31096  
Online at [www.electro-mech.com](http://www.electro-mech.com)  
Phone 800-445-7846  
Fax 478-864-0212  
E-mail [score@electro-mech.com](mailto:score@electro-mech.com)

Model# LX 1740 LED Wireless Scoreboard  
Include arched ID panel and sponsor panel per details  
(Basis of Design)

#### 2.02 SCOREBOARD

- A. General.
1. Functions and Features: Model LX1740 Outdoor Wireless Scoreboard is designed to present information pertinent to baseball or softball. Information presented includes:
    - a. 2-Digit Total Runs (one set for Guest, one set for Home), 11 inches tall, to 99.
    - b. 2-Digit Total Hits (one set for Guest, one set for Home), 11 inches tall, to 99.
    - c. 1-Digit Total Errors (one for Guest, one for Home), 11 inches tall, to 9.
    - d. 10 each 1-Digit Runs-By-Inning (one set for Guest, one set for Home), 11 inches tall, to 9.
    - e. 1-Digit Ball Count, 15 inches tall, to 3.
    - f. 1-Digit Strike Count, 15 inches tall, to 2.
    - g. 1-Digit Out Count, 15 inches tall, to 2.
    - h. 2-Digit Batter Number, 15 inches tall, to 99.
    - i. 1-Character "H" Hit Indicator, 15 inches tall.
    - j. 1-Character "E" Error Indicator, 15 inches tall.
    - k. 1-Digit Error Position, 15 inches tall, to 9.
  2. Additional Features:
    - a. Fifty levels of LED brightness, selectable via the control console.
    - b. All serviceable components accessible from the front of the cabinets.
    - c. Eye bolts for lifting.
    - d. Integrated mounting points.
  3. Cabinet Size: 240.2 inches wide, 72.2 inches tall, 6 inches deep

- (6101 mm x 1829 mm x 153 mm).
- a. Include 3' Arced ID panel per detail.
- b. Include sponsor panel between scoreboard and ID panel per detail.
- 4. Cabinet Weight: 350 pounds (160 kg).
  - a. Optional ID panels may be integrated into the cabinet, adding to the weight.
  - b. Additional ID panels or other accessories may be provided as separate assemblies, adding to the overall weight.
- 5. Electrical Requirements.
  - a. One circuit providing 120 VAC, 60 Hz, 3.5 amp service.
  - b. When upgraded to include Electronic Team Names (ETNs, referenced below), one circuit providing 120 VAC, 60 Hz, 5.7 amp service.
  - c. Refer to electrical drawings and specifications.

## 2.03 ACCESSORIES

- A. Standard accessories.
  - 1. Control Console.
    - a. Supports features of Electro-Mech LX1400, LX1600, and LX1700 series of baseball scoreboards (including Models LX1440, LX1480, LX1620, LX1630, LX1631, LX1632, LX1633, LX1637, LX1700, LX1710, LX1711, LX1712, LX1713, LX1717, LX1720, LX1730, LX1731, LX1732, LX1733, LX1737, LX1741, LX1742, LX1743, LX1747, LX1750, LX1751, LX1752, LX1753, LX1780, LX1781, LX1782, and LX1783) without the need to enter codes or other information to configure the device.
    - b. Provides direct data output ports for up to two scoreboard displays, synchronized to the data (including the time) generated by the control console. Additional displays may be controlled in synchronization by daisy chaining from the data output terminal blocks of displays connected to the control console or via the ScoreLink wireless RF communication system.
    - c. Constructed of a heavy-duty ABS plastic housing holding a 0.1-inch thick keypad panel with stainless steel metal dome switches that provide tactile feedback and are rated for more than one million actuations.
    - d. Integrated LCD screen provides key game data along with interactive prompts for editing data and configuring the behavior of the scoreboard display and accessories.
    - e. Electrical Requirements: One circuit providing 0.5 amps, 120 VAC, 60 Hz via a standard (NEMA 5-15R) grounded power receptacle.
  - 2. Mounting hardware: Standard mounting hardware allows the scoreboard cabinet to be clamped at any height along the support posts without the need for drilling holes or fabricating brackets onsite. Standard hardware accommodates round pipes, I-beams, or other post styles with an exterior cross-section no greater than seven inches. Optional hardware may be substituted where local codes require larger posts.
  - 3. ScoreLink Wireless RF Modem System: Some ScoreLink configurations require a standard electrical outlet for the transmitter at the point of operation.
  - 4. ID Panel and Sponsor Panel Per details.



#### 2.04 FINISH

- A. Standard scoreboard display faces and digit masks are coated with low gloss black polyester resin paint for maximum contrast and resistance to scratches.
  - 1. For the scoreboard display face, the customer may choose from a selection of at least twelve standard paint colors offered by the manufacturer.
  - 2. Standard paint colors are applied at the factory using baked on automotive grade low gloss paint.
  - 3. Non-standard colors and finishes may, for an additional charge, be applied to the scoreboard face at the customer's request.
- B. Scoreboard framing and back are mill-finished aluminum
- C. Captions and other decorative elements on the face of the scoreboard are vinyl.

#### 2.05 SOURCE QUALITY CONTROL

- A. Tests and inspection.
  - 1. Manufacturer requires sub-contracted printed circuit board subassemblies to undergo functional testing at the point of manufacture.
  - 2. Manufacturer inspects incoming components prior to installation in scoreboard display and accessories.
  - 3. Manufacturer functionally tests major electrical subcomponents prior to installation in scoreboard display and accessories.
  - 4. Manufacturer inspects and tests scoreboard displays and accessories at full power prior to shipment.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify mounting posts are correctly sized and positioned to match the mounting points on the scoreboard cabinet and any optional ID panels.
- B. Verify concrete footings have properly cured.
- C. Verify the scoreboard cabinet is grounded to one or more 5/8-inch by 8-foot copper ground rods, driven into the soil and connected to the ground lugs or elsewhere on the scoreboard cabinet.
- D. Verify 120 VAC power supplying the scoreboard display is properly grounded.
- E. Verify 120 VAC outlet at the control console location is properly grounded.
- F. If data cable is used, verify continuity from scoreboard display to control console location.
- G. Verify data and AC power cables are not run in the same conduit or within six inches of each other in the same trench.
- H. Verify data cable and AC power cable are secure and run in conduits where they might otherwise be exposed to abuse or where local, state, or national codes require.
- I. Verify location of all scoreboard displays, junction boxes, and accessories with customer.

#### 3.02 INSTALLATION

- A. Refer to documentation supplied by the manufacturer that is specific to the project. The scoreboard owner's handbook provides general guidelines for typical installations, but customizations or other project-specific requirements can impact many of the details.

### 3.03 PROTECTION

- A. The most common sources of damage to scoreboard displays and accessories are electrical surges running through power or data connections. The usual causes are lightning, power equipment problems (floating neutrals, bad transformers, etc.), and improper connections. To minimize these problems:
  - 1. Ensure electrical wiring is properly grounded.
  - 2. Ensure the scoreboard display is correctly grounded using one or more 5/8-inch by 8-foot copper ground rods driven into the soil near the display.
  - 3. Unplug control console from power outlet and from data cable when not in use.
  - 4. Turn off the breaker to disconnect scoreboard display from power when not in use.
  - 5. Label scoreboard data cable junction boxes and all connectors near junction boxes, scoreboard displays, and accessories so that public address systems and other devices employing similar connectors are not accidentally plugged into any part of the scoreboard system.
- B. Avoid loss or damage of the control console, patch cable, and other accessories by storing when not in use.

END OF SECTION



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SECTION 16100

ELECTRICAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A The General and/or Special Conditions Sections are a part of this specification and the Contractor shall consult them in detail for instructions pertaining to this work.
- B Section 16 is sub-divided for convenience only.

1.2 SCOPE

- A Furnishing of all labor, material, equipment, supplies, and services necessary to construct and install the complete electrical systems as shown on the drawings and specified herein.
- B Work shall include but is not necessarily limited to the following items:
  - 1. Grounding
  - 2. Lighting
  - 3. Distribution/Branch Circuits
  - 4. Equipment Connections

1.3 ELECTRICAL DEMOLITION:

- A Verify field measurements and circuiting arrangements are as shown on Drawings.
  - 1. Verify that abandoned wiring and equipment serve only abandoned facilities.
  - 2. Demolition Drawings are based on casual field observation. Report discrepancies to Architect/Engineer before disturbing existing installation.
  - 3. Beginning of demolition means installer accepts existing conditions.
- B Preparation
  - 1. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
  - 2. Provide temporary wiring and connections to maintain existing systems in service during construction.
  - 3. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

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- C All materials designated to be removed by the Contractor, and not required to be reinstalled, including scrap, shall become the property of the Contractor, and shall be promptly removed from the property.

1.4 JOB CONDITIONS

A Site Inspections:

1. Before submitting proposals, each bidder should visit the site and fully familiarize himself with all job conditions and shall be fully informed as to the extent of his work.
2. No consideration will be given after bid opening date for alleged misunderstanding as to the requirements of work involved in connecting to the utilities, as to requirements of materials to be furnished, or as to the extent of demolition required.

B Existing Conditions: All utilities, existing systems, and conditions shown on the plans as existing are approximate, and the Contractor shall verify before any work is started.

C Maintaining Service: Any existing service (or operating system) which must be interrupted for any length of time shall be supplied with a temporary service as necessary for continuation of the normal operation of this facility

D Accidental Interruptions:

1. All excavation and/or remodeling work required shall be performed with care so as not to interrupt other existing services (water, gas, electrical, sewer, sprinklers, etc.).
2. If accidental utility interruption resulting from work performed by the Contractor occurs, service shall be immediately restored to its original condition without delay, by and at the expense of the Contractor, using skilled workmen of the trade required.

1.5 TEMPORARY POWER

A Furnish and maintain temporary wiring system for light and power for use during construction by all trades.

1. Use solidly grounded system.
2. Limit over-current protection to 20 amperes on No. 12 conductors.
3. Pay for all charges incurred while furnishing power for construction.

1.6 CODES, PERMITS AND INSPECTIONS

A The installation shall comply with all local, state, and federal laws and ordinances applicable to electrical installation and with the regulations of the latest edition of the National Electrical Code (N.E.C.) acceptable to the local authorities where such regulations do not conflict with local, state, and federal laws and

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ordinances.

- B The Contractor shall obtain and pay for all permits and inspection fees, and after completion of the work, shall furnish the Architect a certificate of final inspection and approval from the applicable local inspection authorities.

1.7 DRAWINGS AND SPECIFICATIONS

- A The drawings and these specifications are complimentary each to the other.
  - 1. What is called for by one shall be as binding as if called for by both.
- B Where the drawings and/or specifications differ as to quantity or quality, the greater quantity or higher quality shall be provided.
- C Omissions from the drawings and specifications of details of work which are evidently necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such work.
- D In any case of discrepancy in the figures or catalog numbers, the matter shall be submitted to the Architect, who shall promptly make a determination in writing.
- E Any adjustment by the Contractor shall be at the Contractor's own risk and expense.
- F Electrical drawings are diagrammatic only. Do not scale these drawings.
- G All equipment shall be installed in accordance with manufacturer's recommendations and any conflicting data shall be verified before bidding.

1.8 STANDARDS OF MATERIALS AND WORKMANSHIP

- A Materials: All materials shall be new and shall be listed and approved by the Underwriters' Laboratories, Inc., in every case where a standard has been established for a particular type of material in question.
- B All electrical material and equipment provided by the Contractor shall be new and free of defects. All work performed under this Section of the Specifications shall be carried out by skilled workers regularly engaged in the performance of such duties. The entire electrical installation shall be not less than that required by the latest edition of the National Electrical Code, the Occupational Safety and Health Act, and all electrical codes locally enforced in the Project area.
- C Equipment and materials of the same type or classification and used for the same purpose, shall be products of the same manufacturer.

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1.9 SUBSTITUTIONS:

- A Reference to a particular product by manufacturer, trade name, or catalog number establishes the quality standards of material and equipment required for this installation and is not intended to exclude products equal in quality and similar design.
- B The Architect reserves the sole right to decide the equality of materials proposed for use in lieu of these specified.
- C It shall be the Contractor's responsibility to furnish the information and data sufficient to establish the quality and utility of the items in question, including furnishing samples if required.

1.10 SHOP DRAWINGS:

- A The Contractor shall submit a list of items proposed for use.
  - 1. He shall also submit catalog data and shop drawings on proposed systems and their components, panelboards, safety switches, starters and contactors, transformers, lighting fixtures, and wiring devices.
- B Where substitutions alter the design or space requirements, the Contractor shall defray all items of cost for the revised design and construction including costs to all allied trades involved.
- C Data shall be submitted within ten (10) calendar days after the contract is awarded.
  - 1. Provide one (1) electronic copy of shop drawings unless a greater number of copies is required by the General Conditions.
  - 2. Each submittal data section shall be covered with an index sheet listing Contractor, Sub-Contractor, Project Name, and an index to the enclosed submittals.
- D Each major section of submittals such as power equipment, lighting fixtures, etc., shall be secured in a booklet or stapled with a covering index which lists the following information:
  - 1. General contractor with phone number and project manager
  - 2. Subcontractor with phone number and project manager.
  - 3. Supplier of equipment with phone number and person responsible for this project
  - 4. Index of each item covered in submittal and model number as proposed in the attached.
  - 5. Any deviation from contract documents shall be specifically noted on submittal cover index and boldly on specific submittal sheet.

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1.11 TYPE OF PERMANENT ELECTRICAL SERVICE

- A The new electrical service is 277/480 volts, 3 phase, 4 wire served from an existing overhead electrical service to new Power Panel "MDP"

1.12 OPERATING AND MAINTENANCE MANUALS:

- A At completion of the work, furnish three (3) copies of written operation instructions which shall include manufacturer's descriptive bulletins, operating and maintenance manuals and parts lists of all equipment installed.
- B Also include in such instructions, the specified size and capacity ratings of all equipment installed.
- C Each set of instructions shall be assembled into a suitable loose leaf type binder and presented to the Architect for delivery to the Owner

1.13 RECORD DRAWINGS

- A Record Drawings:
  - 1. Maintain one extra set of black-line, white print drawings for use as Record drawings. These prints shall be marked "Record Drawings" and maintained at the Project site.
  - 2. The Contractor shall record on the prints using a colored pencil all deviations from the Contract Drawings, at the time that such deviations are made.
  - 3. A complete file of accepted field sketches, diagrams, and other changes as may become necessary during the progress of the work shall also be maintained and attached to the set of marked-up prints.
  - 4. As the work is completed, relevant information shall be transferred to a reproducible set, and copies made to be given to the Architect
- B Comply with the following for all work specified in Division Sixteen.
  - 1. As-built information shall be shown to scale, using standard symbols listed in the legend.
  - 2. As a minimum, show the following:
    - a. Location of stub-outs, dimensioned from permanent building lines.
    - b. Location and depth of under-slab and in-slab raceways.
    - c. All routing of raceways.
    - d. Corrected panelboard and equipment schedules.
    - e. Corrected circuit numbers as they appear on panelboard directories.
    - f. Corrected motor horsepower and full load amperages
    - g. Number, size, type of insulation, and number of wires in each



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- conduit or multiconductor cable whether in conduit or exposed.
- h. Location of junction boxes and splices.
- i. Location of access panels

1.14 INTERFACE WITH OTHER CONTRACTS

- A It shall be the responsibility of the Contractor to cooperate with all other crafts working on this project.
- B All cutting, trenching, backfill, and structural removals to permit entry of the electrical system components shall be done by this Contractor.
- C All patching and finishing shall be done by the General Contractor.

1.15 EQUIPMENT FURNISHED UNDER OTHER SECTIONS

- A This Contractor shall furnish and install complete electrical roughing-in and connection to all equipment furnished under other sections as indicated on drawings.
- B All such equipment shall be set in place as work of other sections.

1.16 EQUIPMENT CONNECTIONS

- A In general, provide electrical power and control systems connections to all equipment shown on drawings.
  - 1. Included are wiring raceways, disconnects, starters, and other devices shown.
  - 2. Excluded are devices furnished integrally with the manufacturer's package and work specified in other sections of these specifications.

1.1 GROUNDING

- A Provide grounding and bonding systems in strict accordance with the latest published edition of N.E.C., except where more stringent requirements are specified herein.
- B Inter-connection of neutral and ground is not permitted except at service entrance equipment.
- C Install grounding conductors to permit shortest and most direct path to ground.
- D Concealed joints shall be made by Cadweld method.
- E Where grounding conductors are in raceway, bond conductor and raceway at both ends.

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- F Grounding and bonding fittings used shall be UL listed and be compatible with metals used in system.
  - 1. Sheet metal type strap are not acceptable
- G A green insulated ground conductor shall be run in all branch circuit and feeder conduit with phase and/or neutral conductors.
- H Ground conductor shall be sized as noted on drawings or per NEC where not specified on drawings.
  - 1. Minimum size #12 AWG copper.
  - 2. Conduit box to device strap or yoke screw connection is not sufficient.
  - 3. Provide an insulated grounding jumper for receptacle circuits.

1.2 GUARANTEE AND SERVICE

- A Upon completion of all tests and acceptance, the Contractor shall furnish the Owner of a written guarantee covering the electrical work done for a period of one (1) year from date of acceptance.
  - 1. Guarantee includes equipment capacity and performance ratings specified without excessive noise levels.
- B. Upon notice from the Architect or the Owner, the Contractor shall, during the guarantee period, rectify and replace any defective material or workmanship and repair any damage caused thereby without additional cost.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All equipment and materials shall have ratings established by the recognized independent agency or laboratory.
- B. The Contractor shall apply the items used on the project within the ratings and subject to any stipulations or exceptions established by the independent agency or laboratory.
- C. Use of equipment or materials in applications beyond that certified by the agency or beyond that recommended by the manufacturer shall be cause for removal and replacement of such misapplied items.

2.2 PANELBOARDS

- A. Circuit breaker panelboards shall be with sequence phased bus bars and molded

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case circuit breakers.

- B. Circuit breakers shall be quick-make, quick-break, trip indicating, each pole containing thermal and magnetic trip units.
- C. Provide two and three pole circuit breakers with common trip, without relying on handle ties. Tandem type breakers and bailed tied handles of single unit breakers **shall not be acceptable** for this work.
- D. Submit shop drawings showing cabinet dimensions, circuit breaker electrical ratings, and bussing arrangements. All bussing shall be copper.
- E. Panelboards shall be of type specified on drawings or equivalent as manufactured by Siemens, GE, Challenger or Square D.
  - 1. Note that dimensions may be critical, do not exceed dimensions of the specified manufacturer without prior approval.

### 2.3 NAMEPLATES

- A. Each new panel shall have an external micarta engraved nameplate.
- B. Disconnect switches, starters or similar devices shall have a micarta engraved nameplate mechanically affixed (no glue) indicating the load served and the location, such as "A/C 2" or "A/C 3 above ceiling".
- C. Letters shall be 1/4" black on a white background. Panels shall be designated in this manner.

"Panel A"  
277/480 Volts  
3 Phase, 4 Wire"

### 2.4 DIRECTORIES

- A. For panelboards, install typewritten directories, listing each branch circuit, identifying space and equipment it controls.
- B. Label panels, disconnect switches, pushbuttons, motor starters, and time clocks with identification shown on plans using engraved nameplates,
- C. Identify main electrical service disconnecting means using engraved nameplate.

### 2.5 DISCONNECT SWITCHES

- A. Furnish heavy duty disconnect switches.

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- B. Switches shall be a product of the same manufacturer as panelboards, using a quick-make, quick-break mechanism.
- C. Enclosure shall be NEMA Type conforming to area in which it is installed.

2.6 FUSES

- A. Furnish fuses for fusible equipment.
  - 1. Supply one (1) set of 3-spare fuses for each size used.
  - 2. Provide spare fuse cabinet.
- B. Motor circuit fuses shall be Fusestrons rated between 125 and 150 percent of name plate rating or as specified by the equipment manufacturer.

2.7 RACEWAY AND FITTINGS

- A. Conduit Systems: Acceptable types of conduit:
  - 1. Hot dipped galvanized rigid steel (GRS)
  - 2. Electrical Metallic Tubing (EMT)
  - 3. Polyvinyl Chloride - Schedule 40 (PVC 40)
  - 4. Polyvinyl Chloride - Schedule 80 (PVC 80)
  - 5. Flexible Metallic Conduit (½" min. trade size) (FLEX)
  - 6. Liquid Tight Flexible Metallic Conduit (½" min. trade size) (LQFLEX)
- B. Conduits installed in earth fill, in concrete, or in solid masonry structures shall be PVC 80.
- C. Conduits installed in moist and/or damp locations shall be PVC 80 or GRS.
- D. Conduits subject to mechanical injury shall be GRS.
- E. Conduits for connection to motors or vibrating equipment shall be LQFLEX not less than 18" long and not over 60" long.
- F. Conduits run concealed in the hollow space of non-masonry wall or above suspended ceilings shall be EMT.
- G. Exposed conduits shall be run at right angles to or parallel with building lines and exposed structure.
- H. In all cases, conduit runs shall be grouped together where possible and shall be supported from the building structure, not for any suspended ceiling support system.
- I. Install conduits passing through building sidewalls or through beams below grade

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with expansion/deflection fittings.

- 1. Install expansion fittings where conduit crosses an expansion joint.
- J. Where conduit penetrates damp-proofing membranes, cut the membrane carefully around the conduit and seal the joint with pressure sensitive tape.
- K. Support raceways securely with pipe straps, wall brackets, conduit hangers or ceiling trapeze.
  - 1. Fastenings shall be by wood screws or screw type nails to wood, by toggle bolts to concrete block, expansion bolts on concrete or brick, and beam clamp types on steel or bar joists.
  - 2. Raceways shall not be fastened to suspended ceiling supports but must have independent support from the structure.
  - 3. Supporting devices shall be of materials having corrosion protection at least equal to the raceway.
  - 4. A support shall be provided as close as practical to, and not exceeding 18" from an unsupported box or from change of direction.
  - 5. In horizontal runs, this support may be omitted if the box is independently supported and the box connection is not made with chase nipple or threadless box connector.
  - 6. In vertical runs, load produced by weight of the raceway and conductors shall not be carried by the raceway terminal but must be carried entirely by conduit supports.
  - 7. Install conduit supports in strict accordance with the following table, except as required by support for boxes and changes in direction:

L. Raceway Support Spacing:

MAXIMUM TRADE SIZE (INCHES)	LOCATION OF RUNS	SUPPORT SPACING
½, ¾	Exposed, Horizontal	7 feet
1 and larger	Exposed, Horizontal	10 feet
All sizes	Concealed, Horizontal	10 feet
½, ¾	Exposed, Vertical	7 feet
1, 1¼	Exposed, Vertical	8 feet
1 ½ and larger	Exposed, Vertical	10 feet
All sizes	Concealed, Vertical	10 feet

- M. For conduit runs that are not sized on drawings, the maximum conduit fill shall be computed using the requirements for Type THW conductors although the actual wiring is with Type THWN or other type of conductors having smaller cross-sections.

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1. This requirement is made to provide spare conduit capacity.
- N. Install all required sleeves for conduits passing through concrete slabs.
1. Fireproof space between conduit and sleeve after installation using of mineral wool.

2.8 CONDUCTORS

- A. All conductors shall be installed in conduit.
- B. Conductors for building wiring shall have THHN/THWN, 600 volt insulation and shall be soft-drawn copper of standard American Wire Gauge (AWG) size.
1. No aluminum conductors will be allowed.
- C. Minimum size shall be No. 12. All wire No. 8 and larger shall be stranded.
- D. All branch circuits No. 10 and smaller shall be wired with color-coded wire with the same color used for a system throughout the building.
- E. Power feeders and branch circuits larger than No. 10 shall either be fully color coded or shall have black insulation and be similarly color coded with tape or paint in all junction boxes and panels.
1. Where tape or paint is used to identify conductors, apply at all terminations, junction boxes, pull boxes and wireways.
  2. Apply tape, butt lapped, or paint for a minimum distance of 2" and, where applied to ends of conductors, start at cut end of the conductor insulation.
  3. Tape shall not cover manufacturers conductors shall be color coded or labeled as necessary for clear identification.
  4. Color coding of all conductors shall be as follows:

120/208/240 Volt Three Phase (Wye) System

Phase A:	Black
Phase B:	Red
Phase C:	Blue
Neutral:	White
Ground:	Dark Green

277/480 Volt Three Phase (Wye) System

Phase A:	Brown
Phase B:	Orange
Phase C:	Yellow
Neutral:	Gray

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Ground:       Dark Green

2.9     JUNCTION AND PULL BOXES

- A.     Junction and pull boxes shall meet requirements of National Electrical Code.
- B.     Standard manufactured boxes shall be listed by Underwriters' Laboratories, Inc.
  - 1.     Where custom designed and fabricated boxes are needed, they shall meet the construction standards of Underwriters' Laboratories, Inc. and the N.E.C.
- C.     Junction and pull boxes shall be installed where required by National Electrical Code and where necessary to facilitate pulling of wire or cable.
  - 1.     Considerations are sizes of wire and cable, number of bends in raceway, and conductor support requirements in vertical raceways.
  - 2.     Maximum distance between terminations at junction or pull boxes, cabinets, or other points of termination shall not exceed 250 feet for straight horizontal runs.
  - 3.     This length shall be decreased 50 feet for each 90° bend.

2.10    OUTLETS

- A.     Outlet boxes shall be one piece or projection welded, galvanized stamped steel for gang sizes required.
  - 1.     Where several devices are located on drawings in the same general location, use multi-gang boxes.
  - 2.     Sectional boxes are not acceptable.
- B.     Boxes shall be sized in accordance with National Electrical Code.
- C.     Boxes required for communications systems, mechanical control devices, etc., shall be installed under this section of the specifications.
- D.     Verify outlet box locations and sizes required for systems other than electrical power from shop and manufacturer's drawings, and install outlets as per those requirements
- E.     Boxes for outlets shall finish flush and straight.
  - 1.     Outlets in exposed concrete block, masonry, and tile walls shall be installed with extra deep square corner boxes or with standard boxes and square cornered tile wall covers so that conduit offsets are not required.
  - 2.     Openings in concrete blocks or masonry walls shall be saw cut with an

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opening tolerance of 1/8" on all sides, the opening shall have bottom of box at nearest masonry joint to dimension indicated.

3. No outlets shall be installed back-to-back.
4. Where outlets occur in stud walls back to back on opposite sides, they shall be isolated by a stud between them

## 2.11 WIRING DEVICES

A Colors: Wiring device and plate colors shall be selected by Architect for individual rooms from one of the following colors (unless another color is noted): Brown, ivory, gray, white.

B Receptacles:

1. Duplex receptacles shall be specification grade, 20 amps, 125 volts with grounding terminal (NEMA 5-20R configuration).
2. All receptacles shall be such depth as to permit mounting in outlet boxes 1½" or greater in depth without the use of spacers
3. All receptacles shall accept standard duplex wall plates.
4. All receptacles shall be noise suppressed and shall be UL listed.

C Switches: Standard flush tumbler switches shall be specification grade, 20 amps, 120/277 volts A-C only, single pole, three-way or four-way as shown, single throw with screw terminals arranged for side wiring.

D Device Plates: Shall be specification grade, high impact thermoplastic type.

1. Color to match device.

E Ground Fault Receptacles: Ground fault circuit interrupting duplex receptacles shall be specification grade, 20 amps, 125 volts with grounding terminal.

1. Units shall have line and load terminals such that connection to load terminals will provide ground fault protection for other receptacles

## 2.12 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protections: Take necessary precautions to protect all material, equipment, apparatus, and work from damage.

1. Failure to do so to the satisfaction of the Architect will be sufficient cause for the rejection of the material, equipment, or work in question.
2. Contractor is responsible for the safety and good condition of the materials installed until final acceptance by the Owner.

B. Cleaning: Conduit openings shall be capped or plugged during installation.



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- C. Fixtures and equipment shall be tightly covered and protected against dirt, moisture, chemical, and mechanical injury.
  - 1. At the completion of the work, the fixtures, material and equipment shall be thoroughly cleaned and delivered in condition satisfactory to the Architect.

PART 3 - EXECUTION

3.1 PAINTING

- A. Contractor shall touch-up or refinish all items of electrical equipment furnished with a factory finish coat of paint and which may have been damaged regardless of cause.

3.2 TESTING AND BALANCING

- A. Balance all single phase loads connected to all panelboards to ensure an approximate equal division on these loads on main power supply serving building.
  - 1. All tests shall be made in accordance with the latest standards of the IEEE and the NEC.
- B. The installation shall be tested for performance, grounds and insulation resistance.
  - 1. "Megger" type instruments shall be used.
  - 2. Contractor shall perform circuit continuity and operational tests on all equipment furnished or connected by Contractor.
  - 3. The tests shall be made prior to final inspection.
  - 4. The Contractor shall provide all testing equipment and all costs shall be borne by him.
  - 5. Written reports shall be made of all tests.
  - 6. These reports shall be turned over to the Architect at time of final inspection.
  - 7. All faults shall be corrected immediately.

3.3 CLEANING UP

- A. The Contractor shall remove all oil, grease, or other stains resulting from his work performed in the building or the exterior thereof.

END OF SECTION 16100

## SECTION 321313 – CEMENT CONCRETE PAVING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes Concrete Paving Including the Following:
  - 1. City of Mobile Fiber Reinforced Sidewalks
- B. Related Sections:
  - 1. Section 02764 "Pavement Joint Sealants" for joint sealants in expansion and contraction joints within concrete paving and in joints between concrete paving or adjacent construction.

#### 1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, and other pozzolans, and ground granulated blast-furnace slag.
- B. W/C Ratio: The ratio by weight of water to cementitious materials.

#### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review methods and procedures related to concrete paving, including but not limited to, the following:
    - a. Concrete mixture design.
    - b. Quality control of concrete materials and concrete paving construction practices.
    - c. Control / Expansion Joint Layout.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer of Concrete Paving Surfaces.
- B. Material Certificates: For the following, from manufacturer:
  - 1. Cementitious materials.
  - 2. Steel reinforcement and reinforcement accessories.
  - 3. Admixtures.
  - 4. Curing compounds.
  - 5. Bonding agent or epoxy adhesive.
  - 6. Joint fillers.
- C. Material Test Reports: For each of the following:
  - 1. Aggregates: Include service-record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.
- D. Field quality-control reports.

#### 1.7 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").
- B. Testing Agency Qualifications: Qualified according to ASTM C1077 and ASTM E329 for testing indicated.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
- C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Build mockups of full-thickness sections of concrete paving to demonstrate typical joints; surface finish, texture, and color; curing; and standard of workmanship.
  - 2. Build mockups of concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by Architect and not less than 96 inches by 96 inches.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.8 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

#### 1.9 FIELD CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.
- B. Cold-Weather Concrete Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
  1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
  2. Do not use frozen materials or materials containing ice or snow.
  3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
- C. Hot-Weather Concrete Placement: Comply with ACI 301 (ACI 301M) and as follows when hot-weather conditions exist:
  1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  2. Cover steel reinforcement with water-soaked burlap, so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
  3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

### PART 2 - PRODUCTS

#### 2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with ACI 301 (ACI 301M) unless otherwise indicated.

## 2.2 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
  - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet (30.5 m) or less. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

## 2.3 STEEL REINFORCEMENT

- A. Plain-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, fabricated from steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A615/A615M, Grade 60 (Grade 420); deformed.
- C. Galvanized Reinforcing Bars: ASTM A767/A767M, Class II zinc coated, hot-dip galvanized after fabrication and bending; with ASTM A615/A615M, Grade 60 (Grade 420) deformed bars.
- D. Joint Dowel Bars: ASTM A615/A615M, Grade 60 (Grade 420) plain-steel bars; zinc coated (galvanized) after fabrication according to ASTM A767/A767M, Class I coating]. Cut bars true to length with ends square and free of burrs.
- E. Tie Bars: ASTM A615/A615M, Grade 60 (Grade 420); deformed.
- F. Hook Bolts: ASTM A307, Grade A (ASTM F568M, Property Class 4.6), internally and externally threaded. Design hook-bolt joint assembly to hold coupling against paving form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.
- G. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

## 2.4 CONCRETE MATERIALS

- A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:
  - 1. Portland Cement: ASTM C150/C150M, gray portland cement Type I.
  - 2. Fly Ash: ASTM C618, Class C or Class F.

- B. Normal-Weight Aggregates: ASTM C33/C33M, uniformly graded. Provide aggregates from a single source with documented service-record data of at least 10 years' satisfactory service in similar paving applications and service conditions using similar aggregates and cementitious materials.
  - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
  - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Air-Entraining Admixture: ASTM C260/C260M.
- D. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
  - 1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
- E. Water: Potable and complying with ASTM C94/C94M.

## 2.5 FIBER REINFORCEMENT

- A. Synthetic Fiber: Monofilament or fibrillated polypropylene fibers engineered and designed for use in concrete paving, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches (13 to 38 mm) long.

## 2.6 CURING MATERIALS

- A. Moisture-Retaining Cover: ASTM C171, polyethylene film or white burlap-polyethylene sheet.
- B. Water: Potable.
- C. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- D. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C309, Type 1, Class B, dissipating.
  - 1. **Products:** Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. [Anti-Hydro International, Inc.](#); A-H Curing Compound #2 DR WB.
    - b. [ChemMasters](#); Safe-Cure Clear.
    - c. [Conspec by Dayton Superior](#); [D.O.T. Resin Cure] [DSSCC Clear Resin Cure].
    - d. [Dayton Superior Corporation](#); Day-Chem Rez Cure (J-11-W).
    - e. [Edoco by Dayton Superior](#); [DSSCC Clear Resin Cure] [Resin Emulsion Cure V.O.C. (Type I)].
    - f. [Euclid Chemical Company \(The\)](#), an RPM company; Kurez W VOX.
    - g. [Kaufman Products, Inc.](#); Thinfilm 420.
    - h. [Lambert Corporation](#); AQUA KURE - CLEAR.

- i. [L&M Construction Chemicals, Inc.](#); L&M CURE R.
- j. [Meadows, W. R., Inc.](#); 1100-CLEAR SERIES.
- k. [Nox-Crete Products Group](#); Resin Cure E.
- l. [SpecChem, LLC](#); PaveCure Rez.
- m. [Symons by Dayton Superior](#); Resi-Chem Clear.
- n. [Tamms Industries, Inc.](#), Euclid Chemical Company (The); TAMMSCURE WB 30C.
- o. [TK Products](#), Division of Sierra Corporation; [TK-2519 WB] [TK-2519 DC WB].
- p. [Vexcon Chemicals Inc.](#); Certi-Vex Enviocure 100.

## 2.7 RELATED MATERIALS

- A. Joint Fillers: ASTM D1751, asphalt-saturated cellulosic fiber in preformed strips.
- B. Bonding Agent: ASTM C1059/C1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- C. Epoxy-Bonding Adhesive: ASTM C881/C881M, two-component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements.
- D. Chemical Surface Retarder: Water-soluble, liquid, set retarder with color dye, for horizontal concrete surface application, capable of temporarily delaying final hardening of concrete to a depth of 1/8 to 1/4 inch.

## 2.8 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301 (ACI 301M), for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
  1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
  2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that comply with or exceed requirements.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
  1. Fly Ash or Pozzolan: 25 percent.
  2. Slag Cement: 50 percent.
  3. Combined Fly Ash or Pozzolan, and Slag Cement: 50 percent, with fly ash or pozzolan not exceeding 25 percent.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:

1. Air Content: 3-1/2 percent plus or minus 1-1/2 percent for 3/4-inch (19-mm) nominal maximum aggregate size.
- D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
- F. Concrete Mixtures: Normal-weight concrete.
  1. Compressive Strength (28 Days): 3000 psi
  2. Maximum W/C Ratio at Point of Placement: 0.45
  3. Slump Limit: General Use - 4 inches, Concrete Paving – 2 inches, Curbs and Sidewalks – 2 inches. Tolerance of plus or minus 1 inch.

## 2.9 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C94/C94M. Furnish batch certificates for each batch discharged and used in the Work.
  1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
  1. Completely proof-roll subbase in one direction and repeat in perpendicular direction. Limit vehicle speed to 3 mph (5 km/h).
  2. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 15 tons, with a maximum weight of 45 tons.
  3. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch. According to requirements in Section 02300 "Earthwork".
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.



### 3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

### 3.4 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Zinc-Coated Reinforcement: Use galvanized-steel wire ties to fasten zinc-coated reinforcement. Repair cut and damaged zinc coatings with zinc repair material.
- F. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap of adjacent mats.

### 3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
  - 1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
  - 1. Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
  - 2. Provide tie bars at sides of paving strips where indicated.
  - 3. Butt Joints: Use bonding agent at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.
  5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
1. Extend joint fillers full width and depth of joint.
  2. Terminate joint filler not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished surface if joint sealant is indicated.
  3. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
  4. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/4-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
  2. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

### 3.6 CONCRETE PLACEMENT

- A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.
- B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

- D. Comply with ACI 301 (ACI 301M) requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- G. Consolidate concrete according to ACI 301 (ACI 301M) by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
  - 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- H. Screed paving surface with a straightedge and strike off.
- I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- J. Curbs and Gutters: Use design mixture for automatic machine placement. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing.
- K. Slip-Form Paving: Use design mixture for automatic machine placement. Produce paving to required thickness, lines, grades, finish, and jointing.
  - 1. Compact subbase and prepare subgrade of sufficient width to prevent displacement of slip-form paving machine during operations.

### 3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
  - 1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch (1.6 to 3 mm) deep with a stiff-bristled broom, perpendicular to line of traffic.

### 3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by as follows:
  - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period, using cover material and waterproof tape.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

### 3.9 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 (ACI 117M) and as follows:
  - 1. Elevation: 1/2 inch
  - 2. Thickness: Plus 3/8 inch (10 mm), minus 1/4 inch (6 mm).
  - 3. Surface: Gap below 10-foot- (3-m-) long; unlevelled straightedge not to exceed 1/2 inch (13 mm).
  - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches (13 mm per 300 mm) of tie bar.
  - 5. Lateral Alignment and Spacing of Dowels: 1 inch (25 mm).
  - 6. Vertical Alignment of Dowels: 1/4 inch (6 mm).
  - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches (6 mm per 300 mm) of dowel.

8. Joint Spacing: 3 inches (75 mm).
9. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
10. Joint Width: Plus 1/8 inch (3 mm), no minus.

### 3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing and inspecting of composite samples of fresh concrete obtained according to ASTM C172/C172M shall be performed according to the following requirements:
  1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.
    - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
  2. Slump: ASTM C143/C143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
  3. Air Content: ASTM C231/C231M, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
  4. Concrete Temperature: ASTM C1064/C1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when it is 80 deg F (27 deg C) and above, and one test for each composite sample.
  5. Compression Test Specimens: ASTM C31/C31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
  6. Compressive-Strength Tests: ASTM C39/C39M; test one specimen at seven days and two specimens at 28 days.
    - a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.
- C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
- D. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.

- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
- G. Concrete paving will be considered defective if it does not pass tests and inspections.
- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- I. Prepare test and inspection reports.

### 3.11 REPAIR AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Drill test cores, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
- C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751



## SECTION 321373 - CONCRETE PAVING JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

1. Cold-applied joint sealants.
2. Hot-applied joint sealants.
3. Cold-applied, fuel-resistant joint sealants.
4. Hot-applied, fuel-resistant joint sealants.
5. Joint-sealant backer materials.
6. Primers.

- B. Related Requirements:

1. Section 02751 "Cement Concrete Pavement" for constructing joints in concrete pavement.
2. Section 02741 "Asphalt Paving" for constructing joints between concrete and asphalt pavement.

#### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

#### 1.4 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, Samples of materials that will contact or affect joint sealants.

1. Use manufacturer's standard test method to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Submit no fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.



5. Testing will not be required if joint-sealant manufacturers submit joint-preparation data that are based on previous testing, not older than 24 months, of sealant products for compatibility with and adhesion to joint substrates and other materials matching those submitted.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Certificates: For each type of joint sealant and accessory.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for joint sealants.
- D. Preconstruction Compatibility and Adhesion Test Reports: From joint-sealant manufacturer, indicating the following:
  1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility with and adhesion to joint sealants.
  2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Source Limitations: Obtain each type of joint sealant from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
- D. Product Testing: Test joint sealants using a qualified testing agency.
  1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

#### 1.8 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer are below 40 deg F.
  2. When joint substrates are wet.

3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: Light Grey

### 2.2 COLD-APPLIED JOINT SEALANTS

- A. Single-Component, Nonsag, Silicone Joint Sealant: ASTM D5893/D5893M, Type NS.
  1. Products: Subject to compliance with requirements, available products, that may be used include, but are not limited to, the following:
    - a. Dow Corning Corp: 888
    - b. Pecora Corp.: 301NS

### 2.3 JOINT-SEALANT BACKER MATERIALS

- A. Joint-Sealant Backer Materials: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by joint-sealant manufacturer, based on field experience and laboratory testing.
- B. Round Backer Rods for Cold- and Hot-Applied Joint Sealants: ASTM D5249, Type 1, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.
- C. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

### 2.4 PRIMERS

- A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine joints to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Before installing joint sealants, clean out joints immediately to comply with joint-sealant manufacturer's written instructions.
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

#### 3.3 INSTALLATION OF JOINT SEALANTS

- A. Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions.
- C. Install joint-sealant backings to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of joint-sealant backings.
  - 2. Do not stretch, twist, puncture, or tear joint-sealant backings.
  - 3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install joint sealants immediately following backing installation, using proven techniques that comply with the following:
  - 1. Place joint sealants so they fully contact joint substrates.
  - 2. Completely fill recesses in each joint configuration.

3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:
  1. Remove excess joint sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- F. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

### 3.4 CLEANING AND PROTECTION

- A. Clean off excess joint sealant as the Work progresses, by methods and with cleaning materials approved in writing by joint-sealant manufacturers.
- B. Protect joint sealants, during and after curing period, from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations in repaired areas are indistinguishable from the original work.

### 3.5 PAVING-JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Joints within concrete paving.
  1. Joint Location:
    - a. Expansion and isolation joints in concrete paving.
    - b. Contraction joints in concrete paving.
    - c. Other joints as indicated.
  2. Joint Sealant:
    - a. Single-component, nonsag, silicone joint sealant
    - b. Multicomponent, pourable, urethane, elastomeric joint sealant
    - c. Joint-Sealant Color: Light Grey

END OF SECTION 321373

## SECTION 323113 - CHAIN LINK FENCES AND GATES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Section includes the following:
  - 1. Material and construction requirements for PVC (vinyl) coated galvanized fence fabric with PVC coated galvanized steel framework, hardware and other required accessories.
  - 2. Excavation for post bases; concrete foundation for posts.
  - 3. Privacy Slats

#### 1.2 REFERENCES

- A. ASTM A123 - Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
- B. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- C. ASTM A569 - Steel, Carbon (0.15 Maximum Percent), Hot-Rolled Sheet and Strip Commercial Quality.
- D. ASTM C94 - Ready-mixed Concrete
- E. ASTM F567 - Installation of Chain-Link Fence

#### 1.3 SYSTEM DESCRIPTION

- A. Fence Height: Height Varies. See plan for locations.
- B. Line Post Spacing: At intervals not exceeding 10 feet.

#### 1.4 SUBMITTALS

- A. Product data in the form of manufacturer's technical data, specifications and installation instructions for fence and gate posts, fabric, gates, gate operators, hardware and accessories.

#### 1.5 QUALITY ASSURANCE

- A. Installation Qualifications: Engage an experienced Installer who has at least three (5) years experience and has completed at least five (50) chain link fence projects with same material and of similar scope to that indicated for this Project with a successful construction record of in-service performance.
- B. Single-Source Responsibility: Obtain chain link fences, including accessories, fittings and fastenings, from a single source.

#### 1.4 WARRANTY

- A. Provide in required form for a period of 1 year from date of acceptance by Owner.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Contractor shall verify all dimensions and site conditions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Master Halco or Approved Equal.

2.2 FABRIC

- A. Selvage: Knuckled on both selvages for all mesh sizes.
- B. Steel Chain Link Fence Fabric: Fabricated in one piece widths for fencing 12 feet and less in height to comply with Chain Link Fence Manufacturers Institute (CLFMI) "Product Manual" and with requirements indicated below:
  - 1. Coating: ASTM A 817, Type 2, Class 1 zinc-coated (galvanized).
  - 2. PVC Vinyl Coating: ASTM F-668, Class 2b, Master Halco Permafused II polyolefin fused and adhered to zinc-coated wire or Approved Equal.
  - 3. Mesh and Wire Size 2 -inch mesh, 9 gauge Core with a 8 Gauge Finish.
- C. Manufacturers: Master Halco Permafused Chain Link or Approved Equal.
- D. Color: Midnight Black

2.3 FRAMING

- A. All framing members to be coated with PVC vinyl coating as per ASTM-F-1043, Group 1C, 3 Mils minimum, over galvanized steel wire, min. yield strength of 50,000 psi. Protective coating per ASTM 1043 External coating Type B, zinc with organiz overcoat, 0.9 oz per square foot with chromate conversion and verifiable polymer film.
- B. Manufacturers: Master Halco Spectra Framework Type 1 or Approved Equal.
- C. Color: Midnight Black
- D. Round member sizes are given in actual outside diameter (OD) to the nearest thousandth of inches. Round fence posts and rails are often referred to in ASTM standard specifications by nominal pipe sizes (NPS) or the equivalent trade size in inches. The following indicates these equivalents all measured in inches:

Actual OD	NPS Size	Trade Size
1.315	1	1-3/8
1.660	1-1/4	1-5/8
1.900	1-1/2	2
2.375	2	2-1/2
2.875	2-1/2	3
3.500	3	3-1/2

Matthews Park  
 Synthetic Turf Field 'A'  
 Mobile, AL - PR-022-21

4.000	3-1/2	4
6.625	6	6-5/8
8.625	8	8-5/8

- E. Type I Round Posts: Standard weight (Schedule 40) galvanized steel pipe conforming to ASTM F 1083, according to heavy industrial requirements of ASTM F 669, Group IA, with minimum yield strength of 25,000 psi, not less than 1.8 oz of zinc per square foot. Type A coating inside and outside according to ASTM F 1234, as determined by ASTM A 90, and weights per foot as follows:

Actual OD	Weight (lb/ft)	NPS Size
1.315	1.68	1
1.660	2.27	1-1/4
1.900	2.72	1-1/2
2.375	3.65	2
2.875	5.79	2-1/2
3.500	7.58	3
4.000	9.11	3-1/2
6.625	8.97	6
8.625	28.66	8

- F. Type II Round Posts: cold formed, electric welded steel pipe conforming to heavy industrial requirements of ASTM F 669, Group IV, with minimum yield strength of 50,000 psi, either protective coating system below according to ASTM F 1234, and weight per foot as follows:

Coatings: Type B outside with minimum of 0.9 oz. of zinc per square foot after welding, a chromate conversion coating and a clear polymer overcoat. Type B inside 0.3 mil thick,

Actual

- 81 percent zinc pigmented minimal coating.
- Coatings: Type C inside and outside with not less than 0.9 oz of zinc – 5 percent aluminum mischmetal alloy per square foot.

<u>OD</u>	<u>Weight (lb/ft)</u>	<u>NPS Size</u>
1.315	1.35	1
1.660	2.84	1-1/4
1.900	2.28	1-1/2
2.375	3.12	2
2.875	4.64	2-1/2
3.500	5.71	3
4,000	6.56	3-1/2

- G. Roll-Formed Steel: Rolled form steel shapes (e.g. C Section) produced from structural quality steel conforming to ASTM A 570, grade 45 or ASTM A 446, Grade D, galvanized conforming to heavy industrial requirements of ASTM F 669, Group II, with a minimum yield strength of 45,000 psi. Protective coating system according to ASTM F 1234, Type A, hot dip galvanized with a minimum of 2.0 oz of zinc per square foot according to ASTM A 123, 4.0 oz of zinc per square foot according to ASTM A 525; or Type C, a minimum of 1.0

oz of zinc – 5 percent aluminum-mischmetal alloy per square foot according to ASTM A 875.

- H. Roll Formed Steel: Hot rolled steel Shape H section with minimum yield strength of 45,000 psi conforming to ASTM F 669, Group III. Protective coating system according to ASTM F 1234, Type A, hot dip galvanized with a minimum of 2.0 oz of zinc per square foot according to ASTM A 123, of 4.0 oz. zinc per square foot according to ASTM A 525.
- I. Top Rail: Manufacturer's longest length (17 to 21 feet) with swaged end or expansion type coupling, approximately 6 inches long for joining. Provide rail ends or other means for attaching top rail securely to each gate corner, pull and end post.
  - 1. Round Steel: 1.660 inch OD Type I or II steel pipe.
  - 2. Roll Formed Steel: 1-1/4 by 1-5/8 inch C Section weighing a minimum of 1.40 lb per linear foot.
- J. Steel posts for fabric heights 6 feet and over:
  - 1. Round Line or Intermediate Posts: 2.375 inch OD Type I or II steel pipe.
  - 2. Round End, Corner and Pull Posts: 2.875 inch OD Type I or II steel pipe.

#### 2.4 FITTINGS AND ACCESSORIES

- A. All framing members to be coated with PVC vinyl coating as per ASTM-F-668 , Polyester Coating, 3 Mils minimum, over hot dipped galvanized pressed steel.
- B. Color: Match Framing Color
- C. Material: Comply with ASTM F 626. Mill finished aluminum or galvanized iron or steel to suit manufacturer's standards.
  - 1. Steel and Iron: Unless specified otherwise, hot dip galvanized pressed steel or cast iron fencing fittings and accessories with at least 1.2 oz. zinc per square foot as determined by ASTM A 90.
  - 2. Aluminum: Die cast conforming to ASTM B 26, aluminum allow 360 or sand cast conforming to ASTM B 85, aluminum alloy 365, AG61A or Tenzalloy.
- D. Post and Line Caps: Provide weather-tight closure cap for each post. Provide line post caps with loop to receive tension wire or top rail.
- E. Post Brace Assembly: Manufacturer's standard adjustable brace. Use material specified below for brace, and truss to line posts with 3/8 inch diameter rod and adjustable tightener. Provide manufacturer's cap for each end.
  - 1. Round Steel: 1.600 inch OD Type I or II steel pipe.
  - 2. Roll-formed steel: 1-1/4 inch by 1-5/8 inch C Section weighing a minimum of 1.40 lb. per linear foot.
  - 3. Round Aluminum: 1.660 inch OD aluminum pipe.
- F. Tension or Stretcher Bars: Minimum length 2 inches less than the full height of fabric, a minimum cross section of 3/16 inch by 3/4 inch and a minimum of 1.2 oz. of zinc coating per square foot. Provide one bar for each gate and end posts and two for each corner and pull



post, except where fabric is integrally woven into the post.

- G. Tension and Brace Bands: ¾ inch wide minimum
  - 1. Tension Bands: 0.074 inch thick (14 gauge) minimum.
  - 2. Brace Bands: 0.105 inch thick (12 gauge) minimum.
- H. Tension Wire: 0.177 inch diameter metallic PVC coated steel marcelled tension wire conforming to ASTM A 824 with finish to match fabric.
  - 1. Coating Type I aluminum with minimum coating weight of 0.40 per square foot as determined by ASTM A 428.
  - 2. Coating Type II zinc in the following class as determined by ASTM A 90.
    - a. Class 2 with a minimum coating weight of 1.20 oz. per square foot of uncoated wire surface.
- I. Tie Wires: 0.106 inch diameter (12 gauge) PVC coated galvanized steel with minimum of 0.80 oz. per square foot of zinc coating according to ASTM A 641, Class 3, to match fabric wire.

## 2.5 PRIVACY SLATS

- a. Quality high density virgin polyethylene & ultraviolet inhibitors, having a 25 year warranty against color fading or breakage of slats and locking channel.
- b. Master Halco PDS Self locking Fence Privacy Slats System
- c. Color: Match vinyl chain link fabric color specified.

## 2.6 CONCRETE

- A. Concrete: Provide concrete consisting of Portland cement per ASTM C 150, aggregates per ASTM C 33, and potable water. Mix materials to obtain concrete with a minimum 28 day compressive strength of 3000 psi. Use at least four sacks of cement per cubic yard, 1-inch maximum size aggregate, 3-inch maximum slump.
- B. Packaged Concrete Mix: Mix dry packaged normal weight concrete conforming to ASTM D 387 with clean water to obtain a 2 to 3 inch slump.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General: Install fence to comply with ASTM F 567. Do not begin installation and erection before all existing materials are removed.
- B. Excavation: Drill or hand excavate (using post hole digger) holes for posts to diameters and spacing indicated, in firm, undisturbed or compacted soil.
  - 1. If not indicated on drawings, excavate holes for each post to minimum diameter recommended by fence manufacturer, but not less than four times the largest cross

- section of post.
2. Unless otherwise indicated, excavate hole depths approximately 6 inches lower than post bottom with bottom of posts set not less than 36 inches below finish grade surface.
- C. Setting Posts: Center and align posts in holes 6 inches above bottom of excavation. Space a minimum of 10 feet on center unless otherwise indicated.
1. Protect portion of posts above ground from concrete splatter. Place concrete around post and vibrate or tamp for consolidation. Check each post for vertical and top posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations.
- D. Top Rails: Run rail continuously through line post caps, bending to radius for curved runs and at other posts terminating into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer.
- E. Intermediate Rails: Run rail terminating into post caps fabricated to receive rail.
- F. Brace Assemblies: Install braces at end and at both sides of corner and pull posts. Locate horizontal braces at mid height of fabric on fences with top rail and at 2/3 fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension. Install horizontal bracing at top rail where fences are within 5' of each other. Angled braces shall be installed at each post where fences are within 5' of each other.
- G. Bottom Tension Wire: Install tension wire within 6 inches of bottom of fabric before stretching fabric and tie to each post with not less than same gauge and type of wire. Pull wire taut without sags. Fasten fabric to tension wire with 0.120 inch diameter (11 gauge) hog rings or same material and finish as fabric wire, spaced a maximum of 24 inches on center.
- H. Fabric: Bottom selvage should be close to the ground. Pull fabric taut and tie to posts, rails and tension wires. Install fabric on security side of fence and anchor to framework so that fabric remains under tension after pulling force is released. Top of fence shall be level and adjust at grade of fencing as required to maintain 10' fence height and +/-1" to grade.
- I. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull and gate posts with tension bands spaced not over 15 inches on center.
- J. Tie Wires: Use wire of proper length to secure fabric firmly to posts and rails. Bend ends of wire to minimize hazard to persons or clothing.
1. Maximum Spacing: Tie fabric to line posts 12 inches on center and to rails and braces 24 inches on center.
- K. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts for added security.
- L. Install gates to operate freely without binding or dragging and easily operable by hand.

END OF SECTION

SECTION 32 31 13.33 – BACKSTOP NETTING SYSTEMS

PART 1 GENERAL

1.1 WORK INCLUDED

Work necessary to design, furnish and install, complete, the Backstop Netting System and Outfield Netting System specified herein, and as shown on the Drawings.

- a. Backstop Netting System
- b. Outfield Netting System

1.2 SUBMITTALS

Submit drawings, data, and information confirming that the poles, net material, and accessories conform to the requirements of Part 2 of this Section.

- A. Contractor shall have a minimum of ten (10) years experience installing netting of a similar type construction, and shall submit five references for similar installations.
- B. Manufacturer's descriptive literature and catalog information on poles, net material, and hardware as applicable. A copy of independent mesh breaking strength test report, in accordance with ISO standard 1806, must be submitted with bid proposal.
- C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- D. **Signed & Sealed structural design to 150 mph windspeed for compete netting systems, including poles, foundations, cabling, connections, & netting by a Alabama Licensed Engineer.**

PART 2 PRODUCTS

2.1 BACKSTOP NETTING

- A. Netting: LFS #36 twisted knotted nylon. The netting shall made of 100% Dupont type 66 high-grade nylon, manufactured with UV treated yarn and additionally coated with a black resin dye and bonding treatment.
- B. Size: 3½” stretch mesh, 1 ¾” single bar measure. 325.6 Lb. average single mesh break strength, determined in accordance with ISO standard1806.
- C. Attachment Twine: Black #48 braided polyester twine, 375 lb tensile strength, impregnated with UV inhibitor.
- D. Rope Boarder and Interior Riblines: Black 3/8” braided synthetic cover, parallel synthetic core, 3,500 lb. tensile strength. The rope boarder shall be attached to the net using a black UV dye treated #48 braided polyester twine with a minimum 375 lb.

tensile strength. The attachment twine shall not be continuously tied to the net, but rather shall be tied at 6" on center for the full length of the rope boarder.

- E. Netting shall have a five (5) year pro-rated warranty.

## 2.2 STEEL POLES

- A. Steel poles are to be steel pipe, made of A500 grade B/C pipe (min). Minimum Pipe size to be as per engineering requirements.
- B. Steel poles shall be painted with a Carbocoat® 150 universal primer, and two (2) coats of black Carbothane ® 8845 finish, as manufactured by Carboline.
- C. Steel poles shall be sized so as to withstand 8% solid wind loading in accordance with ACSE 7-0. Up to 150 mph wind speed.
- D. **Netting Systems Manufacturer shall provide Signed & Sealed structural design to 150 mph windspeed for compete netting systems, including poles, foundations, cabling, connections, & netting by a Alabama Licensed Engineer.**
- E. Maximum dead load top deflection of steel support poles shall not exceed H/90. Steel support poles shall be designed accordingly.
- F. Netting support pole foundations shall be per engineer drawings

## 2.3 HARDWARE

- A. All hardware shall be galvanized unless specified differently, and shall conform to one of the following standards ANSI, ASTM, IEEE, and/or NEMA. Hardware components shall be matched so as to meet or exceed load capacity of the cable.
- B. Bolts: All bolts will be 5/8" diameter with a minimum tensile strength of 13,550 lbs.
- C. Cable Clamps: Three bolt cable clamps are required at each pole to support all horizontal cables. One bolt clamps are required to support the vertical cable on every pole at every horizontal cable intersection except for the top and bottom horizontal cable.
- D. Vertical Rollers shall be used to terminate the vertical cables at top and bottom of each pole. Rollers shall be 1 7/8" in diameter and 7/8" thick with an 11/16" hole in the center.
- E. (Where necessary) Guy wires shall be anchored using a coated helix-hub assembly or approved equal. Anchors shall be a minimum size 10" strait hub, single helix anchor attached to 3/4" by 7' anchor rods with guy nut end. All guy wires shall include a high visibility yellow guy guard.

- F. All horizontal cables shall terminate to the pole using a 5/8" Thimble eye nut.
- G. Attachment clips shall be 9/32" cadmium plated steel carabineer attachment snap. Zinc or Nickel coated clips are not to be used.
- H. All cable shall be 1 by 7 galvanized extra high strength galvanized strand with a minimum breaking strength of 11,200 lbs.

### PART 3 EXECUTION

#### 3.1 DELIVERY, STORAGE, AND HANDLING

New Steel Poles, Net Materials, and Accessories:

- 1. Protect, support, and handle in a manner to prevent damage to the poles, net materials, and accessories.
- 2. Use implements, tools, facilities, and equipment suitable for proper and safe protection and handling of pipe, fence materials, and accessories.
- 3. Remove poles, net materials, and accessories that are damaged beyond repair, in the opinion of ENGINEER.

#### 3.2 PREPARATION

New Poles, Net Materials, and Accessories:

Inspect before poles, net materials, and accessories are installed.

#### 3.4 INSTALLATION

##### A. Qualifications

- 1. Contractor shall have a minimum of ten years experience installing netting of a similar type construction, and shall submit five references for similar installations.

##### B. Steel Pole Installation

- 1. Poles shall be placed plumb and true with spacing as per drawings; embedment shall be per engineer drawings. Poles shall be fabricated so that top horizontal cable be no less than 2" below the top of steel poles.
- 2. Pole borings shall be as indicated on drawings.
- 3. Poles shall be backfilled using 3,000 PSI concrete or as specified by structural engineer.

##### C. Hardware Installation

- 1. All hardware to be installed using a through bolted connection.
- 2. Lock washers shall be installed at each bolted connection.
- 3. (Where necessary) Guy hooks shall be used to attach guy cables to the poles.

4. Vertical cables shall be installed on each pole.
5. Horizontal cables shall be installed parallel to the ground and each other.
6. Cables shall be tensioned to force of 500lbs to 1,000 lbs. to provide less than 6" of sag at midpoint of each span. Cables shall be terminated using 5/16" preformed cable grips. Turnbuckles and/or cables clamps shall not be used to secure the cable.
7. Cross or "X" bracing cables shall not be used between the poles.

D. Netting Installation

1. Net panels shall be custom fabricated to as built measurements of the pole/cable structure to provide a taut panel upon completion.
2. Rope boarder shall be installed at the net perimeter and all horizontal and vertical cable locations. Rope boarders shall be constructed using a 3/8" rope with black synthetic cover, and a minimum tensile strength of 3,500 lbs.
3. Attachment clips are to be attached to the rope boarder at 2' on center. Clips shall be installed so as to attach to the support cable and rope boarder only. The clip shall not be attached so as to encompass the net or attachment twine. Continuously sewn rope boarders and riblines that require clipping the net with the rope boarder will not be allowed.
4. Netting shall be lashed to bottom strand of cable, continuously, using #48 braided polyester twine. Installer shall use a clove and one half hitch knot when lashing.

E. Installation Clean Up

Clean up debris and unused material, and remove from the site.

END OF SECTION

## SECTION 323300 - SITE FURNISHINGS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Drinking Fountain
  - 2. Spectator Bench
- B. Related Requirements:
  - 1. Section 033000 "Cast-in-Place Concrete" for installing pipe sleeves cast & installing anchor bolts cast in concrete footings.
  - 2. Section 02300 "Earthwork" for excavation for installing concrete footings.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Product Schedule: For site furnishings.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For site furnishings to include in maintenance manuals.

### PART 2 - PRODUCTS

#### 2.1 DRINKING FOUNTAIN

- A. Drinking Fountain with Bottle Filler - Provided and install:
  - 1. Material: Stainless Steel, Lead Free, Heavy Duty, Vandal Resistant, with Vandal Resistant bubbler. Wall mount for Outdoor use.
  - 2. Dimensions: 18"x39", ADA accessible, 27" clearance to bottom of drinking tray.
  - 3. Hardware: Provide mounting hardware for wall mount attachment. Hardware shall be rust inhibitive, taper resistant and of strength to withstand thrust without stripping attachment.

4. Additional: Laminar flow, Must comply with ADA, Provide sump system as specified on drawings.

B. Acceptable Products:

1. Elkay Model # VRCTLDDWSK\_MECH  
2222 Camden Court  
Oak Brook, Illinois 60523  
630-572-3192  
Elkay.com  
Elkay ezH2O Vandal Resistant Mechanical Bottle filling station & single cooler,  
non-filtered, non-refrigerated, Stainless  
(Basis of Design)
2. OR Approved Equal

2.2 SPECTATOR BENCH

A. Backless Aluminum Bench – Provide and Install:

1. Spartan Series Team Bench - 8'-0"L, Galvanized Steel Frame, Surface Mount with stainless steel hardware to concrete slab as recommended by manufacturer.

B. Acceptable Products:

1. GT Grandstands  
2810 Sydney Road  
Plant City, FL 33566  
gtgrandstands.com  
813-305-1415
2. (Basis of Design) Model #: TB-SSG08
3. OR Approved Equal

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.



Matthews Park  
Synthetic Turf Field 'A'  
Mobile, AL - PR-022-21

- B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.
- C. Install site furnishings level, plumb, true, and securely anchored & positioned at locations indicated on Drawings.
- D. Install with sump chamber as specified on plans per City of Mobile plumbing code.
- E. Connect existing water supply line as required for a completely operational drinking fountain using a licensed plumber.

END OF SECTION 323300



## SECTION 329200 - LAWNS AND GRASSES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Sodding

#### 1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See drawing designations for planting soils.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
  - 1. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.
- C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of turf during a calendar year. Submit before expiration of required maintenance periods.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf establishment.
  - 1. Experience: Five years' experience in turf installation.
  - 2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
  - 3. Pesticide Applicator: State licensed, commercial.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Sod: Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.
- B. Bulk Materials:
  - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
  - 3. Accompany each delivery of bulk materials with appropriate certificates.

1.8 FIELD CONDITIONS

- A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 TURFGRASS SOD

- A. Turfgrass Sod: Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.
- B. Turfgrass Species: Bermuda 419

## 2.2 FERTILIZERS

- A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

## 2.3 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

## 2.4 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
  - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  - 3. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

### 3.2 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
  - 1. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

### 3.3 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement.
- B. Placing Planting Soil: Place clean, friable, light brown, sandy subsoil in sod areas.
  - 1. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- D. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
- E. Pre-Plant Fertilizer
  - 1. Primeria Organic 4-4-4 Fertilizer: Apply at rates per manufacturers recommendations.

Gulf Coast Organic, Inc.  
17588 Highway 98 West  
Foley, AL 36535  
Phone: 251-952-4769  
[www.gcogrows.com](http://www.gcogrows.com)

Or Approved Equal

#### B. Dolomitic Lime

- 1. Pelletized Dolomitic Lime: Apply at rates per manufacturers recommendations.

Gulf Coast Organic, Inc.  
17588 Highway 98 West  
Foley, AL 36535  
Phone: 251-952-4769  
[www.gcogrows.com](http://www.gcogrows.com)

Or Approved Equal

### 3.4 SODDING

- A. Lay sod within 24 hours of harvesting unless a suitable preservation method is accepted by Architect prior to delivery time. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
  - 1. Lay sod across slopes exceeding 1:3.
  - 2. Anchor sod on slopes exceeding 1:6 with steel staples spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray immediately after planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

### 3.5 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
  - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
  - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
  - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
  - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
  - 2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.
- C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades

bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

1. Mow Bermuda grass, to a height of 1/2 to 1 inch.

### 3.6 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Architect:

1. Satisfactory Seeded Turf: No seeding of turf will be accepted.
2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities 3"x3" or larger.

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

### 3.7 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

### 3.8 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

C. Remove nondegradable erosion-control measures after grass establishment period.

### 3.9 MAINTENANCE SERVICE

A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance". Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:

1. Sodded Turf: **Sod shall be maintained by this contractor 30 days from date of Substantial Completion .**

END OF SECTION 02920



## SECTION 334600 - SYNTHETIC TURF BASE CONSTRUCTION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Included technical specifications Division 1 through Division 48.

#### 1.2 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all playing field sub-drainage and related work as shown on the Drawings and/or specified herein as required.
- B. Scope of work: The general extent of the sub-drainage, base construction, & turf surface work is shown on the Drawings and includes, but is not limited to the following:
  - 1. Restore sub-grade to meet grading and compaction requirements inside of synthetic field surfaces. (See Earthwork 02300 for requirements.)
  - 2. Verification of sub-grade elevation tolerances through conformance surveying
  - 3. Trenching for all sub-drainage lines
  - 4. Lining trenches and sub-grade with geo-textile filter fabric
  - 5. Construction and installation of field sub-drainage laterals, collectors
  - 6. Construction and installation of sub-drainage structures and assemblies
  - 7. Backfilling and compaction of trenches
  - 8. Installation & compaction of base drainage stone fill material as playing field sub-base.
  - 9. Installation and compaction of finishing stone fill material as a leveling course for the playing field.
  - 10. Verification of Base drainage stone elevation tolerances through conformance surveying.
  - 11. Sub-base Testing during and after construction as described herein.
  - 12. Finished Turf Surface Testing after construction as described herein.
  - 13. Maintenance Equipment: Furnish field groomer.
  - 14. Coordination and scheduling of owner provided synthetic turf installation including receiving, storing, and securing owner provided materials.
- C. Related sections can include, but may not be limited to:
  - 1. Section 033000 Cast-in-Place Concrete
  - 2. Section 02300 Earthwork

#### 1.3 REGULATORY REQUIREMENTS AND REFERENCES

- A. American Association of State Highway and Transportation Officials:
  - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 10-lb. Rammer and an 18" Drop.
  - 2. The State of Alabama Department of Transportation Standards.

B. American Society for Testing and Materials:

1. ASTM C136 Sieve Analysis of Fine and Coarse Aggregates.
2. ASTM C702 Reducing Samples of Aggregate to Testing Size.
3. ASTM D75 Sampling Aggregates.
4. ASTM F355 – Standard Test Method for Impact Attenuation of Playing Surface Systems, Other Protective Sport Systems, and Materials Used for Athletics, Recreation and Play
5. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>).
6. ASTM 1551 – Water Permeability of Synthetic Turf Systems and Permeable Bases
7. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft<sup>3</sup>).
8. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings.
9. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
10. ASTM D2412 – Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
11. ASTM D2564 - Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
12. ASTM D2729 - Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
13. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
14. ASTM D2922 – Standard Test Method for Density of Soil and Soil aggregate in Place by Nuclear Methods
15. ASTM D3017 – Standard Test Method for Water Content of Soil and Rock in place by Nuclear Methods
16. ASTM D3034 - Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
17. ASTM D3350 – Standard Specification for Polyethylene Plastics Pipe and Fittings Material
18. ASTM D3574-08 – Standard Specification for Flexible Materials – Tensile Strength, Tensile Elongation
19. ASTM D3575-08 – Flexible Cellular Polymeric Materials – Determination of Compression Strength
20. ASTM D4253 – Standard Test Method for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
21. ASTM D4254 – Standard Test Method for Minimum Index and Unit Weight of Soils and Calculation of Relative Density.
22. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

1.4 SUBMITTALS

- A. Conform to requirements of applicable Division One and Division Two specifications, General Conditions and Special Provisions.

- B. Bidder Qualifications: Playing Field Base Installation shall be provided by an experienced contractor which shall have installed a minimum of five (5) synthetic athletic field bases of at least 75,000 square feet that have been in use for two (2) or more years. Provide a type-written description of each similar type construction experience with names and phone numbers of client contact, date of installation, and so forth with bid.
- C. ***Pre-Construction Submittals:*** Prior to construction, Contractor shall submit the following:
1. Sub-base Contractor qualifications.
  2. Cut-sheets or samples of all products proposed for construction of drainage lines, structures, equipment, and shock pad underlayment as specified.
  3. Material Testing: Contractor shall submit one-gallon composite sample of drainage aggregate, base drainage stone, processed sand and choker aggregate (as required). The contractor shall submit and pay for Testing Agent to evaluate these materials using the appropriate ASTM protocol. This representative sample will be used for comparison with all subsequent samples submitted for approval during construction.
  4. Submit a particle gradation analysis in graph and table form for each product specified. Approval of the Landscape Architect of an analysis does not constitute approval of the actual product, which may be subject to additional testing.
- D. ***Testing During Construction:*** Contractor shall submit the following during construction:
1. Certification: Submit certification signed by turf contractor that installed materials conform to specified requirements and was successfully checked and tested prior to covering with carpet.
  2. Material Testing During Construction: To ensure that the quality of drainage stone materials remain constant from point of supply to jobsite.
  3. Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition per ASTM D2922 and ASTM D3017.
- E. ***Post Construction Submittals:***
1. Certification: Submit certification signed by Contractor that installed materials conform to specified requirements and drainage system was successfully checked and tested prior to covering with drainage gravel.
  2. Sub-base Infiltration testing per ASTM D3385, Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer.
  3. Finished Turf Surface Infiltration testing per ASTM D3385, Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer.
  4. Record Drawings:
    - a. Accurately record location of new piping, drain structures, and connections to existing systems using horizontal dimensions, elevations, inverts and slope gradients as applicable.
    - b. Maintain progress drawings on the construction site at all times during installation of the sub-drainage system. Make a daily record of all work installed each day until completion of the work.
  5. Compaction tests per the requirements set forth in Section 02300 for sub-grade preparation and compaction.

1.5 QUALITY ASSURANCE

- A. Restore sub-grade to meet grading and compaction requirements inside of athletic fields. (See Earthwork Section 02300 for requirements.)
- B. The Contractor is responsible for verifying the quality of the work and shall perform compaction and density tests on request of the Landscape Architect to check compliance with these specifications. A copy of the test reports shall be furnished to the Landscape Architect.
- C. The Owner's Geotechnical Testing Agent may perform compaction and density tests to check compliance with these specifications.
- D. The Landscape Architect requires that an independent testing laboratory test imported materials at any time. If the material is found to be non-compliant with the Contract, the Contractor shall bear the cost of testing, removal of all non-compliant materials from the Project Site, and replacement of the materials with materials meeting the requirements of the Contract. If the materials tested are found to be compliant with the requirements of the Contract, the Owner will bear the cost incurred for the additional testing.
- E. It is the responsibility of the Contractor to verify the accuracy of all survey information provided by the Owner prior to commencing excavations or filling operations. Commencement of these operations constitutes acceptance of the survey information as appropriate to meet the intent of the Contract.
- F. It is the responsibility of the Contractor to pay for all material testing through the Owner's Testing Agent for the drainage stone materials per the requirements below and in this specification section. If the material is found to be non-compliant with the Contract, the Contractor shall also bear the cost of testing, removal of all non-compliant materials from the Project Site, and replacement of the materials with materials meeting the requirements of the Contract.
- G. Material Testing: Testing During Construction: To ensure that the quality of drainage stone materials remain constant from point of supply to jobsite, the following protocol shall be used:
  1. Prior to shipment from the supplier, Contractor shall submit a one-gallon composite sample representative of every 1000 tons of the base drainage stone, drainage aggregate material to be shipped to the site. The Testing Agent will evaluate this sample using gradation testing per ASTM D422, Standard Test Method for Particle-Size Analysis of Soils. The results will be provided to the Owner, and upon approval, the material may be shipped to the site.
  2. If visual analysis of shipped materials suggests a change in material quality, additional testing is required. If an on-site sample fails, immediately stop all placement activities until authorized to continue by the Landscape Architect.
- H. Quality assurance testing of the subgrade, and in place sub-base materials prior to synthetic turf installation shall be paid for and performed by the Contractor, should include the following:

Matthews Park  
Synthetic Turf Field 'A'  
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1. Density testing per ASTM D2922, Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods, for each 5000 square feet of installed sub-base.
  2. Sub-base Percolation testing: Infiltration testing per ASTM D3385, Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer, for each 10,000 square feet of installed sub-base, or other equivalent percolation test.
  3. Material soundness testing on the basis of a Magnesium Sulfate Soundness Loss after 4 cycles of 20% or less.
  4. Finished turf surface testing: Infiltration testing per ASTM D3385, Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer, for each 50,000 square feet of installed synthetic turf surface, or other equivalent percolation test.
  5. Other special tests that may be suggested or recommended by manufacturers.
- I. Quality assurance verification of the subgrade, in place sub-base materials, and finishing stone prior to synthetic turf installation, should include the following:
1. **Conformance Survey of Sub-Grade:** The Contractor shall pay for and perform a conformance survey by a licensed surveyor, before any placement of the drainage stone, on a 25-foot grid over the sub-grade of the entire playing field. Landscape Architect will require three (3) working days to review survey. After review, the survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to base drainage stone.
    - a. **Tolerance for Sub-Grade:** Sub-grade shall be verified using laser-operation survey instruments. Subgrade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the sub-grade shall be measured so that no point within the 25-foot grid deviates more than 1/4 of an inch from any other point within the 25-foot grid.
  2. **Conformance Survey of Finish Stone:** The Contractor shall pay for and perform a conformance survey by a licensed surveyor, before any placement of the synthetic turf, on a 25-foot grid over the finish stone of the entire playing field. Provide spot elevations, based on the established benchmark, at each grid intersection and at the intersection of the perimeter and the grid. Submit a drawing showing the results of the above survey. The drawing shall include the scaled grid and all spot elevations. Interpolate spot elevations as required to provide contours. Landscape Architect will require three (3) working days to review survey. After review, the survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to turf installation.
    - a. **Tolerance for Finish Stone:** Finish stone elevations shall be verified using laser-operation survey instruments. Finish Grade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the finish stone shall be measured so that no point within the 25-foot grid deviates more than 1/4 of an inch from any other point within the 25-foot grid.

J. Testing Agent:

1. The testing agency for quality assurance of the sub-base stone and finishing stone shall be:

Turf & Soil Diagnostics, Inc.  
613 East 1st Street  
Linwood, KS 66052  
Phone: 855-769-4231  
Attn: Sam Ferro

2. The testing agency for quality assurance related to sub-grade and sub-base compaction, concrete strength and items related to contract compliance shall be the Owner's Geotechnical testing agent.

1.6 PROTECTION OF PROJECT SITE

- A. Make provisions for and take the necessary precautions to protect existing and new work from damage during the entire life of the project.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Store pipe neatly and orderly, stacked and blocked to prevent damage. Cracked, checked, spalled or otherwise damaged pipe shall be removed from site.
- B. Use of chain slings shall not be permitted.
- C. All piping, fittings and related materials shall be carefully handled at all times.
- D. All pipelines, fittings and drainage structures shall be kept clean and closed during construction.
- E. Store and protect all tested and approved drainage stone materials prior to delivery.

1.8 PROJECT/SITE CONDITIONS

- A. Work of this section shall not be executed when site conditions are detrimental to quality of work as determined by the Owner. Comply with the environmental protection and safety requirements of the Owner and all governmental authorities having jurisdiction.
- B. Keep dust to a minimum.
- C. Maintain streets and walks free of mud, dirt and debris.
- D. Restoration of Damaged Property: When or where in the execution of the work under this contract, any direct or indirect damage injury is done to public or private property by or on account of any act, omission, neglect, or misconduct, the Contractor, at no additional cost to the Owner, shall restore the damaged property to a condition equal to that existing before damage or injury was done.
- E. Synthetic turf installation operations shall not be conducted under the following conditions unless approved by Owner's Representative:
  1. Ambient air and material temperatures are at least 40 degrees F and rising.
  2. High winds
  3. Excessively wet conditions. Surfaces and materials shall be dry. Adhesives should not be

- applied within 12 hours after rainfall, or when rainfall is eminent.
4. Conditions exist, or are pending, that will be unsuitable for the installation of the system as set forth by the manufacturer.
  - F. Construction Surveying: The Contractor shall be responsible for all construction surveying required for the proper layout and location of all work covered hereunder.
  - G. As provided for in other Division 2 Sections, the in-fill synthetic turf field subgrade shall be a smooth, clean surface free of any debris and/or loose soil to the tolerances specified. Before compaction the subgrade shall have been raked clean of any extraneous material including, but not limited to, branches, twigs, and other vegetative material; large cobbles, frozen or clumped soil, glass, plastic, or other debris.
  - H. Avoid contamination of materials or damage to the drainage aggregate layer during construction and installation of synthetic turf field.
  - I. Work under this Section shall include all fees, permits, licenses, and required inspections by governing agencies. (See Supplementary Instructions to Bidders for more detailed information.)

#### 1.9 SEQUENCING AND SCHEDULING

- A. Coordinate work of this section with all other work contained in the Contract Documents.

#### 1.10 WARRANTY

- A. All materials and workmanship shall be guaranteed for a period of one (1) year beginning at Notice of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 PIPE MATERIALS

- A. Drain Pipe: Furnish drainage pipe complete with bends, reducers, adapters, couplings, collars, and joint materials.
  1. Corrugated Polyethylene Pipe: High-density polyethylene perforated corrugated pipe with an integrally formed smooth waterway. Nominal sizes shall have a full circular cross-section, with an outer corrugated pipe wall and an essentially smooth inner wall (waterway). Corrugations may be either annular or spiral. All sizes shall conform to the AASHTO classification "Type S". Pipe manufacturer for this specification shall comply with the requirements for test methods, dimensions, and markings found in MSHTO Designations M252 and M294. Pipe and fittings shall be made from virgin PE compounds which conform with the requirements of cell class 324420C as defined and described in ASTM D 3350.
    - a. The minimum parallel plate stiffness values when tested in accordance with ASTM D2412 shall be as follows:

<u>Diameter</u>	<u>Pipe Stiffness</u>
4 inch (100 mm)	50 psi (340 kPa)
6 inch (150 mm)	50 psi (340 kPa)
8 inch (200 mm)	50 psi (340 kPa)
12 inch (300 mm)	50 psi (340 kPa)

2. The fittings shall not reduce or impair the overall integrity or function of the pipeline. Common corrugated fittings include in-line joint fittings, such as couplers and reducers, and branch or complimentary assembly fittings such as “tees”, “wyes”, and end caps. These fittings may be installed by various methods, such as snap-on, screw-on, bell and spigot, and wrap around. Provide nylon straps for compressive pipe connections as required by manufacturer.
3. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used. Where designated on the plans and as required by the manufacturer, a neoprene or rubber gasket shall be supplied.
4. Installation of the pipe specified above shall be in accordance with ASTM Recommended Practice D2321 as covered elsewhere in these specifications.
5. Corrugated Polyethylene Pipe and Structures shall be N-12 drainage pipe as manufactured by Advanced Drainage Systems, Inc. or approved equal.

**B. Panel Drain**

1. 12” Subsurface Panel Drain Pipe and fittings shall be AdvanEDGE oblong corrugated pipe WITHOUT the geotextile wrap for use in subsurface drainage applications as manufactured by Advanced Drainage Systems, Inc. or approved equal.
2. Outside dimensions shall be 1.5” thick by 12.5” wide or as specified on drawings.
3. All pipe and fittings shall be made of polyethylene with a minimum cell classification of 424420C as defined and described in the latest version of ASTM D3350.
4. Panel Drain shall have internal bracing adjoining each long wall to prevent crushing under typical loading.
5. Panel drains shall be benched into subgrade or as specified on drawings.

**2.2 GEOTEXTILE FABRIC**

- A. Provide geotextile fabric in the areas designated on the Details. Geo-textile fabric should conform to the following minimum specifications:

1. Geotextile filter fabric should meet the following minimum requirements:

<b>Property</b>	<b>Test Method</b>	<b>Typical Values</b>
Grab Strength	ASTM D 4632	>80 lb.
Puncture Strength	ASTM D 4833	25 lb.
Burst Strength	ASTM D 3786	130 psi
Trapezoid Tear	ASTM D 4533	>25 lb.
Permeability	ASTM D 4491	0.1 cm/sec
Apparent Opening Size	ASTM D 4751	>#60 Sieve size
Permittivity	ASTM D 4491	>1.7 sec.



2.3 FIELD BASE AGGREGATES

A. General

1. Provide Aggregates with the specified properties.
2. Provide independent laboratory test results (supplier lab results will not be accepted) identifying performance to the properties specified in the units identified here.
3. Material shall contain less than 1/10 of 1% organic material by weight as measured by burn test.
4. All surfaces of individual particles shall be fractured. No worn or naturally occurring faces shall be present.

B. BASE DRAINAGE STONE

1. Base drainage stone to be placed over geo-textile filter fabric shall meet the following criteria:

U.S. Standard Sieve Mesh	Allowable Range % Passing
2 inch (50 mm)	100%
1.5 inch (38 mm)	90%-100%
1 inch (25 mm)	75%-100%
3/4 inch (19 mm)	65%-100%
1/2 inch (12.5 mm)	55%-100%
3/8 inch (9.5 mm)	40%-100%
1/4 inch (6.3 mm)	25%-90%
US #4 (4.75 mm)	15%-85%
US #8 (2.36mm)	0%-65%
US #16 (1.18 mm)	0%-50%
US #30 (600 μm)	0%-35%
US #60 (250 μm)	0%-15%
US #100 (150 μm)	0%-8%
US #200 (75 μm)	0%-5%

2. This material must meet the following requirements for acceptance:

- a. Using the standard structural stability equation:

$$D_{60}/D_{10} > 5 \text{ and } 1 < D_{30}^2/D_{10}(D_{60}) < 3$$

- b. Permeability requirements for the Base Drainage Stone should be greater than 50 inches per hour.

C. FINISH DRAINAGE STONE:

1. Finish drainage stone to be placed over base drainage stone shall meet the following criteria:

U.S. Standard Sieve Mesh	Allowable Range % Passing
1/2 inch (12.5 mm)	100%
3/8 inch (9.5 mm)	85%-100%
1/4 inch (6.3 mm)	75%-100%
US #4 (4.75 mm)	60%-90%
US #8 (2.36mm)	35%-75%
US #16 (1.18 mm)	10%-55%
US #30 (600 µm)	0%-40%
US #60 (250 µm)	0%-15%
US #100 (150 µm)	0%-8%
US #200 (75 µm)	0%-2%

2. This material must meet the following requirements for acceptance:

a. Using the standard structural stability equation:

$$D_{60}/D_{10} > 5 \text{ and } 1 < D_{30}^2/D_{10}(D_{60}) < 3$$

b. Permeability requirements for the Finish Drainage Stone should be greater than 14 inches per hour.

D. SEPARATION OF DRAINAGE STONE: The Finish drainage stone and Base drainage stone together shall meet the following criteria:

1. This material together must meet the following requirements for acceptance:

a. Using the standard bridging equation:

$$\frac{D_{85} \text{ of Finishing Stone}}{D_{15} \text{ of Base Stone}} > 2 \text{ and } 3 < \frac{D_{50} \text{ of Base Stone}}{D_{50} \text{ of Finishing Stone}} < 6$$

b. Porosity requirements for both stones should be greater than 25%.

E. Soft limestone and shale materials are not suitable for drainage stone. Questionable materials should be evaluated using a sulfate soundness test (ASTM C-88) and LA Abrasion Test (ASTM C-131). The drainage stone should meet both of the following stability requirements:

Test Method	Criteria
Sulfate Soundness (C-88)	Not to exceed 12% Loss
LA Abrasion (ASTM C-131)	Not to exceed 40

## 2.4 MISCELLANEOUS MATERIALS

- A. Perimeter Edge: The method for attaching to the existing edge of the synthetic turf shall be hidden, stable, non-degradable, and not visible when construction is complete as recommended by the Synthetic Turf Provider. All edge conditions must be addressed, including where the synthetic turf abuts skinned infield, paved areas, or concrete conditions.

## 2.5 MAINTENANCE EQUIPMENT

- A. The following maintenance equipment shall be provided to the Owner prior to final acceptance of the synthetic turf surface. **Equipment shall be fully assembled & operational.**

1. Redexim Speed Clean 1700, speed clean magnet, and speed clean tow kit
2. Redexim Base Rake w/ Tines & Soft Brushes, and wheel kit

Redexim North America  
427 W Outer Road  
Valley Park  
MO 63088  
United States  
(636) 825 8300  
[www.redexim.com](http://www.redexim.com)

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that area is ready to receive work, and excavations, dimensions, and elevations are as indicated on Drawings.
- B. Beginning of installation means acceptance of existing conditions.

### 3.2 PROTECTION OF WORK IN PROGRESS

- A. It is the responsibility of the Contractor to protect all work in progress from damage due to extremes of cold, moisture, or drying, or mechanical damage from equipment traffic or foot traffic. Alert the Landscape Architect to the presence or likelihood of conditions that may adversely affect the quality of the work, the physical structure of soils, or transport of site soils off-site.
- B. Do not work frozen soils.
- C. Protect soils from excessive moisture. During periods of prolonged precipitation, take aggressive steps to avoid over-saturation, erosion, or homogenization of soils by covering with protective plastic sheeting, collection and controlled dewatering, detention for sediment removal, and allowing excessively wetted soils to remain fallow until approved by the Landscape Architect as appropriate for continued work.
- D. Apply supplemental moisture to overly dry soils.
- E. Do not operate heavy equipment near excavations where trench wall or cut-slope failure

may result.

### 3.3 PREPARATION OF SUB-GRADE

- A. Restore sub-grade to meet grading and compaction requirements inside of playing fields per Specification Section 02300 Earthwork. Provide testing to confirm compaction conditions.
- B. Using laser operation survey instruments, the Contractor shall verify that sub-grade has been prepared according to specification with regard to compaction, grade tolerances and is free of debris prior to beginning work.
- C. The field sub-grade shall be final graded to form a smooth, clean basin free of any debris and/or loose soil to the tolerances specified in Section 02300. The base drainage stone shall not be installed until all sub-grading and drainage are completed in order to avoid the mixing of other soil and materials with the drainage materials.

### 3.4 TRENCHING

- A. Excavate to required elevations. Trench width shall not exceed dimensions shown on the details.
- B. Contractor shall use great care so as not to disturb the sub-grades of the field. Contractor will make provisions to avoid rutting of the field surface. Equipment used to install sub-drainage shall have large floatation tires. Under no circumstances will loaded rubber-tired vehicles or equipment with a loading rate in excess of 5-lbs/in<sup>2</sup> be allowed on the sub-grade prior to or during excavation, placement of pipelines, or gravel placement. Do not leave any wheel ruts.
- C. Contractor shall remove stones or other hard objects over 2-inch in diameter that could damage drainage pipe or impede consistent backfilling or compaction.
- D. Excavate recessed trenches for panel drains to be benched in as detailed in the drawings so that top of panel drain is at or below subgrade elevation.

### 3.5 SUB-DRAINAGE PIPE INSTALLATION

- A. Install geo-textile fabric as required in the trenches as shown in the details.
- B. Install and join pipe and pipe fittings in accordance with manufacturers' instructions.
- C. Laying Drain Pipe: Provide full bearing for each pipe section throughout its length, to true grades and alignment, and continuous slope in direction of flow. Lay pipe to slope gradients noted on Drawings, with maximum variation from true slope of 1/8 inch in 25 feet.
- D. Provide recesses in excavation bottom to receive bells for drainpipe having bell and spigot ends. Lay pipe with bells facing up slope with spigot end entered fully into adjacent bell. Seal joint in accordance with manufacturer.
- E. All laterals and collector pipes shall be joined by snap couplings with soil tight gaskets on both ends.
- F. Geo-textile fabric used in the sub-drainage trenches should be laid or folded over to protect

the drainage aggregate from contamination of soil materials during any sub-grade revisions.

- G. Request inspection by Landscape Architect prior to placing gravel drainage fill over pipe. Provide 48 hours advance notice of this to the Landscape Architect.
- H. Protection of Pipe
  - 1. Protect pipe and drainage stone cover from damage or displacement until placement of artificial turf begins. Do not use compaction equipment directly over pipe until sufficient drainage stone has been placed to insure that equipment will not damage or disturb pipe.
  - 2. Fold installed filter fabric over the trench to cover the drainage stone material until placement of base materials. Pin as necessary to prevent any runoff from contaminating trenches.
- I. Trench Backfilling and Compaction
  - 1. Backfilling Collector Trenches: Fill collector trenches with Drainage Aggregate in maximum 6-inch lifts. Do not displace or damage drainage pipe when compacting. Exercise care to prevent disturbance to the sub-grade elevations or compaction.
  - 2. All drainage stone material shall be compacted to not less the 95% density, with a moisture condition between 3% below and 2% above optimum moisture content in accordance with ASTM D698. Material shall be tamped, vibrated or other operations necessary to provide a stable compacted installation.
- J. Connect collectors to storm drainage structure, or structures set forth by the drawings.
- K. Testing Drain Lines: Test or check lines after all connections are made to assure free flow of water through the system. Remove obstructions and debris, replace damaged components, and retest system until satisfactory. Submit certification signed by Contractor and drainage system Installer that installed materials conform to specified requirements and system was successfully checked and tested prior to covering with gravel aggregate.

### 3.6 SUB-GRADE VERIFICATION

- A. Upon installation of the sub-drainage system, the Contractor shall submit to the Landscape Architect for review, the sub-grade conformance survey, performed by a licensed surveyor, before any placement of the drainage stone, on a 25-foot grid over the sub-grade of the entire playing field.
  - 1. Tolerance for Sub-Grade: Sub-grade shall be verified using laser-operation survey instruments. Finish Grade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the sub-grade shall be measured so that no point within the 25-foot grid deviating more than 1/4 of an inch from any other point within the 25-foot grid.
- B. After review, the conformance survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to base drainage stone installation.

### 3.7 INSTALLATION OF SYNTHETIC TURF PERIMETER EDGE

- A. Install synthetic turf perimeter edge attachment system in accordance with manufacturer's instructions. The Contractor may use recycled plastic lumber as synthetic turf perimeter edge.

### 3.8 GEOTEXTILE FABRIC INSTALLATION

#### A. General

- 1. Install geotextile over the entire sub-base surface without wrinkles, folds, or excessive tension. Anchor ends and long runs with materials specified for installation above the geotextile, typically Base drainage stone. Do not anchor fabric with soil.

#### B. Definitions

- 1. Course: completed installation of fabric across the width of the finished field surface.
- 2. Longitudinal Seam(s): Seams created which run in the longest parallel axis of the finished field surface, within a single installed course of fabric.
- 3. Transverse Seam(s): Seams running across the width of the finished field surface, between courses.

#### C. Installation of Geotextile Fabric

- 1. Install geotextile fabric as indicated on drawings per manufacturer's specifications and recommendations. Overlap lower gradient fabric seams with 24" of upper gradient fabric panels. Pin in place to prevent displacement.

### 3.9 PREPARATION OF BASE DRAINAGE STONE

- A. Prior to commencing the base drainage stone, confirm that geotextile has been approved by the Landscape Architect as satisfactorily installed.
- B. Protect the approved work as installation of Field Base is commenced and completed.
- C. Do not operate machinery directly on approved Geotextile.
- D. Place approved Base drainage stone to depths shown in the Contract Drawings and in a manner that will minimize disturbance to the Subgrade Geotextile installation. Use only approved transport methods for placement of materials. Thoroughly cover Subgrade Geotextile with sufficient Base drainage stone to evenly distribute compressive forces of placement operation.
- E. Spread initial lift of Base drainage stone to the depth specified to allow installation and mechanically compact in lifts not exceeding 4" at any one time. Perform compaction with a static roller of sufficient weight to insure proper compaction.
- F. After all lifts of Base drainage stone have been installed, this surface should be proof rolled to lock in and stabilize the drainage stone. The Landscape Architect should observe this being performed.
- G. Provide complete compaction to the lines, grades, and slopes indicated on the Contract Drawings.

- H. Coordinate approval of Base drainage stone installation with the requirements of Section 321813 Synthetic Turf System.
- I. Base drainage stone throughout the field shall be carefully smoothed and compacted. The entire playing field surface shall then be checked for irregularities and adjusted to a uniform grade per the grading plans.
- J. Upon installation of Base drainage stone, pay for and perform testing in a minimum of six locations indicating Base drainage stone is at 95% of maximum density.
- K. The Contractor shall submit to the Landscape Architect for review, the sub-base conformance survey, performed by a licensed surveyor, before any placement of the turf, on a 25-foot grid over the sub-grade of the entire playing field.
  - 1. Tolerance for Base drainage stone: Finish stone elevations shall be verified using laser-operation survey instruments. Finish Grade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the finish stone shall be measured so that no point within the 25-foot grid deviates more than 1/4 of an inch from any other point within the 25-foot grid.
  - 2. After review, the conformance survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to turf installation. Areas that deviate should be marked with spray paint and corrected by re-grading or filling low areas with crushed stone, granite chips or screenings, and rolling tight to achieve proper density.
- L. The Owner's Testing Agent shall perform six infiltration tests on the completed finishing stone to check compliance with these specifications. If the material is found to be non-compliant with the Contract, the Contractor shall bear the cost of testing, removal of all non-compliant materials from the Project Site, and replacement of the materials with materials meeting the requirements of the Contract.

### 3.10 REMOVAL OF EXCESS AND WASTE MATERIALS

- A. Remove waste materials, including materials not allowed for fill, backfill or site grading, and dispose of it in approved manner off Owner's property. Remove from the site all excess excavated material from the installation of the drainage pipe and other improvements inside of the playing field.

### 3.11 EXAMINATION OF THE BASE BY THE SYNTHETIC TURF INSTALLATION SUPERVISOR/MANUFACTURER

- A. The Turf Installation Supervisor shall verify that all sub-base, drainage and leveling is complete prior to installation and that the sub-base meets all tolerance-to-grade requirements.
- B. The surface to receive the synthetic turf shall be inspected by the Installer, and prior to the beginning of installation, the Installer must accept in writing the sub-base surface planarity.

The surface must be perfectly clean as installation commences and shall be maintained in that condition throughout the process.

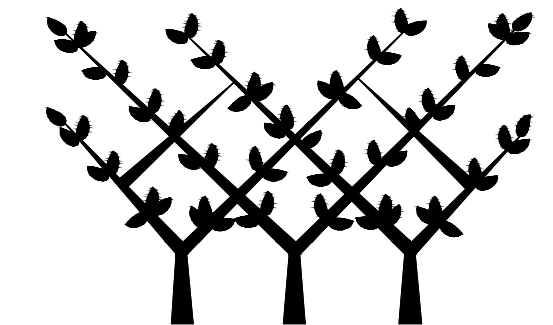
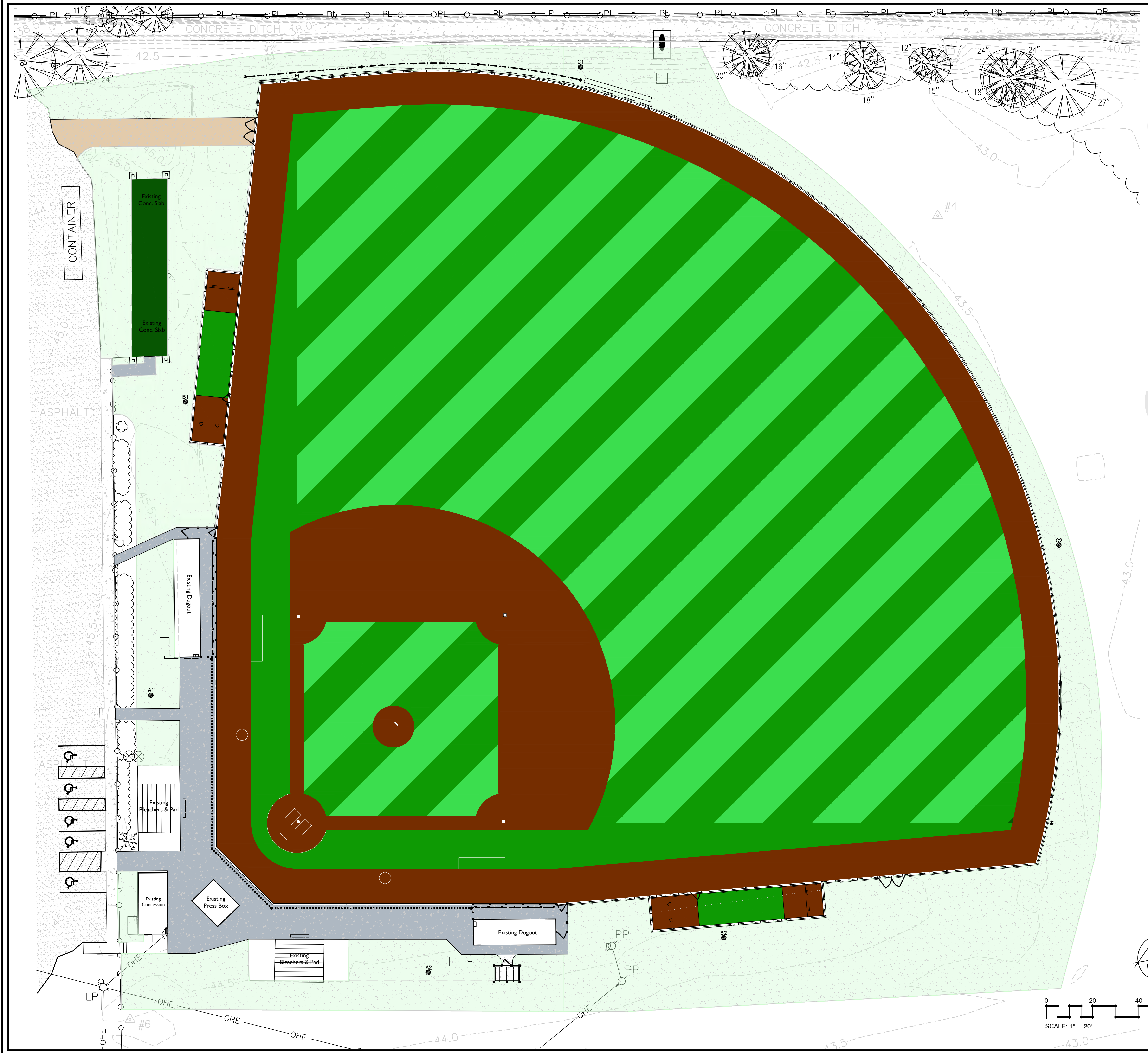
- C. Confirm the compaction of the aggregate base.
- D. Confirm by on-site inspection and testing that the sub-base is acceptably permeable.

### **3.12 CERTIFICATION**

- A. A written "Certification of Acceptance of the Base Construction" is required from the Manufacturer prior to installation of the synthetic surfacing material. This certification shall include but not limited to the acceptance of:
  - 1. The subgrade and aggregate base construction is completely acceptable and warrantable for the application of work specified in this section.
  - 2. The materials and method of installation of the base materials is in conformance with manufacturer's current requirements for subsurface base construction and synthetic turf application.
  - 3. The base construction is totally suitable for the work to proceed with the assurance that the final installation of the work under this section and other related sections will result in a high-quality athletic surface fully warranted for the period and use specified herein.
  - 4. All discrepancies between the required materials, application and tolerance requirements noted by the installer shall be brought to the attention of the Owner and Owner's Representative. Failure to immediately notify the Owner and Owner's Representative of any prior work that does not meet the required specifications for installation of the athletic turf surfacing system shall be considered as acceptance by the installer on the non-conforming work.
  - 5. The system and its component materials and the necessary methods of construction are in compliance with all governing jurisdictions for construction of this project.

END OF SECTION 334600





**ESPALIER**  
landscape architecture

Espalier, LLC  
P.O. Box 1247  
Fairhope, Alabama 36533  
P: 251.454.3500  
espalierdesign.com

DRAFT - FOR REVIEW ONLY  
NOT FOR CONSTRUCTION

# MATTHEWS PARK

3700 Michael Blvd. - Mobile, AL 36606  
**SYNTHETIC TURF FIELD A**  
PROJECT# PR-022-21

Prepared for:  
The City of Mobile Alabama  
Architectural Engineering Department  
P.O. Box 1827 - Mobile, AL 36633-1827

Landscape Architect:  
Espalier Landscape Architecture  
P.O. Box 1247 - Fairhope, AL 36533  
251-454-3500

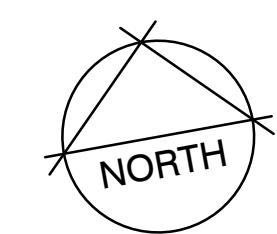
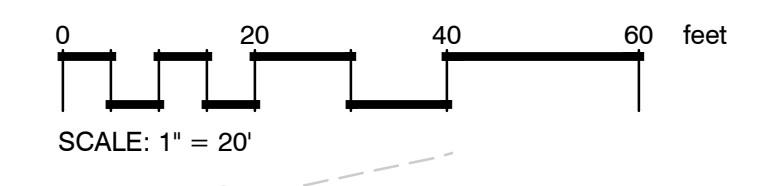
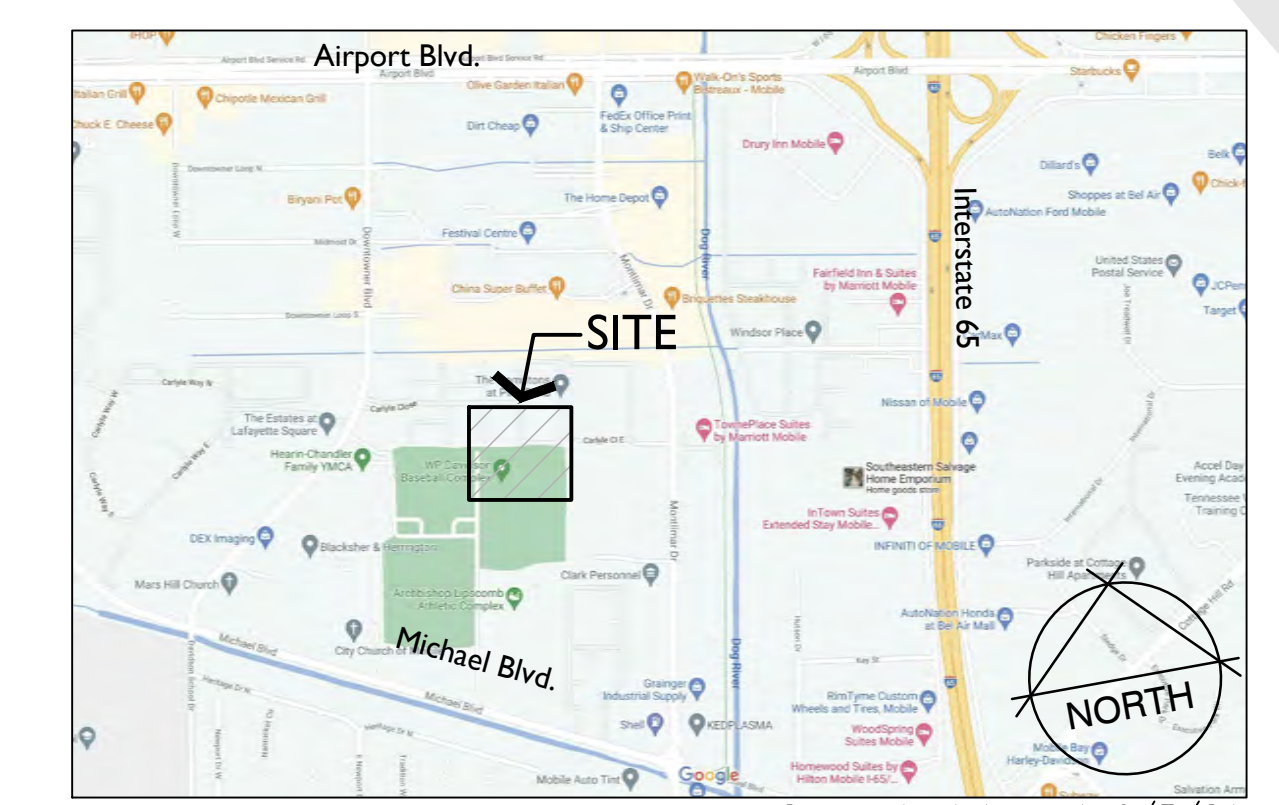
Civil Engineer:  
S.E. Civil Engineering  
9969 Windmill Road  
Fairhope, AL 36532  
251-990-6566

Structural Engineer:  
Barter & Associates, Inc.  
1614 Government St.  
Mobile, AL 36604-1102  
251-473-8354

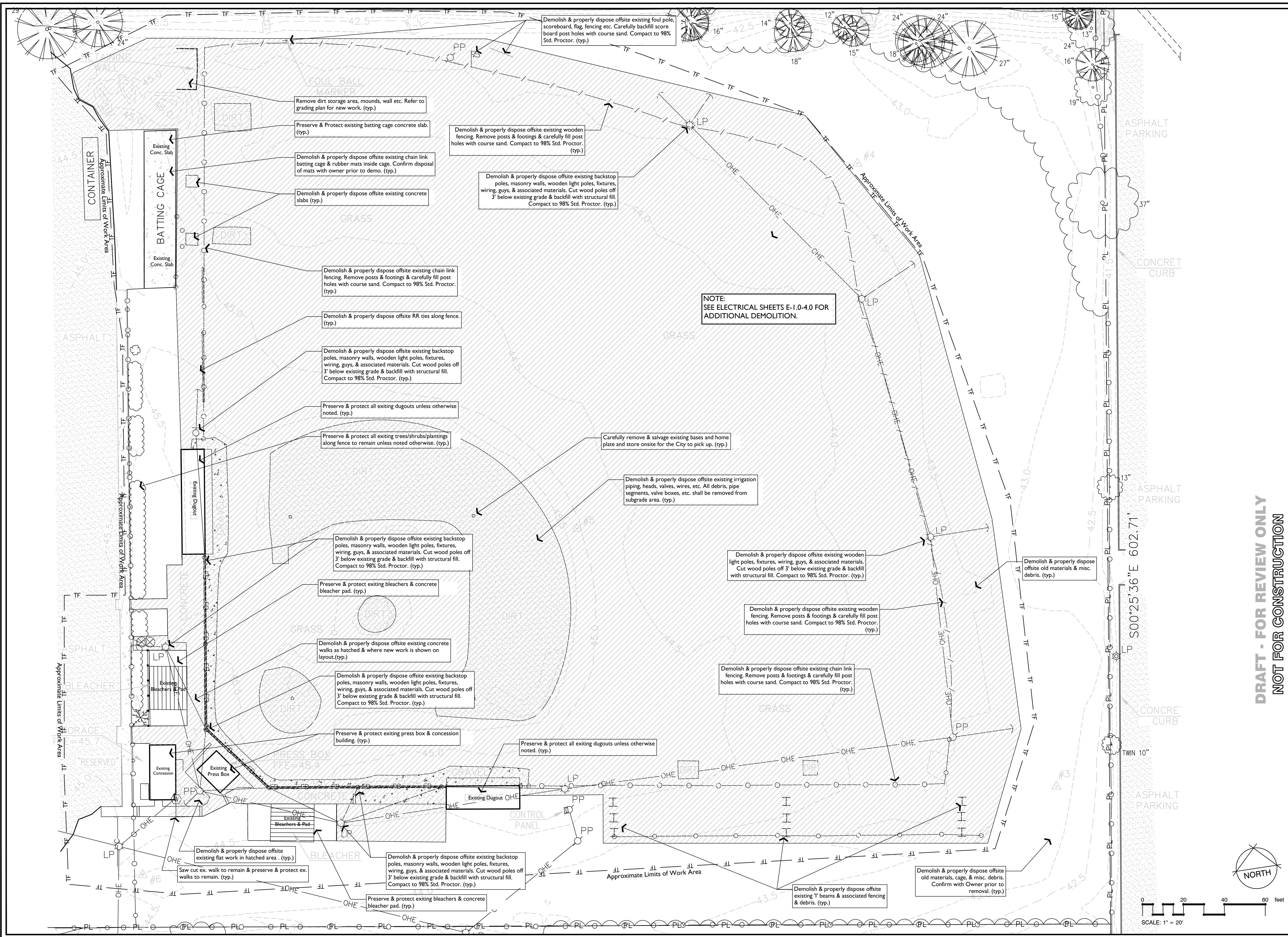
Electrical Engineer:  
Isaiah Engineering, Inc.  
413-C Azalea Road  
Mobile, AL 36609  
251-344-2022

**SHEET INDEX**

SHEET	DESCRIPTION
I.0	Cover Sheet
I.1	Existing Conditions & Demolition Plan
I.2	Survey
CO1	Grading & Drainage Plan
CO2	Erosion & Sediment Control Plan
CO3	Civil Details
CO4	Civil Details
CO5	Civil Details
E-1.0	Electrical Notes & Legend
E-2.0	Electrical Demolition Plan
E-3.0	Electrical Site Plan
E-4.0	Electrical Details
L-1.1	Field Site Plan
L-1.2	Infield Enlargement
L-2.1	Field Subdrainage Plan
L-3.1	Painting Plan
L-4.1	Landscape Plan
L-5.1	Field Details
L-5.2	Field Details
L-5.3	Field Details
L-5.4	Field Details
S-1.0	Structural Details



Conceptual Layout 6/3/21  
30% Review 2/3/22  
60% Review 4/1/22  
90% Review 5/2/22  
Bid/Permit 5/18/22



NOTE:  
SEE ELECTRICAL SHEETS E-1.0-4.0 FOR  
ADDITIONAL DEMOLITION.

**DRAFT - FOR REVIEW ONLY**  
**NOT FOR CONSTRUCTION**

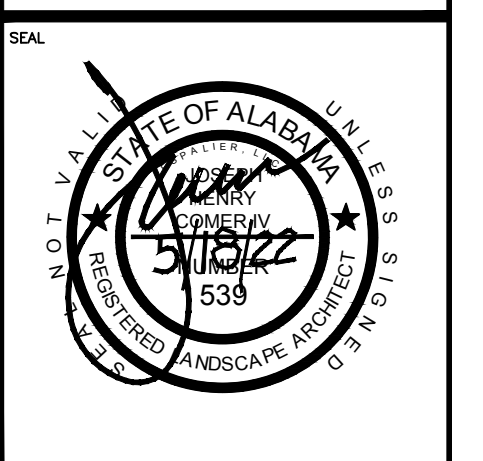


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# MATTHEWS PARK

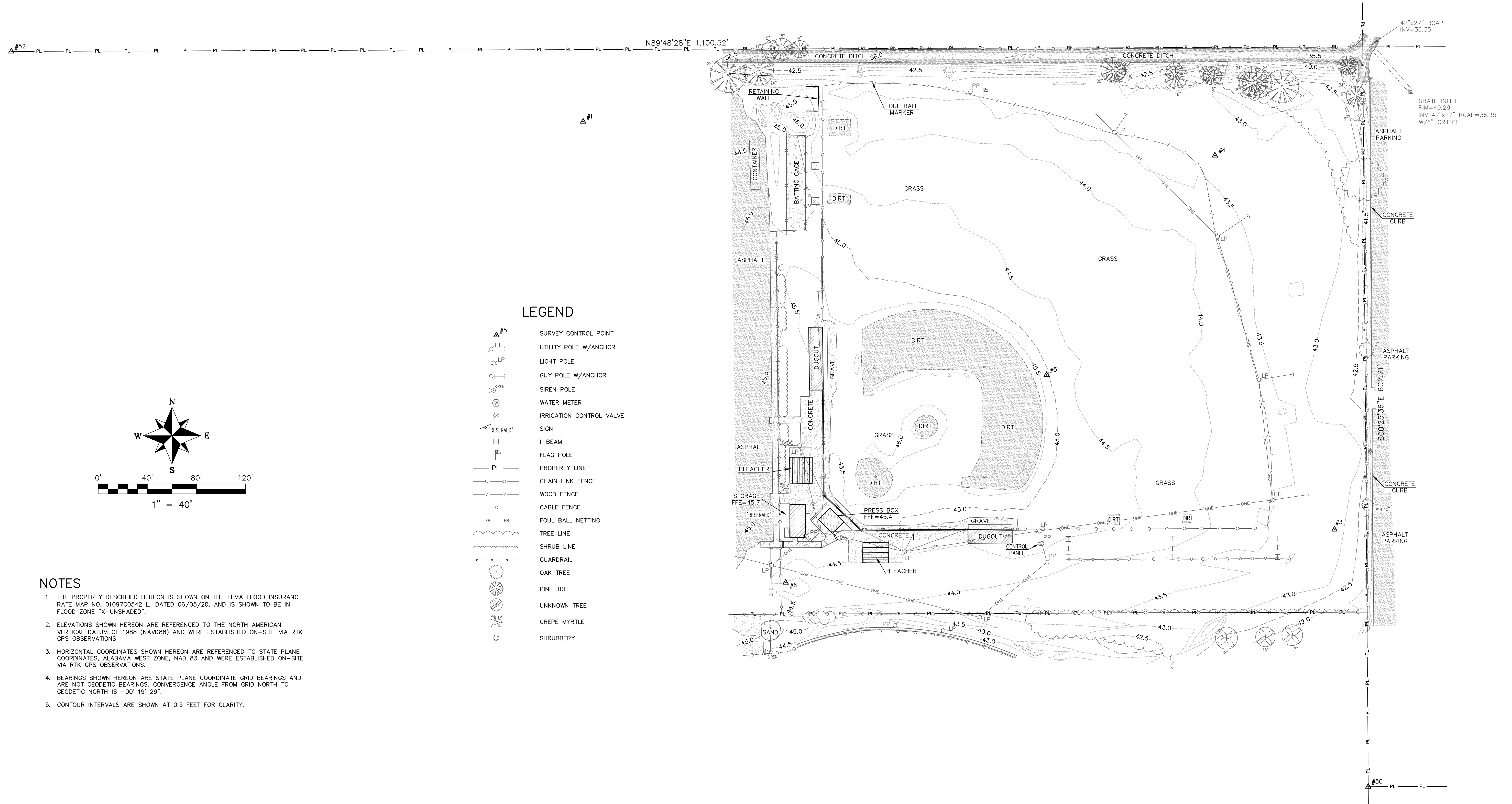
PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED
30% Review
60% Review 4/1/22
90% Review 5/2/22
Bid/Permit 5/18/22

## DEMOLITION PLAN

DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2201	I.1
DATE 1/26/22	



**LEGEND**

- SURVEY CONTROL POINT
- UTILITY POLE W/ANCHOR
- LIGHT POLE
- GUY POLE W/ANCHOR
- SIREN POLE
- WATER METER
- IRRIGATION CONTROL VALVE
- SIGN
- I-BEAM
- FLAG POLE
- PROPERTY LINE
- CHAIN LINK FENCE
- WOOD FENCE
- CABLE FENCE
- FOUL BALL NETTING
- TREE LINE
- SHRUB LINE
- GUARDRAIL
- OAK TREE
- PINE TREE
- UNKNOWN TREE
- CREPE MYRTLE
- SHRUBBERY

**NOTES**

1. THE PROPERTY DESCRIBED HEREON IS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP NO. 01097C0542 L, DATED 06/05/20, AND IS SHOWN TO BE IN FLOOD ZONE "X-UNSHADED".
2. ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND WERE ESTABLISHED ON-SITE VIA RTK GPS OBSERVATIONS.
3. HORIZONTAL COORDINATES SHOWN HEREON ARE REFERENCED TO STATE PLANE COORDINATES, ALABAMA WEST ZONE, NAD 83 AND WERE ESTABLISHED ON-SITE VIA RTK GPS OBSERVATIONS.
4. BEARINGS SHOWN HEREON ARE STATE PLANE COORDINATE GRID BEARINGS AND ARE NOT GEODETIC BEARINGS. CONVERGENCE ANGLE FROM GRID NORTH TO GEODETIC NORTH IS  $-00^{\circ} 19' 29''$ .
5. CONTOUR INTERVALS ARE SHOWN AT 0.5 FEET FOR CLARITY.

**CONTROL POINT DATA**

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	243,747.84	1,768,010.01	43.89	RED CAPPED REBAR SET
2	243,012.27	1,768,027.72	45.10	RED CAPPED REBAR SET
3	243,415.53	1,768,621.88	43.33	RED CAPPED REBAR SET
4	243,720.28	1,768,524.51	43.18	RED CAPPED REBAR SET
5	243,541.59	1,768,387.41	45.02	6" MAG HUB SET
6	243,372.29	1,768,174.97	44.47	RED CAPPED REBAR SET
50	243,206.02	1,768,649.39	----	1/2" REBAR FOUND
52	243,805.02	1,767,544.39	----	CRIMP TOP PIPE FOUND

**FOR INFORMATION ONLY**

PR-022-21 MATTHEWS PARK - FIELD "A"  
PARTIAL BOUNDARY & TOPOGRAPHIC SURVEY

**SURVEYOR CERTIFICATION**

I HEREBY CERTIFY THAT ALL PARTS OF THIS SURVEY AND DRAWING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR SURVEYING IN THE STATE OF ALABAMA TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

*Mark A. Wattier*  
MARK A. WATTIER, PLS  
ALABAMA REGISTRATION NO. 20364

FEBRUARY 19, 2021

**WATTIER SURVEYING, INC.**  
PROFESSIONAL LAND SURVEYORS  
4318 Downtowner Loop N., Suite H  
Mobile, Alabama 36609 251-342-2640



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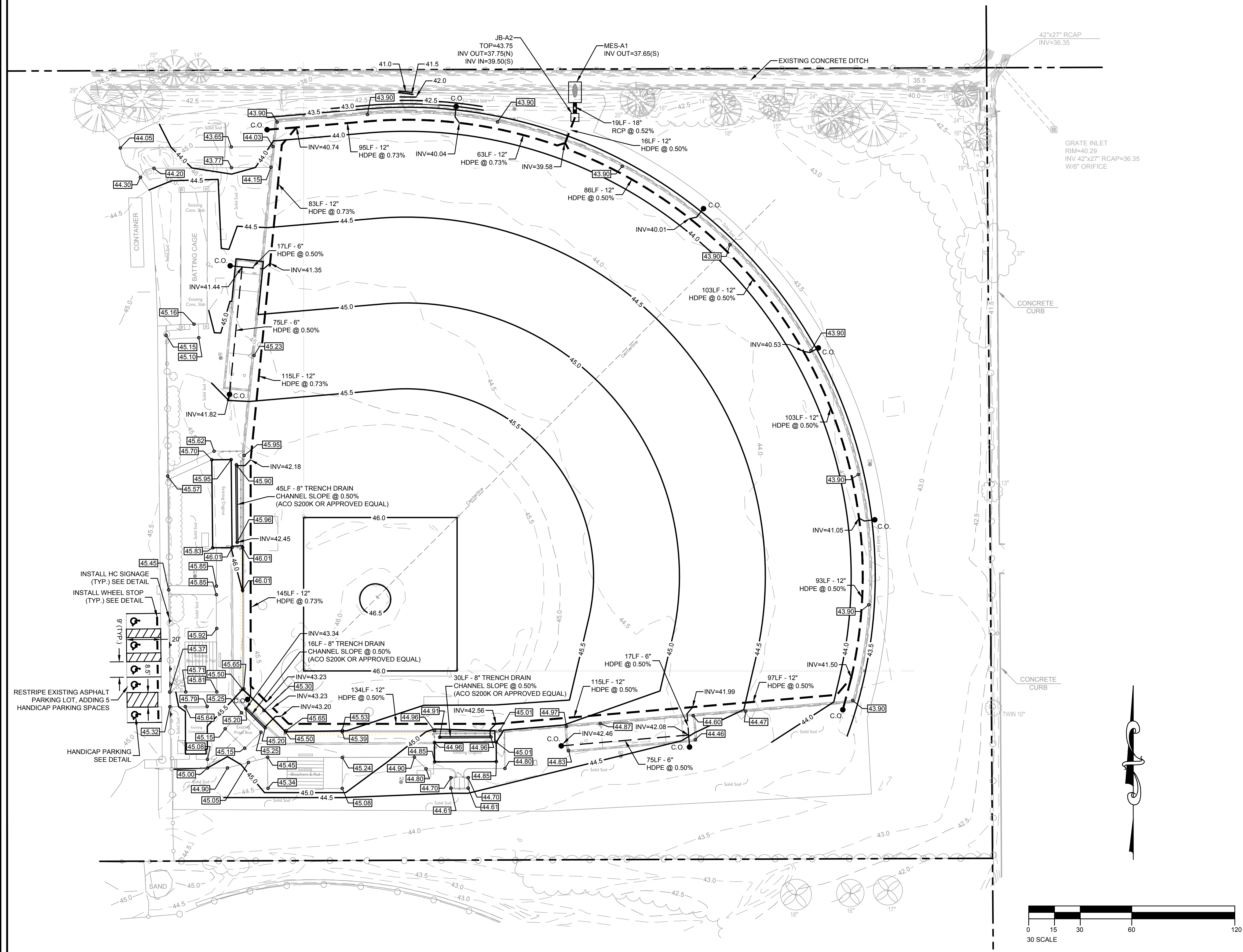


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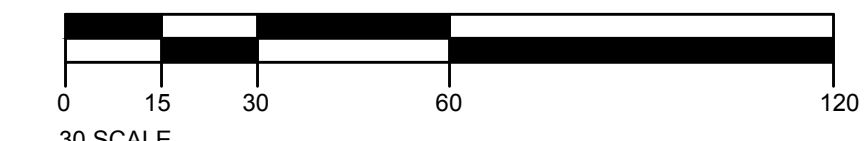
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### GRADING & DRAINAGE NOTES

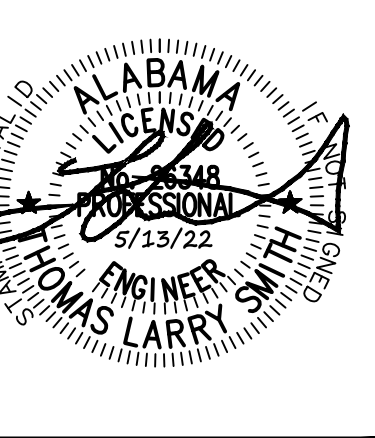
1. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED. SLOPES STEEPER THAN 3:1 SHALL BE COVERED WITH CURLEX BLANKETS BY AMERICAN EXCELSIOR COMPANY OR EQUAL.
3. ALL DISTURBED AREAS NOT OTHERWISE COVERED BY BUILDINGS OR PAVEMENT SHALL RECEIVE FOUR INCHES OF TOPSOIL AND STABILIZED PER THE LANDSCAPE PLAN.
4. ALL STRUCTURES SHALL BE PRECAST CONCRETE PER ASTM C-478/C-913 AND ALDOT STANDARDS UNLESS APPROVED OTHERWISE BY THE ENGINEER.
5. STORM PIPE SHALL BE AS FOLLOWS:  
RCP, CLASS III PER ALDOT SPECIFICATIONS.  
HDPE, ADS N12 PIPE PER SPECIFICATIONS.  
PVC, SCH. 40 PIPE PER SPECIFICATIONS.  
THE TYPE OF PIPE MAY BE ALTERED IF APPROVED BY THE ENGINEER.
6. ALL CAST IN PLACE CONCRETE TO HAVE A MIN. 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
7. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
8. THE CONTOUR INTERVAL IS EVERY 0.5 FEET OR AS SHOWN.
9. THE ELEVATION OF MANHOLE/INLET TOPS ARE TO BE AT THE FINISH ELEVATION SHOWN. THE DEFINITION OF THE TYPE OF TOP IS AS LISTED:  
WEIR INLET = THROAT; ELEVATION OF THE POINT AT WHICH WATER PASSES INTO THE BOX.  
DROP INLET = GRATE; THE TOP MOST PART OF THE FRAME AND GRATE.  
CATCH BASIN = TOP; ELEVATION OF THE POINT AT WHICH WATER PASSES INTO THE BOX.  
JUNCTION BOX = TOP; THE TOP MOST PART OF THE RIM AND COVER CASTING.
10. FIRM NO. 01097C0542L EFFECTIVE DATE JUNE 5, 2020, SHOWS THE PROPERTY TO BE SITUATED IN ZONE X UNSHADED.
11. UTILITY TRENCHES SHALL BE DE-WATERED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND THE SPECIFICATIONS. APPROVED MEASURES SHALL BE TAKEN TO ENSURE THE PROPER INSTALLATION OF THE PIPING SYSTEM. THE CONTRACTOR SHALL HOLD THE OWNER AND ENGINEER HARMLESS FOR ADDITIONAL COSTS FOR DE-WATERING AND BACKFILL LABOR & MATERIALS.
12. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER RECORD DRAWINGS OF AS-BUILT CONDITIONS FOR THE DEVELOPMENT OF THE SITE.
13. EXISTING INFORMATION IS SHOWN PER SURVEY BY WATTIER SURVEYING, INC.
14. ALL STRUCTURAL FILL AREAS TO BE CONSTRUCTED UNDER THE DIRECTION OF A SOILS ENGINEER.
15. GRADES NOT OTHERWISE INDICATED ON THE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPE SHALL BE WELL ROUNDED. ELEVATIONS REPRESENT FINAL GRADE.
16. ALL SILT BARRIERS SHALL BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL THE SILT BARRIER IS INSTALLED.
17. THE LAND DISTURBANCE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A PUBLIC ROAD OR STREET.
18. ALL O.S.H.A. CONSTRUCTION REQUIREMENTS SHALL BE STRICTLY ADHERED TO.
19. PIPE LENGTHS SHOWN ARE LINEAR DISTANCES BETWEEN CENTER TO CENTER OF STRUCTURES. THE CONTRACTOR SHALL DETERMINE THE QUANTITY OF PIPE NEEDED FOR THE JOB, BASED ON SLOPE LENGTH AND WHOLE STANDARD PIPE SECTIONS.
20. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER TRAFFIC CONTROL FOR PUBLIC SAFETY ADJACENT TO THE CONSTRUCTION SITE.
21. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES IN CONFORMITY WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
22. MAXIMUM CUT OR FILL SLOPE IS 3H:1V
23. CONTRACTOR TO CLEAN OUT ACCUMULATED SILT IN THE STORM SYSTEM AT THE END OF CONSTRUCTION WHEN DISTURBED AREAS HAVE BEEN STABILIZED.
24. ALL ELEVATIONS ARE REFERENCED TO NAVD 88 DATUM.
25. CONTRACTOR SHALL CONTACT CITY ENGINEERING DEPARTMENT VIA EMAIL AT LAND.DISTURBANCE@CITYOFMOBILE.ORG AT LEAST 24 HOURS PRIOR TO BEGINNING ANY WORK ON THE SITE. TO SCHEDULE AN INITIAL ON-SITE BMP INSPECTION WITH THE APPROPRIATE CITY ENGINEERING INSPECTOR. FAILURE TO CONTACT THE CITY ENGINEERING DEPARTMENT PRIOR TO BEGINNING ANY WORK IS A VIOLATION OF THE STORM WATER MANAGEMENT AND FLOOD CONTROL ORDINANCE AND MAY INVOKE ENFORCEMENT ACTION IN THE FORM OF A MUNICIPAL OFFENSE TICKET.
26. A VIDEO OF ALL NEW STORM DRAINAGE PIPES SHALL BE SUBMITTED TO THE CITY. THE PIPE MUST BE VIDEOED AFTER THE PROJECT'S COMPLETION, BUT PRIOR TO THE REQUEST FOR A CERTIFICATE OF OCCUPANCY. SUBMIT THE VIDEO TO THE CITY OF MOBILE WITH THE ENGINEER'S AS-BUILT CERTIFICATION PACKAGE. THE VIDEO NEEDS TO BE REVIEWED BY THE PROJECT ENGINEER BEFORE BEING SUBMITTED TO THE CITY. EACH JOINT NEEDS TO BE PANNED LEFT AND RIGHT AS WELL AS ANY DEFICIENCIES BEING WELL DOCUMENTED VIA VIDEOGRAPHY, INCLUDING A WRITTEN REPORT.



EXISTING		PROPOSED	
	STORM SEWER PIPING		UD
	JUNCTION BOX (JB)		DI
	DROP INLET (DI)		WI
	WEIR INLET (WI)		MES
	MITERED END SECTION (MES)		CONTOURS
	CONTOURS		SPOT ELEVATION
	SPOT ELEVATION		HP
	HIGH POINT		



**MATTHEWS PARK**  
 PR-022-21 -- SYNTHETIC TURF FIELD A  
 3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED

Bid/Permit 5/18/22

SHEET TITLE

**GRADING & DRAINAGE PLAN**

DESIGNED BY JTB	FILE NAME 20221095C01
DRAWN BY JTB	SHEET
CHECKED BY TJS	
PROJECT NO. 20221095	
DATE 5/13/22	

C01



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### CONSTRUCTION SEQUENCE - PHASE 1

1. REMOVE VEGETATION ONLY IN AREAS OF THE PERIMETER SEDIMENT BARRIERS, AND CONSTRUCTION EXIT.
2. INSTALL THE CONSTRUCTION EXIT PER DETAILS.
3. INSTALL PERIMETER SEDIMENT BARRIERS PER DETAILS.
4. REQUEST BMP INSPECTION PRIOR TO CLEARING.
5. ONCE INSPECTION IS COMPLETE AND APPROVED, CLEARING & SITE WORK CAN BEGIN (PHASE 2).

### CONSTRUCTION SEQUENCE - PHASE 2

1. PERFORM CLEARING & ROUGH GRADING ON THE LOT AND ESTABLISH COVER ON AREAS WHEN BROUGHT TO GRADE.
2. INSTALL STORM SYSTEM AND UTILITIES.
3. INSTALL CURBING AND STONE BASE.
4. ESTABLISH VEGETATION ON AREAS NOT IMPACTED BY PAVING OPERATIONS.

### CONSTRUCTION SEQUENCE - PHASE 3

1. INSTALL FINAL LANDSCAPING.
2. CALL FOR AN INSPECTION FROM THE QCP.
3. ONCE THE QCP HAS CERTIFIED THAT ALL AREAS ARE STABILIZED, REMOVE BMPS.
4. STABILIZE ANY AREAS DISTURBED BY BMP AND TREE PROTECTION REMOVAL.

### EROSION CONTROL PRACTICES

CODE	PRACTICE
CEP	CONSTRUCTION EXIT PAD
SB	SEDIMENT BARRIER
FIP	FABRIC DROP INLET PROTECTION
MU	MULCHING
TS	TEMPORARY SEEDING
PS	PERMANENT SEEDING

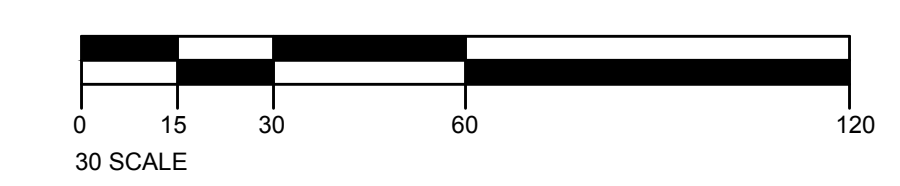
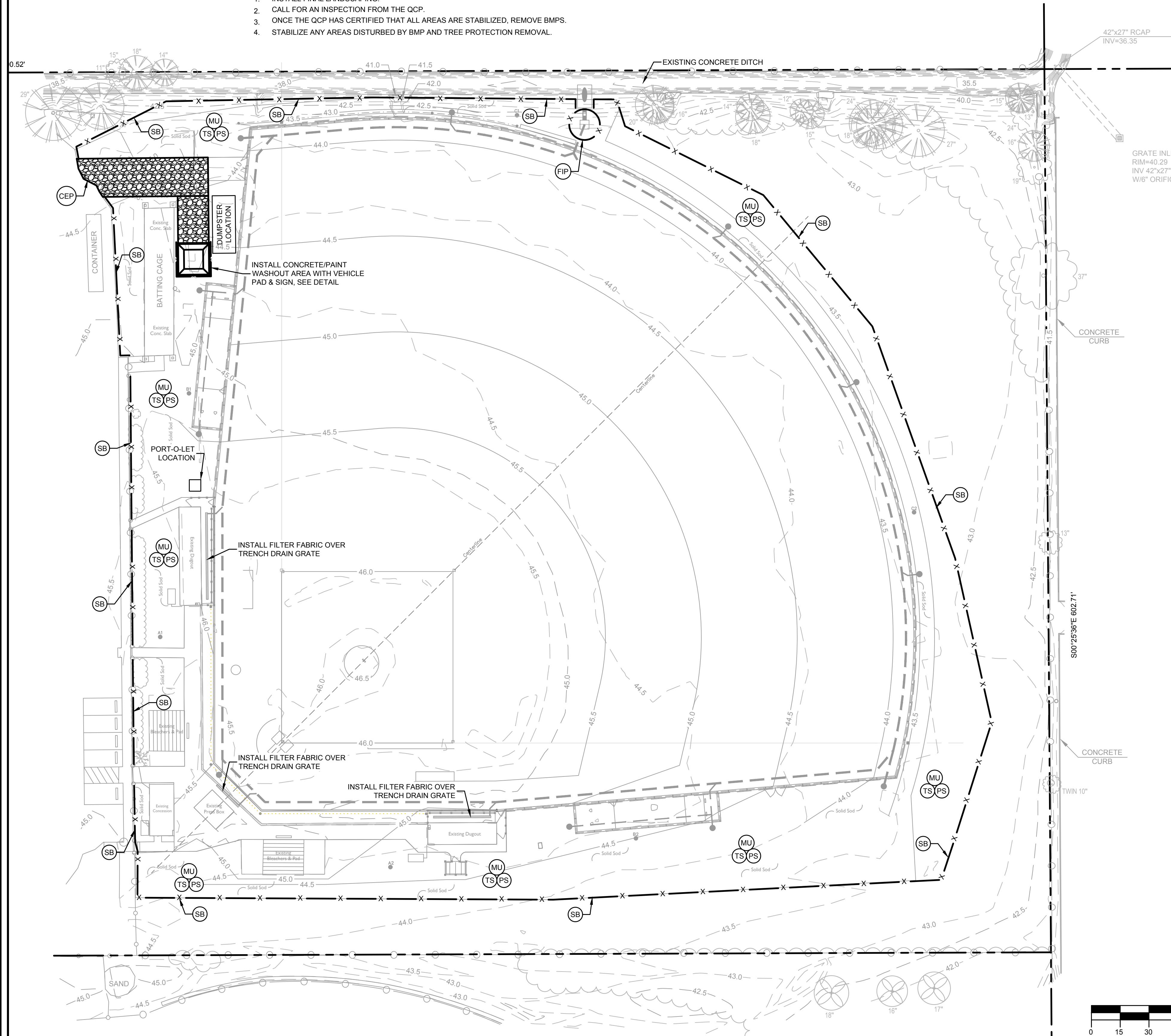


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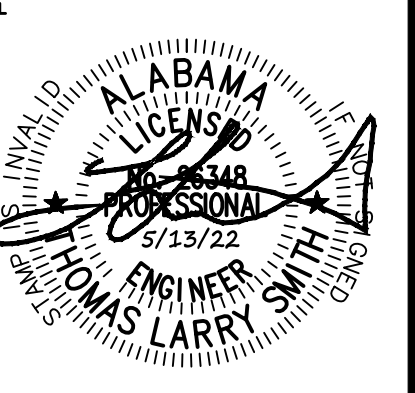
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### EROSION CONTROL NOTES

1. THE EXISTING SITE IS DEVELOPED.
2. CONTACT DAVID KING, PE 251-990-6566.
3. AREA TO BE DISTURBED = 3.67 ACRES
4. ALL VEGETATION SHALL BE PLANTED AND MAINTAINED PER THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL, AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (ALABAMA HANDBOOK).
5. ALL EROSION CONTROL MEASURES SHALL BE PER THE DIRECTION OF THE ENGINEER, SOIL AND WATER CONSERVATION COMMITTEE OFFICER, AND THE FEDERAL E.P.A. GUIDELINES FOR THE NPDES PROGRAM.
6. ABSOLUTELY NO SEDIMENT SHALL BE PERMITTED TO LEAVE THE SITE DURING CONSTRUCTION. IF HEAVY RAINS OR UNUSUAL SITE CONDITIONS RESULT IN THE POLLUTION OF ROADWAYS OR ADJACENT PARCELS THEN THE GRADING CONTRACTOR SHALL CLEAN THE DISTURBED AREAS IMMEDIATELY AND RESTORE THE AREAS TO THE ORIGINAL CONDITION WITHIN 24 HOURS.
7. ALL DISTURBED AREAS SHALL BE TEMPORARILY AND PERMANENTLY SEEDDED WITH "SOUTH" TYPE SEEDINGS PER THE ALABAMA HANDBOOK.
8. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE GOVERNING OFFICIALS. IT IS THE RESPONSIBILITY OF THE GRADING CONTRACTOR TO BE INTIMATE WITH THE LOCAL EROSION CONTROL LAWS AND TO REFLECT THIS KNOWLEDGE IN HIS/HER ACTIONS AND QUOTATIONS.
9. REFERENCE THE CONSTRUCTION SEQUENCE FOR THE RELATIONSHIP BETWEEN THE INSTALLATION OF EROSION CONTROL FEATURES AND GENERAL CONSTRUCTION.
10. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
11. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE GOVERNING OFFICIAL OR ENGINEER OF RECORD.
12. ALL SILT BARRIERS SHALL BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL THE SEDIMENT BARRIERS HAVE BEEN CONSTRUCTED.
13. CONTRACTOR SHALL REMOVE EROSION CONTROL DEVICES AFTER PERMANENT GRASSING IS IN PLACE AND ESTABLISHED.
14. THE CONSTRUCTION EXIT PAD SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
15. DISTURBED AREAS LEFT IDLE FOR TEN DAYS OR LONGER ARE TO BE SEEDDED AND MULCHED.
16. SEDIMENT / EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED 1/2 OF THE CAPACITY OF THE DEVICE.
17. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE OWNER'S CONTRACTOR.
18. THE CONTRACTOR SHALL PREVENT THE LOSS OF SEDIMENT DUE TO WIND VIA WATERING DRY SOILS. CAUTION SHOULD BE TAKEN TO ENSURE THAT THE SITE IS NOT OVER WATERED.
19. THE SITE IS TO BE CLEARED AND GRADED AS TO MINIMIZE THE AMOUNT OF SOIL EXPOSED AT ONE TIME.
20. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
21. CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND SEDIMENT CAUSED BY CONSTRUCTION.
22. BMP'S SHALL BE INSTALLED AS PER THE ALABAMA HANDBOOK STANDARDS.
23. BMP'S SHALL BE INSTALLED WITH MINIMAL CLEARING ACTIVITY.
24. REFER TO THE LANDSCAPE PLANS FOR FINAL STABILIZATION MEASURES.
25. ALL CUT AND FILL SLOPES MUST BE SURFACE ROUGHENED AND VEGETATED WITHIN 7 DAYS OF THEIR CONSTRUCTION.
26. ALL FILL SLOPES HAVE SILT FENCE AT THE TOE OF SLOPES.
27. ALL SLOPES STEEPER THAN 3H:1V MUST BE MATTED AND STAKED WITH AMERICAN EXCELSIOR JUTE MAT.
28. THE CONTRACTOR SHALL SIZE, INSTALL, AND MAINTAIN ADEQUATE CONTROLS FOR THE SITE. REFER TO THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, LATEST EDITION.
29. ANY DISTURBED AREA(S) MAY NOT REMAIN DENUDE LONGER THAN 10 DAYS.



**MATTHEWS PARK**  
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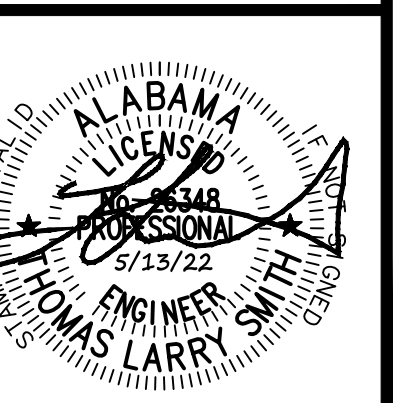
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Bid/Permit 5/18/22

### USDA SOIL SURVEY CLASSIFICATIONS

SNA - SMITHTON-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED.

EROSION & SEDIMENT CONTROL PLAN

DESIGNED BY TJS	FILE NAME 20221095C01
DRAWN BY JED	SHEET
CHECKED BY TJS	
PROJECT NO. 20221095	C02
DATE 5/13/22	



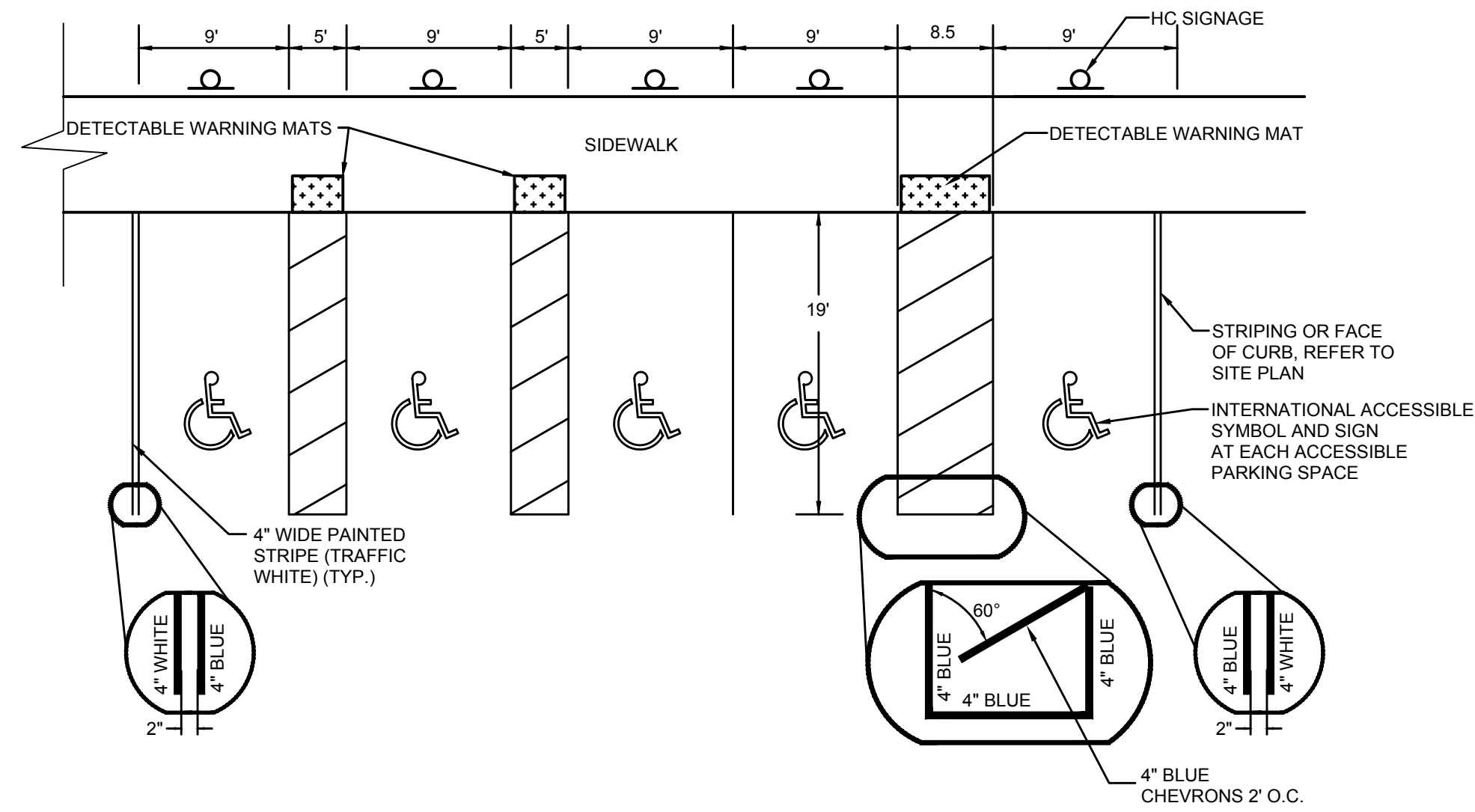
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SHEET TITLE

CIVIL DETAILS

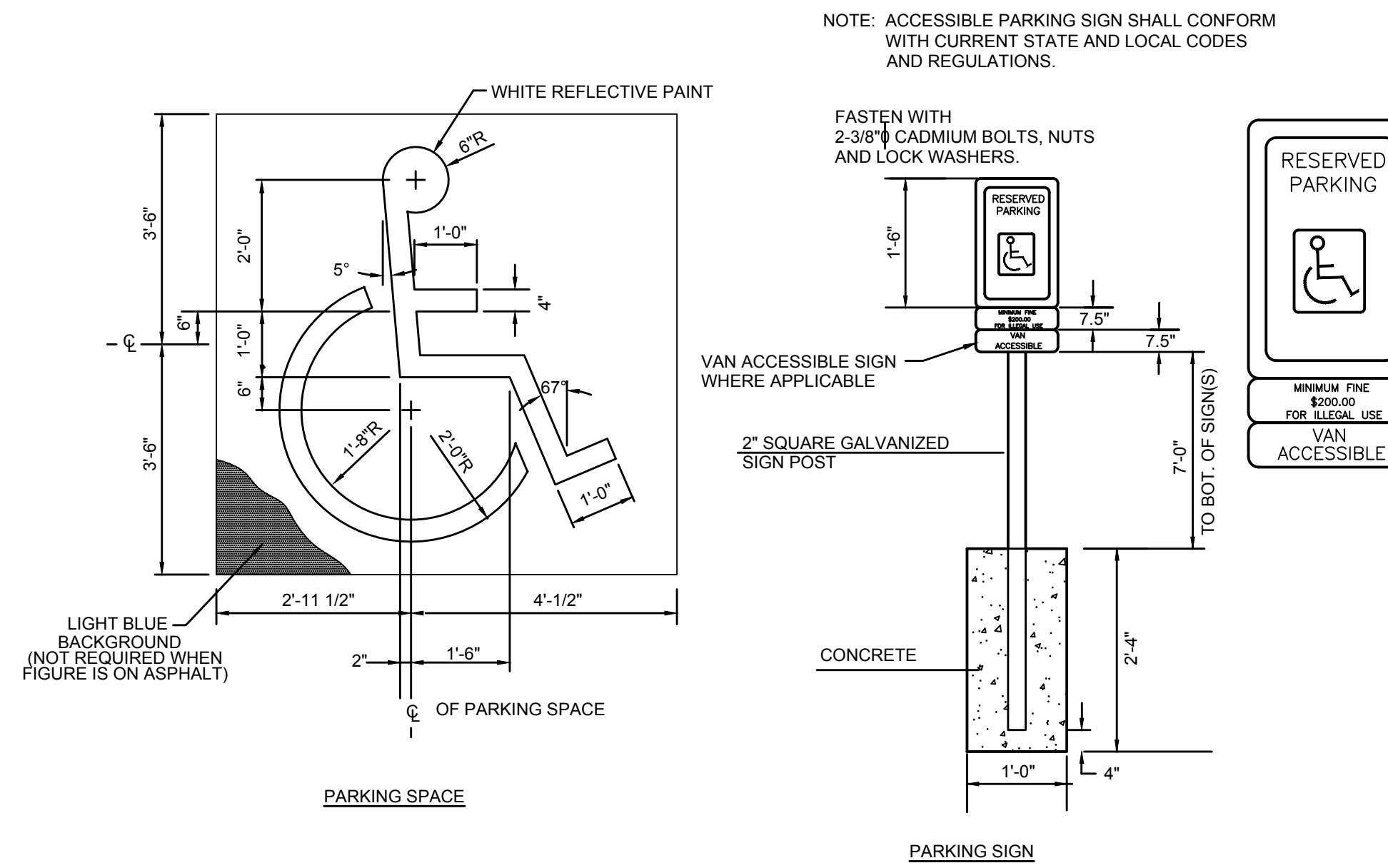
DESIGNED BY T.L.S.	FILE NAME 20221095DET
DRAWN BY J.R.D.	SHEET
CHECKED BY T.L.S.	C03
PROJECT NO. 20221095	
DATE 5/13/22	



- NOTES:
1. DIMENSIONS ARE TO THE CENTERLINE OF MARKINGS.
  2. CRITERIA FOR PAVEMENT MARKINGS ONLY, NOT PUBLIC SIDEWALK CURB RAMP LOCATIONS. FOR RAMP LOCATIONS REFER TO PLANS.
  3. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARDS 595A.
  4. DIAGONAL OR PERPENDICULAR PARKING SPACES SHALL BE A MINIMUM OF NINE (9) FEET WIDE MEASURED FROM CENTER TO CENTER OF THE BLUE DEMARCATION LINES.

**HANDICAP PARKING DETAIL**

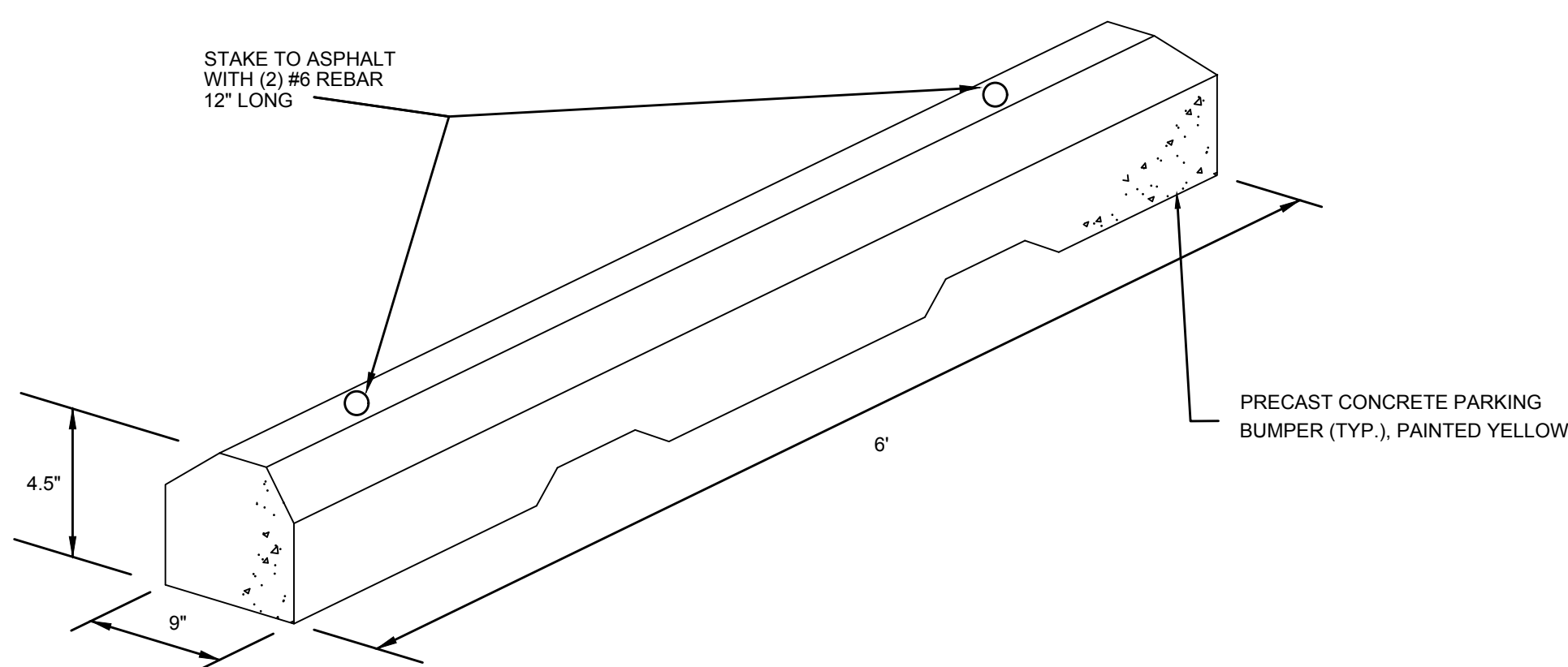
SCALE: NTS



NOTE: ACCESSIBLE PARKING SIGN SHALL CONFORM WITH CURRENT STATE AND LOCAL CODES AND REGULATIONS.

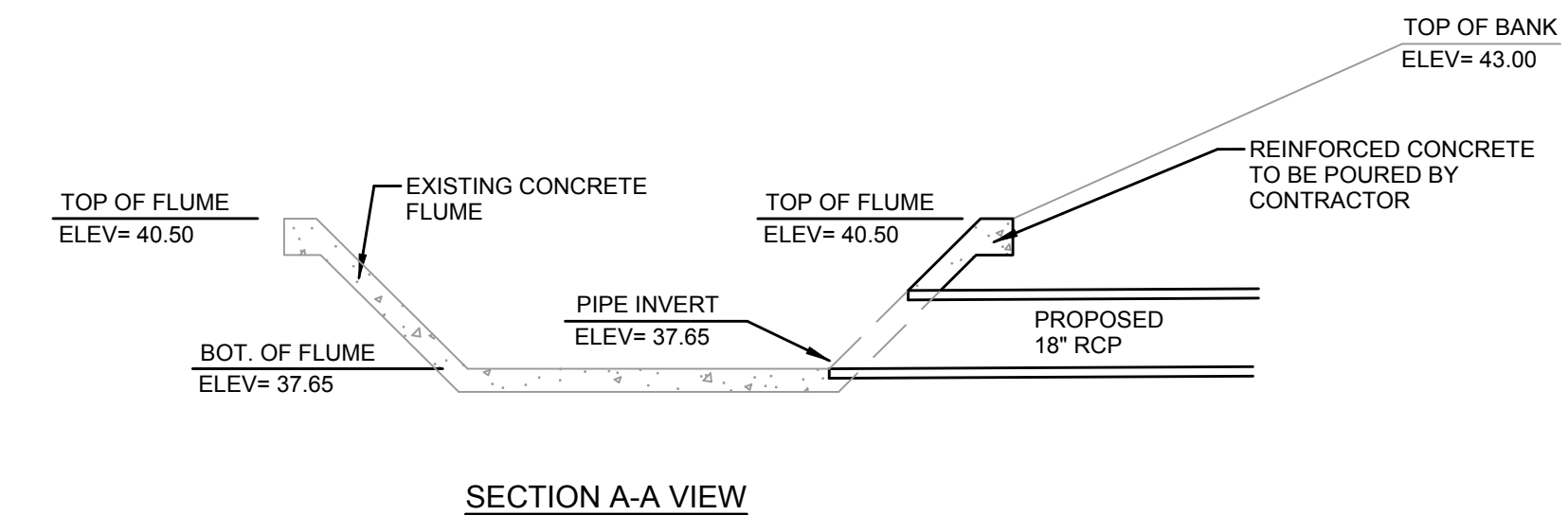
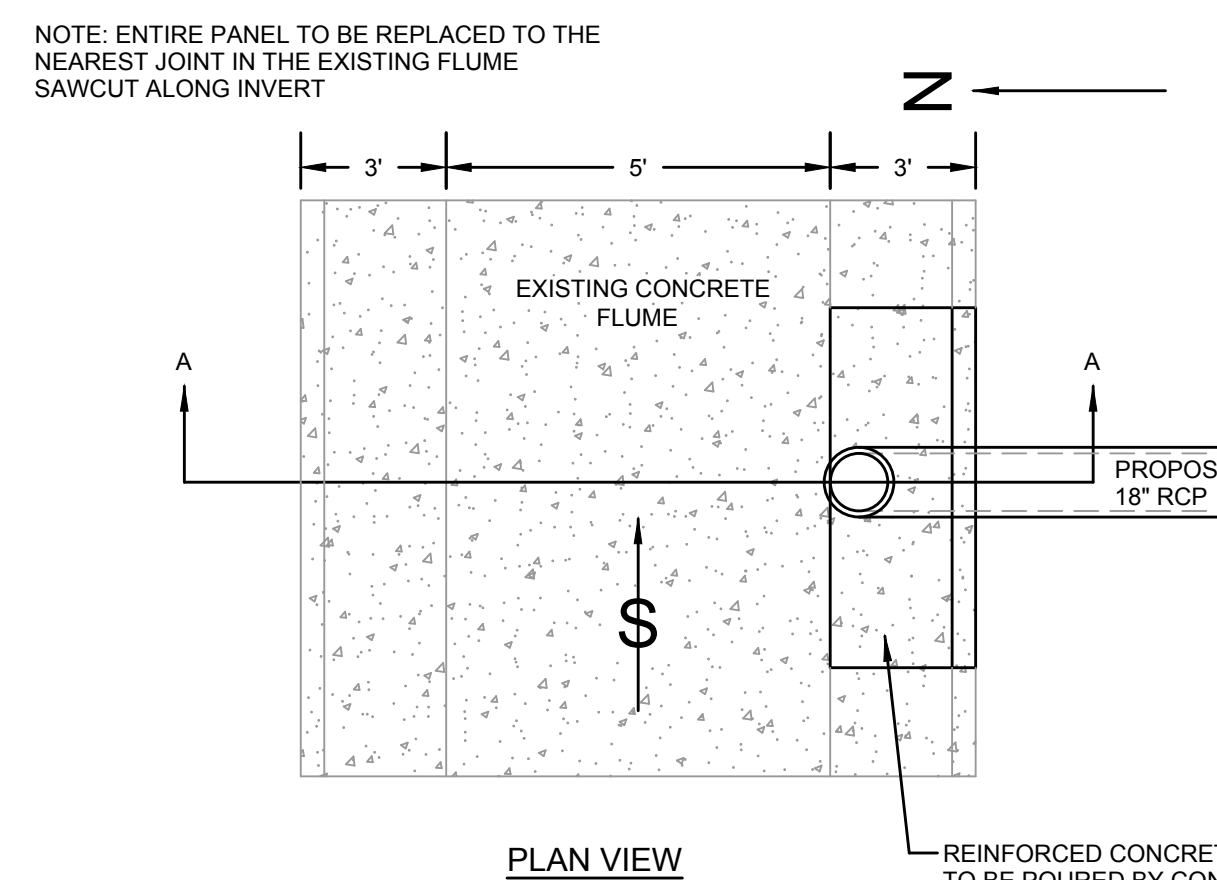
**HANDICAP SIGNAGE DETAIL**

SCALE: NTS



**WHEEL STOP DETAIL**

SCALE: NTS

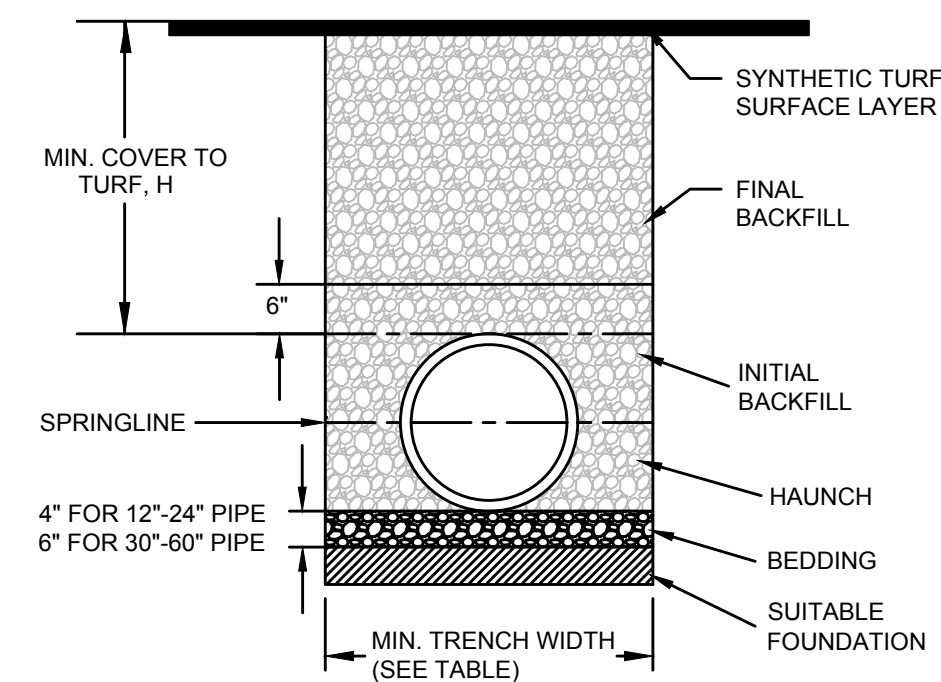


**OUTFALL (MES-A1) FLUME CONNECTION DETAIL**

SCALE: NTS



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RECOMMENDED MINIMUM TRENCH WIDTHS

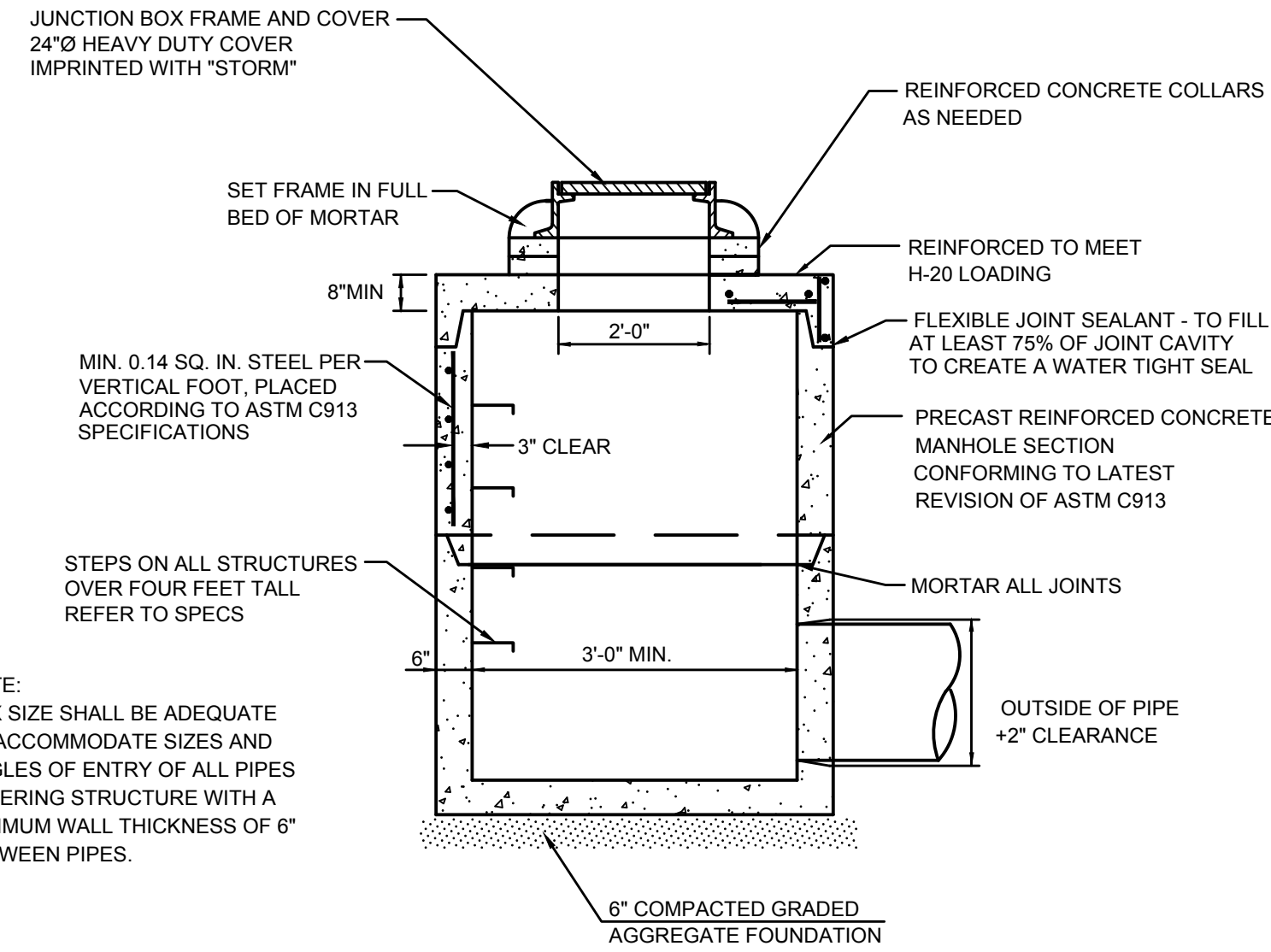
PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"

**NOTES:**

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm), 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

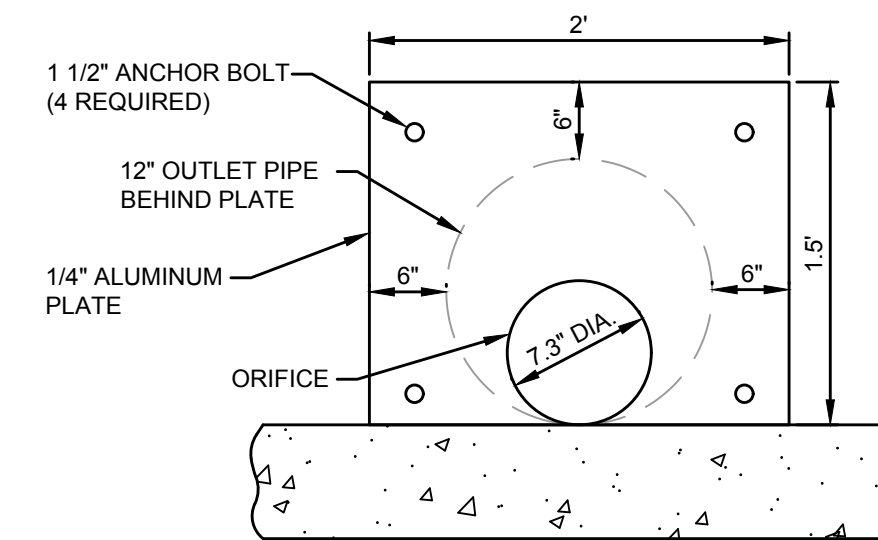
**HDPE PIPE BEDDING DETAIL**

SCALE: NTS



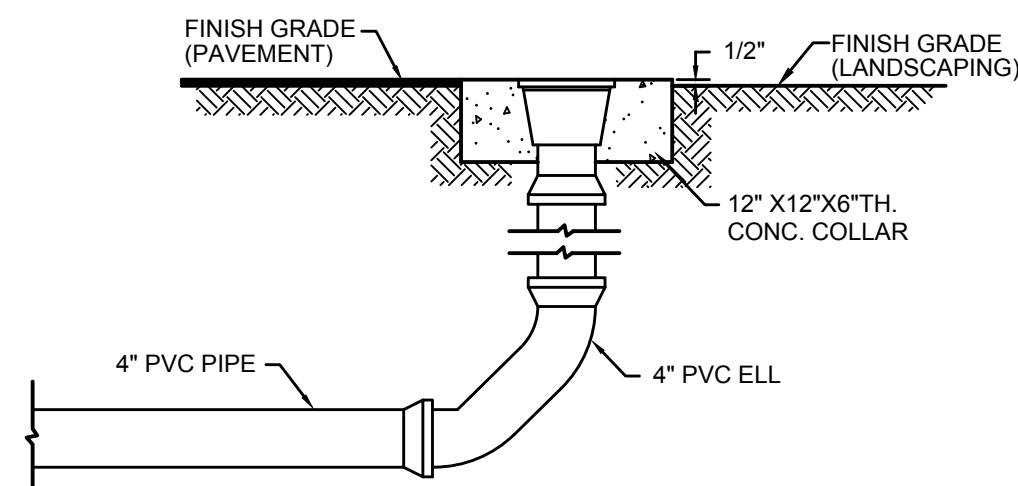
**JUNCTION BOX (JB) DETAIL**

SCALE: NTS



**ORIFICE PLATE (JB#A2)**

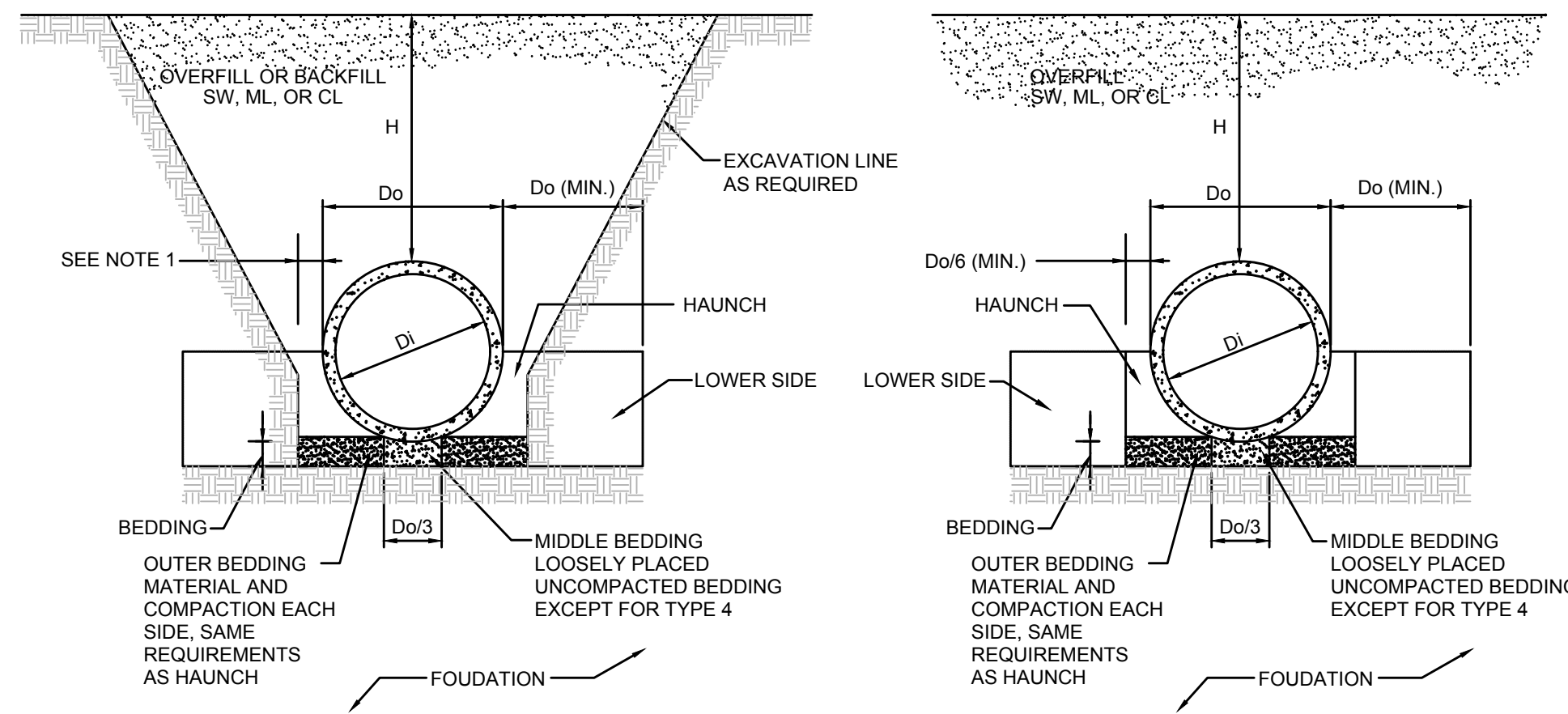
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NOTE:  
CLEANOUT TO BE 4" DURA-COATED HEAVY DUTY WITH ROUND TOP & BRONZE PLUG ZURN Z-1400-HD, WADE W-6000-2, WATTS CO-Z00-RX4, OR APPROVED EQUAL.  
"STORM" CAST INTO COVER.

**UNDERRAIN CLEANOUT**

SCALE: NTS



NOTE 1: CLEARANCE BETWEEN PIPE AND TRENCH WALL SHALL BE ADEQUATE TO ENABLE SPECIFIED COMPACTION BUT NOT LESS THAN Do/6

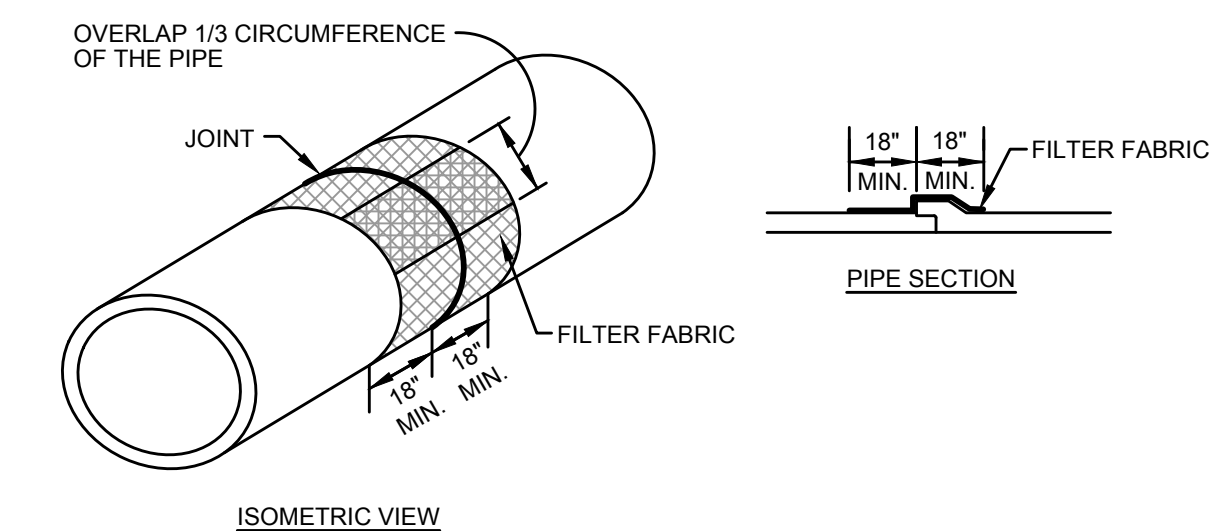
**TRENCH INSTALLATION**

**EMBANKMENT INSTALLATION**

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	EMBANKMENT INSTALLATION LOWER SIDE	TRENCH INSTALLATION LOWER SIDE
TYPE 1	Do/24 MINIMUM; NOT LESS THAN 3". IF ROCK FOUNDATION, USE Do/12 MINIMUM; NOT LESS THAN 6".	95% CATEGORY I	90% CATEGORY I, 95% CATEGORY II, OR 100% CATEGORY III	UNDISTURBED NATURAL SOIL WITH FIRMNESS EQUIVALENT TO THE FOLLOWING PLACED SOILS: 90% CATEGORY I, 95% CATEGORY II, 100% CATEGORY III, OR EMBANKMENT TO THE SAME REQUIREMENTS.
TYPE 2	Do/24 MINIMUM; NOT LESS THAN 3". IF ROCK FOUNDATION, USE Do/12 MINIMUM; NOT LESS THAN 6".	90% CATEGORY I, OR 95% CATEGORY II	85% CATEGORY I, 90% CATEGORY II, OR 95% CATEGORY III	UNDISTURBED NATURAL SOIL WITH FIRMNESS EQUIVALENT TO THE FOLLOWING PLACED SOILS: 85% CATEGORY I, 90% CATEGORY II, 95% CATEGORY III, OR EMBANKMENT TO THE SAME REQUIREMENTS.
TYPE 3	Do/24 MINIMUM; NOT LESS THAN 3". IF ROCK FOUNDATION, USE Do/12 MINIMUM; NOT LESS THAN 6".	85% CATEGORY I, 90% CATEGORY II, OR 95% CATEGORY III	85% CATEGORY I, 90% CATEGORY II, OR 95% CATEGORY III	UNDISTURBED NATURAL SOIL WITH FIRMNESS EQUIVALENT TO THE FOLLOWING PLACED SOILS: 85% CATEGORY I, 90% CATEGORY II, 95% CATEGORY III, OR EMBANKMENT TO THE SAME REQUIREMENTS.
TYPE 4	NO BEDDING REQUIRED, EXCEPT IF ROCK FOUNDATION, USE Do/12 MINIMUM, NOT LESS THAN 6".	NO COMPACTION REQUIRED EXCEPT IF CATEGORY III, USE 85% CATEGORY III	NO COMPACTION REQUIRED EXCEPT IF CATEGORY III, USE 85% CATEGORY III	NO COMPACTION REQUIRED EXCEPT IF CATEGORY III, USE 85% CATEGORY III

**RCP STORM PIPE BEDDING DETAIL**

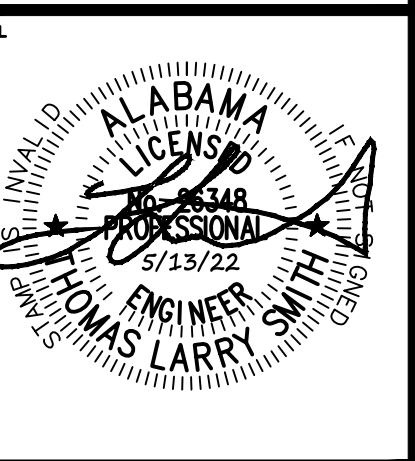
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**STORM PIPE JACKET**

SCALE: NTS

**MATTHEWS PARK**  
PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED

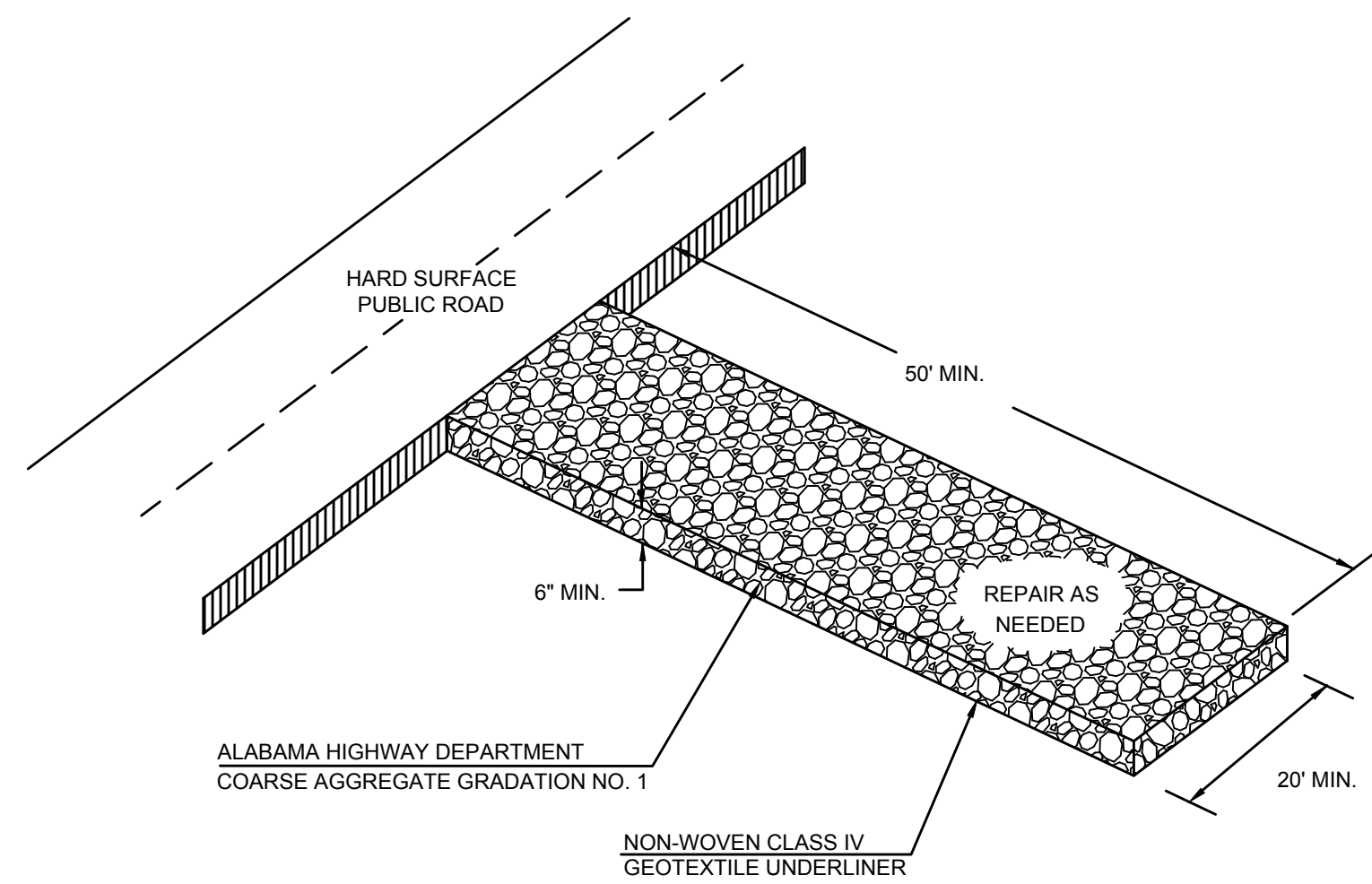
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SHEET TITLE  
**CIVIL DETAILS**

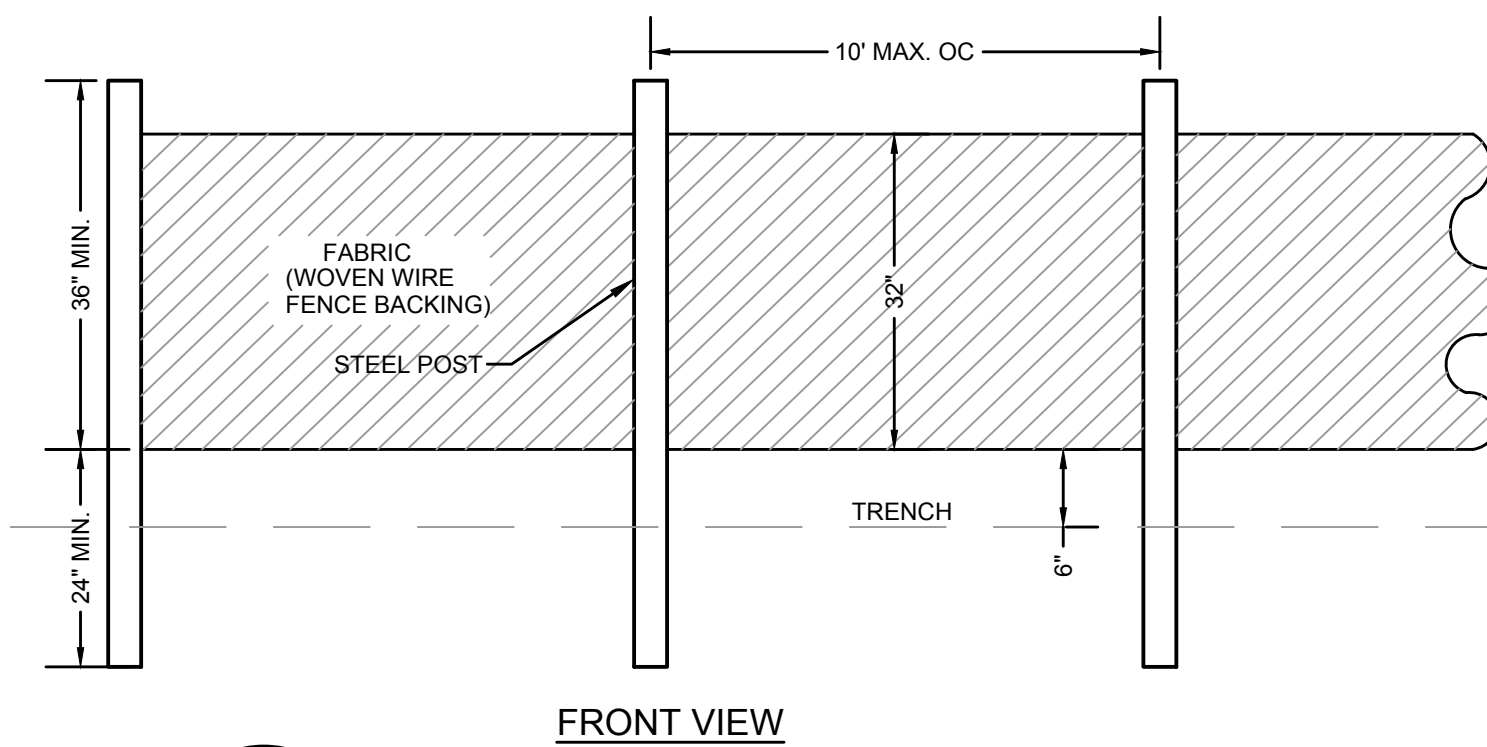
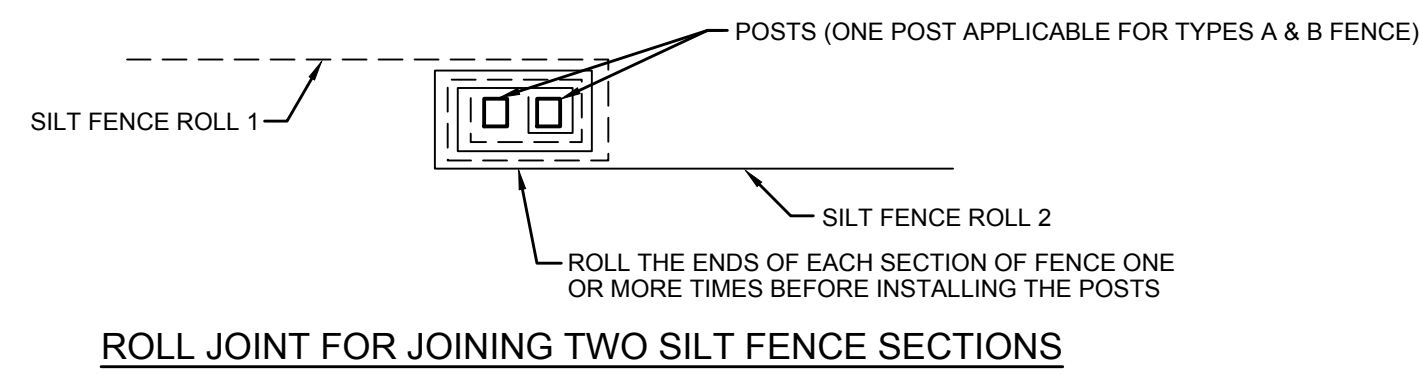
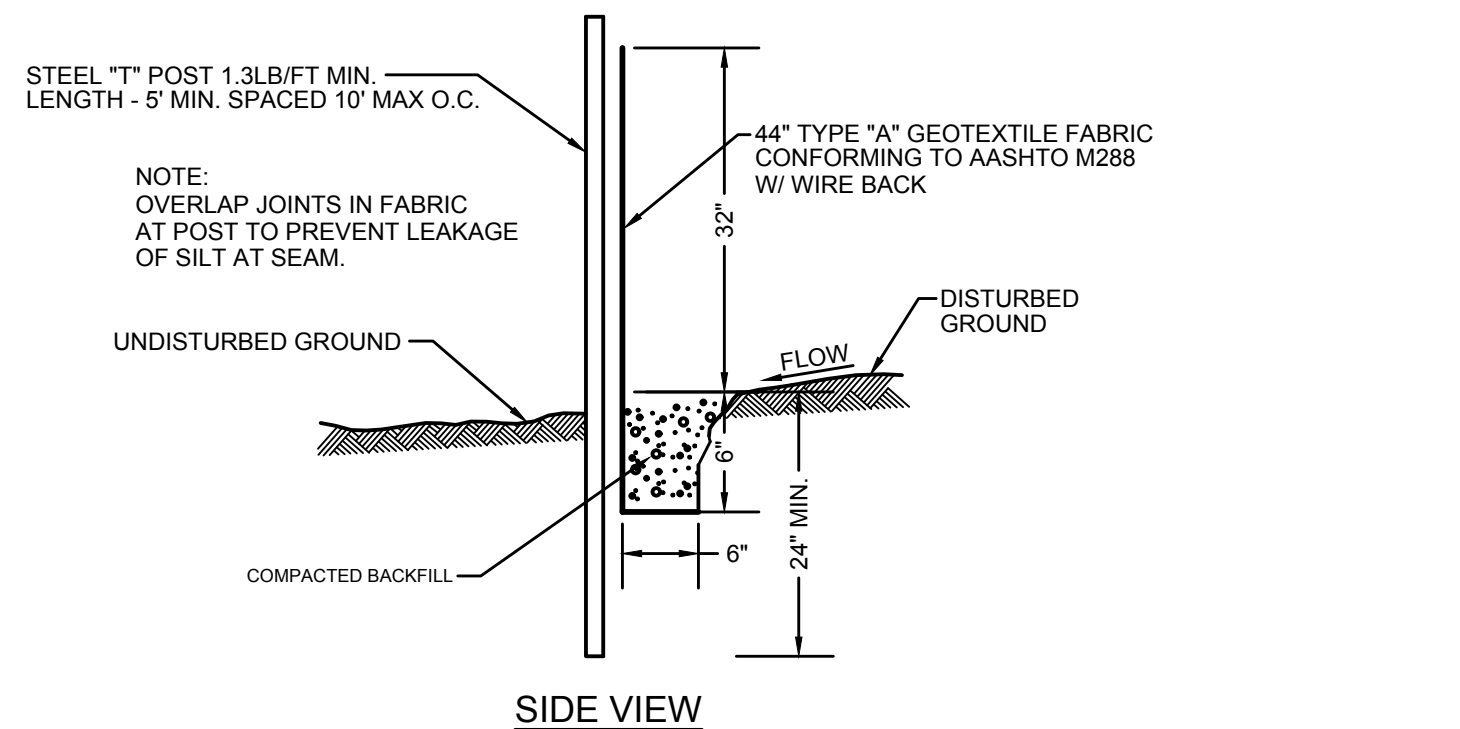
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DRAWN BY JRD	SHEET
CHECKED BY TJS	
PROJECT NO. 20221095	C04
DATE 5/13/22	



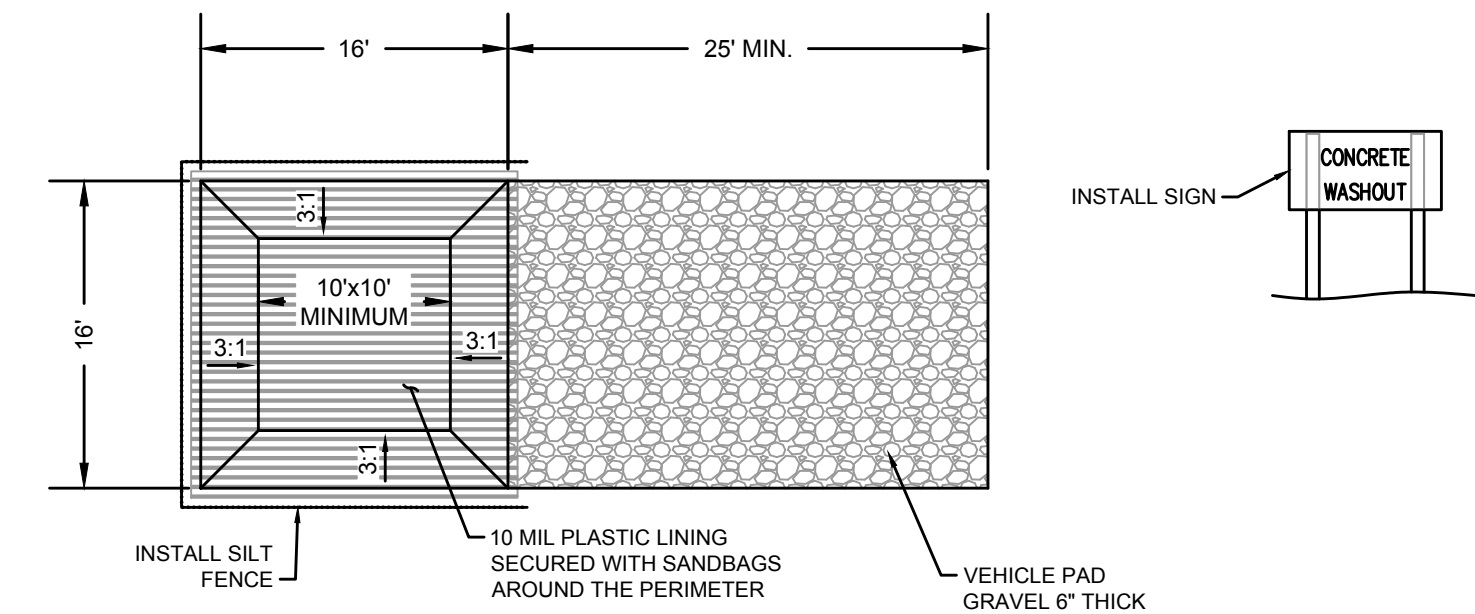
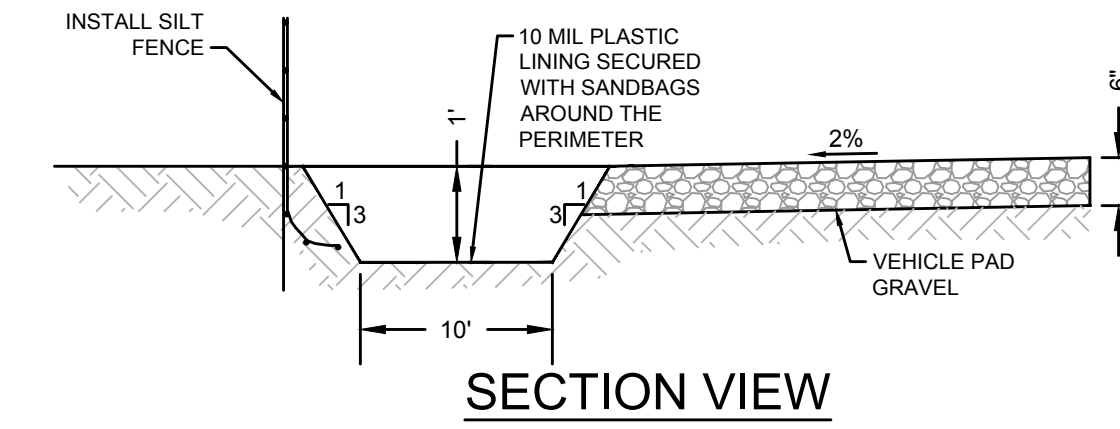
Know what's below.  
Call before you dig.



**CEP CONSTRUCTION EXIT PAD**  
SCALE: NTS

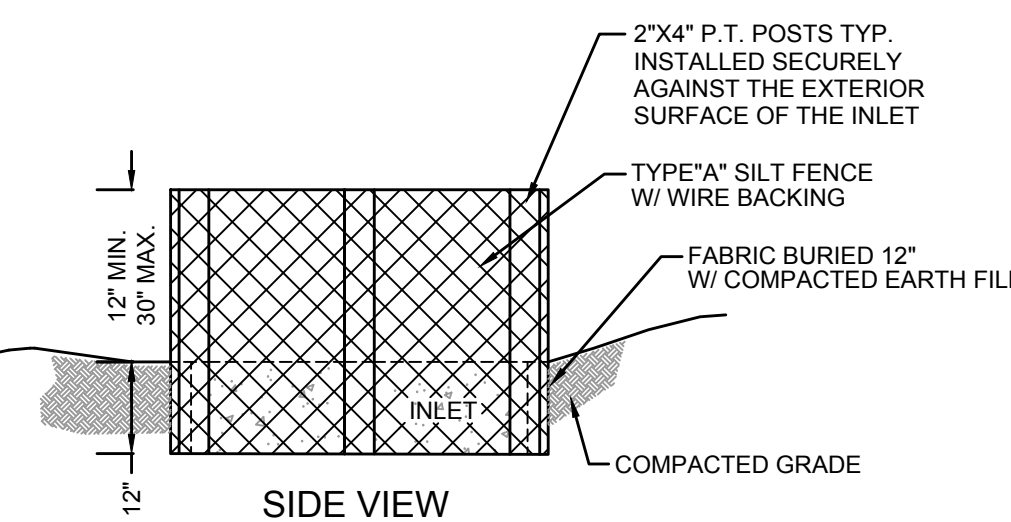
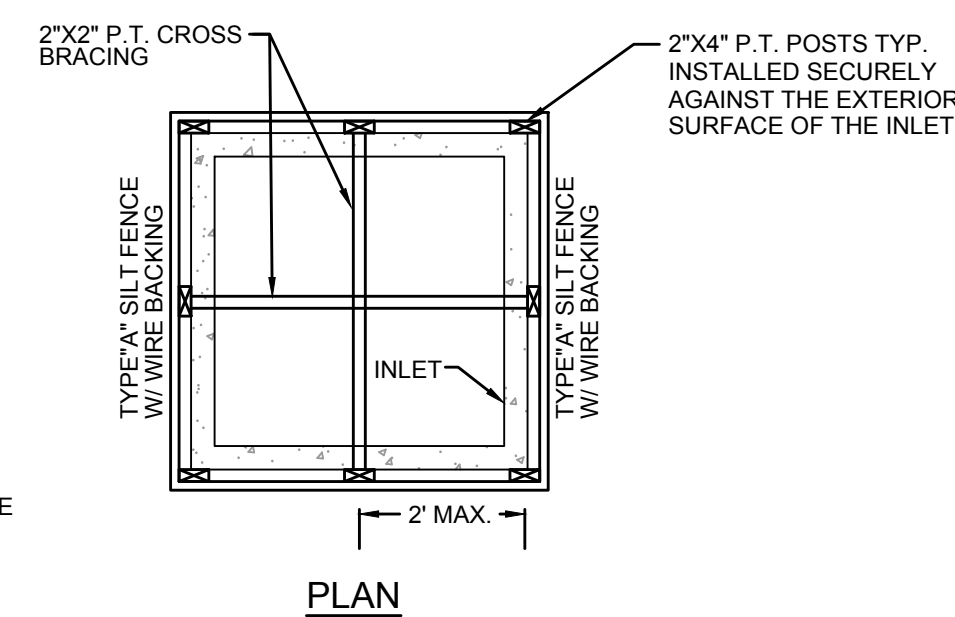


**SB SILT BARRIER TYPE "A"**  
SCALE: NTS



**CONCRETE WASHOUT DETAIL**  
SCALE: NTS

1. THE SEDIMENT BOX TO BE MADE OF 2"x4" P.T. BOARDS
2. THE MAX. POST SPACING IS 2'
3. FRAME TO BE WRAPPED WITH WIRE BACKED SILT FENCE & NAILED TO THE FRAME @ 6" O.C.



**FIP FABRIC DROP INLET PROTECTION**  
SCALE: NTS

MATERIAL	RATE PER ACRE & (PER 1000 SF)	NOTES
STRAW WITH SEED	1 1/2 - 2 TONS (70 LBS-90 LBS)	SPREAD BY HAND OR MACHINE; ANCHOR WHEN SUBJECT TO BLOWING
STRAW ALONE (NO SEED)	2 1/2 - 3 TONS (115 LBS-160 LBS)	SPREAD BY HAND OR MACHINE; ANCHOR WHEN SUBJECT TO BLOWING
WOOD CHIPS	5-6 TONS (225 LBS-270 LBS)	TREAT WITH 12 LBS NITROGEN/TON
BARK	35 CUBIC YARDS (0.8 CUBIC YARDS)	CAN APPLY WITH MULCH BLOWER
PINE STRAW	1-2 TONS (45 LBS-90 LBS)	SPREAD BY HAND OR MACHINE; WILL NOT BLOW LIKE STRAW
PEANUT HULLS	10-20 TONS (450 LBS-900 LBS)	WILL WASH OFF SLOPES. TREAT WITH 12 LBS NITROGEN/TON

**MU MULCHING**  
SCALE: NTS

SPECIES	SEEDING RATE/ACRE	NORTH	CENTRAL SEEDING DATES	SOUTH
MILLET, BROWNTOP OR GERMAN	40 LBS	MAY 1-AUG 1	APR 1-AUG 15	APR 1-AUG 15
RYE	3 BU	SEPT 1-NOV 15	SEPT 15-NOV 15	SEPT 15-NOV 15
RYEGRASS	30 LBS	AUG 1-SEPT 15	SEPT 1-OCT 15	SEPT 1-OCT 15
SORGHUM-SUDAN HYBRIDS	40 LBS	MAY 1-AUG 1	APR 15-AUG 1	APR 1-AUG 15
SUDANGRASS	40 LBS	MAY 1-AUG 1	APR 1-AUG 1	APR 1-AUG 15
WHEAT	3 BU	SEPT 1-NOV 1	SEPT 15-NOV 15	SEPT 15-NOV 15
COMMON BERMUDAGRASS	10 LBS	APR 1-JULY 1	MAR 15-JULY 15	MAR 1-JULY 15
CRIMSON CLOVER	10 LBS	SEPT 1-NOV 1	SEPT 1-NOV 1	SEPT 1-NOV 1

LIME RATE:  
1 TON PER ACRE ON COARSE TEXTURED SOILS  
3 TONS PER ACRE ON FINE TEXTURED SOILS

FERTILIZER RATE:  
APPLY 8-24-24 FERTILIZER PER MANUFACTURER'S RECOMMENDATIONS  
WHEN VEGETATION HAS EMERGED TO A STAND AND IS GROWING, FERTILIZE WITH 30 TO 40 LBS/ACRE OF 28-0-0

MULCH RATE:  
PER MULCHING DETAIL

**TS TEMPORARY SEEDING**  
SCALE: NTS

ZONE 3 - AREAS NOT SUBJECT TO FREQUENT MOWING				
REQUIRED POUNDS PER ACRE OF PURE LIVE SEED				
DATE OF PLANTING	JAN. 1 TO FEB. 15	FEB. 16 TO AUG. 31	SEPT. 1 TO NOV. 30	DEC. 1 TO DEC. 31
ANNUAL RYEGRASS	10		10	10
HULLED BERMUDAGRASS		12	12	
UNHULLED BERMUDAGRASS	29	18	12	29
TALL FESCUE	29		35	29
WEEPING LOVEGRASS		2	2	
ANNUAL LESPEDEZA (KOBE)		50		
RESEEDING CRIMSON CLOVER	29		29	29
PENSACOLA BAHIA GRASS	29	24	29	29
REQUIRED PERMANENT PLANT	MIXED			

LIME RATE:  
1 TON PER ACRE ON LIGHT-TEXTURED, SANDY SOILS (IF THE COVER WILL BE TALL FESCUE AND CLOVER USE 2 TONS/ACRE.)  
2 TONS PER ACRE ON HEAVY-TEXTURED, CLAYEY SOILS

FERTILIZER RATE:  
GRASSES ALONE: 400 LB/ACRE OF 8-24-24  
WHEN VEGETATION HAS EMERGED TO A STAND AND IS GROWING, FERTILIZE WITH 30 TO 40 LBS/ACRE OF 28-0-0  
GRASS-LEGUME MIXTURES: 800 TO 1200 LB/ACRE OF 5-10-10 OR THE EQUIVALENT  
LEGUMES ALONE: 800 TO 1200 LB/ACRE OF 0-10-10 OR THE EQUIVALENT

MULCH RATE:  
PER MULCHING DETAIL

**PS PERMANENT SEEDING**  
SCALE: NTS



ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	BRANCH CIRCUIT CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING. ARROWS INDICATE CIRCUIT HOMERUNS. HASH MARKS INDICATE NUMBER OF CONDUCTORS. NEUTRAL AND/OR SWITCH LEG CONDUCTORS. "A" DENOTES PANEL BOARDS SERVING CIRCUITS, XX CIRCUIT BREAKER SPACES IN PANELBOARD. SEE RESPECTIVE PANEL CIRCUIT SCHEDULE. MINIMUM CONDUCTOR SIZE = #12 AWG.
	BRANCH CIRCUIT CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING. ARROWS INDICATE CIRCUIT HOMERUNS. "A" DENOTES PANEL BOARDS SERVING CIRCUITS, XX CIRCUIT BREAKER SPACES IN PANELBOARD. SEE RESPECTIVE PANEL CIRCUIT SCHEDULE. MINIMUM CONDUCTORS 2#12, 1#12 GND, 1 CAT 5 CABLE, 3/4" C.
	BRANCH CIRCUIT CONDUIT RUN BELOW GRADE OR CONCEALED IN SLAB. ARROWS INDICATE CIRCUIT HOMERUNS. HASH MARKS INDICATE NUMBER OF CONDUCTORS, REVERSE HASH MARK INDICATES GROUND CONDUCTOR, ABSENCE OF HASH MARKS INDICATES TWO CONDUCTORS AND GROUND. GROUND CONDUCTORS SHALL BE RUN IN EACH CONDUIT WITH PHASE, NEUTRAL AND/OR SWITCH LEG CONDUCTORS. "A" DENOTES PANELBOARD SERVING CIRCUITS, "1,3,5" INDICATES CIRCUIT BREAKER SPACES IN PANELBOARD. SEE RESPECTIVE PANEL CIRCUIT SCHEDULE. MINIMUM CONDUCTOR SIZE = #12 AWG.
	DISCONNECT (SAFETY) SWITCH - SIZE AND TYPE AS NOTED. TOP OF SWITCH 6'-6" A.F.F. MAX.
	ELECTRIC MOTOR- SEE RESPECTIVE EQUIPMENT SCHEDULE
	20A, 120/277 VAC SINGLE POLE TOGGLE SWITCH - FLUSH WALL MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. LOWER CASE LETTER INDICATES FIXTURE AND/OR LAMPS CONTROLLED.
	20A, 120/277 VAC THREE WAY TOGGLE SWITCH - FLUSH WALL MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. LOWER CASE LETTER INDICATES FIXTURE AND/OR LAMPS CONTROLLED.
	20A, 120/277 VAC FOUR WAY TOGGLE SWITCH - FLUSH WALL MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. LOWER CASE LETTER INDICATES FIXTURE AND/OR LAMPS CONTROLLED.
	20A, 125 VAC 2P, 3W, GROUNDING TYPE, DUPLEX RECEPTACLE. FLUSH WALL MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. "A - XX" INDICATES PANEL NAME AND CIRCUIT NUMBER
	230 VAC 2P, 3W, GROUNDING TYPE RECEPTACLE. FLUSH WALL MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. "A - XX" INDICATES PANEL NAME AND CIRCUIT NUMBER. "YY" INDICATES AMPERAGE RATING.
	TWO 20A, 125 VAC 2P, 3W, GROUNDING TYPE, DUPLEX RECEPTACLES. FLUSH WALL MOUNTED: ONE AT 18" A.F.F. AND THE OTHER AT 48" A.F.F. "A - XX" INDICATES PANEL NAME AND CIRCUIT NUMBER
	20A, 125 VAC 2P, 3W, GROUND FAULT INTERRUPTING TYPE, DUPLEX RECEPTACLE. FLUSH WALL MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. "A - XX" INDICATES PANEL NAME AND CIRCUIT NUMBER
	(2) 20A, 125 VAC 2P, 3W, GROUNDING TYPE, DUPLEX RECEPTACLES. FLUSH WALL MOUNTED IN 2-GANG BOX 18" A.F.F. UNLESS NOTED OTHERWISE. "A - XX" INDICATES PANEL NAME AND CIRCUIT NUMBER
	JUNCTION BOX. MINIMUM SIZE 4" SQUARE X 2-1/8" DEEP WITH COVER PLATE. FLUSH WALL MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE.

SYMBOLS NOTES:

- ALL OUTLETS ARE TO BE FLUSH MOUNTED.
- MOUNTING HEIGHTS ARE FROM THE CENTER LINE OF THE DEVICE UNLESS OTHERWISE NOTED.
- ALL SINGLE GANG AND TWO GANG DEVICES SHALL USE A 4" SQ. BOX WITH EXTENSION RING.
- ALL MULTI-GANG DEVICES SHALL USE A COMMON COVER PLATE.
- ALL NORMAL POWER DEVICES (i.e. SWITCHES, RECEPTACLES, TELEPHONE OUTLETS, ETC.) AND THEIR COVER PLATES SHALL BE WHITE OR BLACK FOR OUTLETS IN DARK GRANITE.
- A.F.F. INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR.

**ABBREVIATIONS**

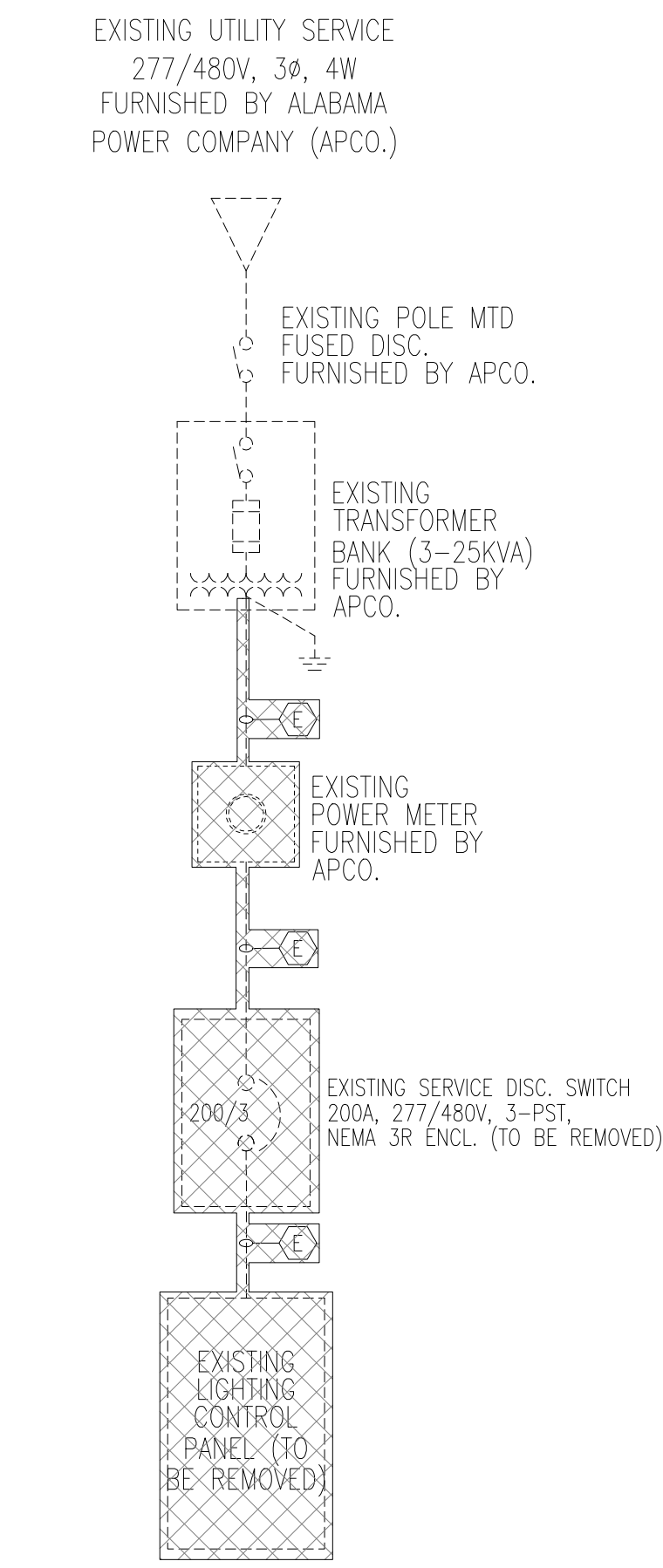
A	AMPS	MAG	MAGNETIC (METER or STARTER)
A/C	AIR CONDITIONING	MAN	MANUAL
A.F.F.	ABOVE FINISHED FLOOR	M.B.	MAIN BREAKER
AHU	AIR HANDLING UNIT	MCM	THOUSAND CIRCULAR MILS
A.I.C.	AMPS INTERRUPTING CAPACITY (SHORT CIRCUIT)	MCS	MOLDED CASE SWITCH
AL	ALUMINUM	MECH.	MECHANICALLY (HELD)
AM	AMMETER	MT	MOUNT
AUTO	AUTOMATIC	MTD.	MOUNTED
AUX	AUXILIARY	N, NEUT	NEUTRAL
AWG	AMERICAN WIRE GAUGE	N.C.	NORMALLY CLOSED
B	BARE	N.O.	NORMALLY OPEN
C	CONDUIT	OHE	OVER HEAD ELECTRICAL LINE
C.B.	CIRCUIT BREAKER	O.L.'s	OVERLOADS (THERMAL)
CH	CHILLED	OUT	OUTPUT
CK	CIRCUIT	P	POLE(S)
Cu	COPPER	P NL	PANEL OR PANELBOARD
CONN.	CONNECTED	P.T.	POTENTIAL TRANSFORMER
CPT	CONTROL POWER TRANSFORMER	#(SUFFIX)	POUNDS WEIGHT
CR	CONTROL RELAY	#(PREFIX)	WIRE GAUGE (AWG)
C.O.	CONDUIT ONLY	Ø	PHASE
C.T.	CURRENT TRANSFORMER	REC.	RECEPTACLE
D	DEEP	RECEPT	RECEPTACLE
D.C.	DIRECT CURRENT	S.C.	SHORT CIRCUIT (DUTY)
DISC.	DISCONNECT	SN	SOLID NEUTRAL
DN	DOWN	SOL	SOLID (CONDUCTOR)
EA.	EACH	SQ.	SQUARE
E.O.	ELECTRIC OPERATOR	ST	SHUNT TRIP
ELEC	ELECTRIC	STR.	STARTER
E, EM	EMERGENCY	SW.	SWITCH
EX. RE.	EXIST. RELOCATED	T.B.B.	TELEPHONE BACK BOARD
EQ.	EQUIPMENT (GROUND)	TEL.	TELEPHONE
FA	FIRE ALARM	TEMP.	TEMPERATURE (CONTROL)
FU	FUSE(S)	T.O.E.	TIMED ON ENERGIZATION
FUT	FUTURE	TYP.	TYPICAL
G, GR.	GROUND	UPS	UNINTERRUPTIBLE POWER SYSTEM
GRDG.	GROUNDING	UG	UNDERGROUND
GI	GROUND FAULT INTERRUPTING	UGP	UNDERGROUND PRIMARY
H.	HIGH, (MOUNTING HEIGHT TO CENTER LINE)	UGS	UNDERGROUND SECONDARY
HH	HAND HOLE	W	WATTS OR WIRE (USE CONTEXT)
H.O.A.	HAND-OFF AUTOMATIC SWITCH	W.H.	WATER HEATER
HT	HEAT	WP	WEATHERPROOF
IG	ISOLATED GROUND	WW	WIREWAY (or GUTTER)
IH	INSTRUMENT HAND HOLE	V	VOLTS
ISO	ISOLATED	VAC	VOLTS ALTERNATING CURRENT
IN	INPUT	VDCTP	VOICE, DATA AND CABLE TERMINATION PANEL
INS.	INSULATED	VM	VOLTMETER
INST.	INSTALL OR INSTRUMENT		
J.B.	JUNCTION BOX		
K.O.	KNOCK OUT		
KW	KILOWATTS		
LTC.	LIGHTING		
LG	LONG		

**GENERAL NOTES:**

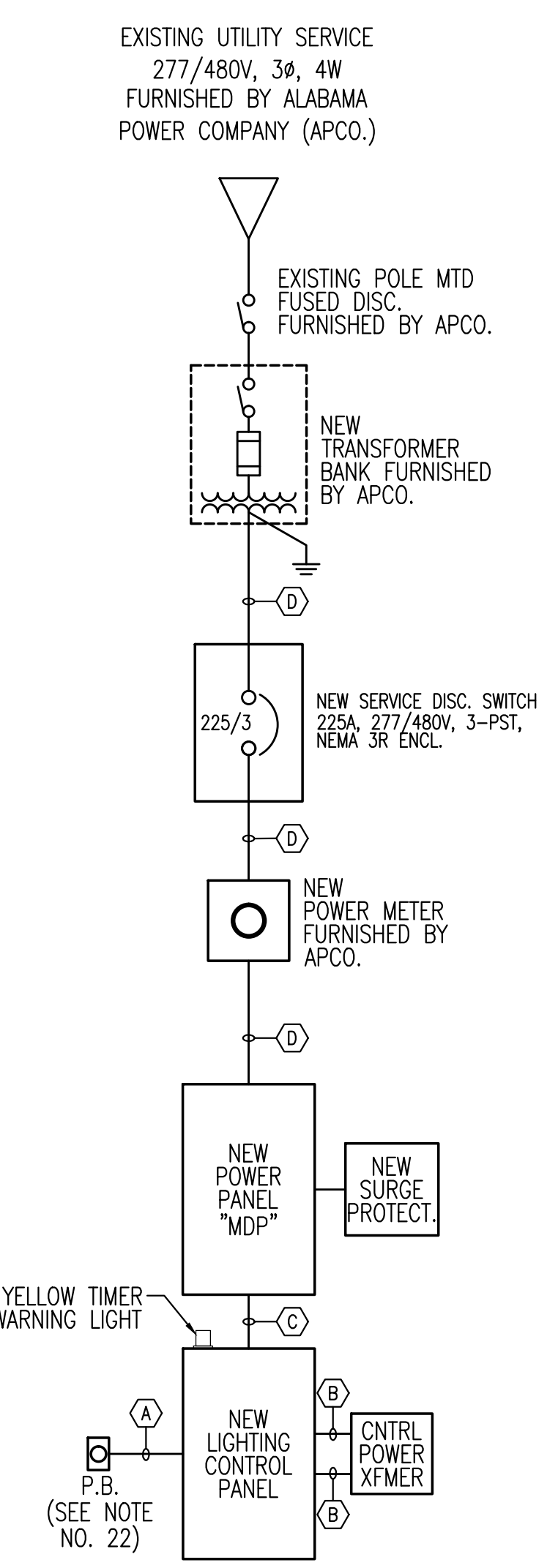
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, THE OCCUPATIONAL SAFETY AND HEALTH ACT, ALL ELECTRICAL CODES LOCALLY BEING ENFORCED BY LOCAL AUTHORITY HAVING JURISDICTION (AHJ) IN THE PROJECT AREA AND THE CONTRACTING OFFICER (C.O.).
- CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, INSPECTION AND CONNECTION FEES.
- CONTRACTOR TO PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SUPERVISION FOR AND INCIDENTAL TO THE COMPLETION OF A FULLY FUNCTIONAL, SAFE AND COMPLETE ELECTRICAL AND LIGHTING SYSTEMS.
- CONTRACTOR TO TEST SYSTEM THOROUGHLY IN THE PRESENCE OF OWNER AND RENDER IT FREE FROM DEFECTS. CONTRACTOR TO PROVIDE OWNER WITH A ONE YEAR WARRANTY AFTER ACCEPTANCE.
- THE CONTRACTOR SHALL PROPERLY SEAL ALL PENETRATIONS. ALL PENETRATIONS THROUGH FIRE BARRIERS SHALL BE SEAL IN ACCORDANCE WITH THE LATEST REVISIONS OF NEC 300.21 AND IBC 712.4.
- THE CONTRACTOR SHALL PROVIDE TYPE WRITTEN PANEL DIRECTORIES WITH BLACK 1/2" LETTERS "CK # & VOLTAGE" FOR A POWER CONTROL PANEL.
- ALL WIRING SHALL BE COPPER AND IN A CONTINUOUS CONDUIT SYSTEM (MT, RIGID PVC, etc.) AS ALLOWED BY CODE AND APPROVED BY AHJ. MINIMUM WIRE SIZE FOR POWER SHALL NO. 12 AWG.
- ALL ELECTRICAL PANELS SHALL HAVE COPPER BUS BARS.
- ELECTRICAL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY CONFLICTS AND/OR CREATING A SAFETY HAZARD.
- CONCEAL ALL CONDUITS AND BOXES UNLESS OTHERWISE NOTED.
- ELECTRICAL CONTRACTOR TO COORDINATE WITH THE OWNER FOR ANY ELECTRICAL REQUIREMENTS FOR SPECIAL EQUIPMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL CIRCUITS ASSOCIATED WITH THE PROJECT WORK AREA.
- ALL EQUIPMENT AND MATERIALS SHALL MEET OR EXCEED THE SCHEDULED AND/OR REQUIRED ITEMS. SUBMIT FOR PRIOR APPROVAL FOR ANY DEVIATIONS.
- NO CHANGES SHALL BE MADE IN MATERIALS OR INSTALLATION WITHOUT ENGINEER AND OWNER'S APPROVAL.
- CONTRACTOR SHALL VERIFY CLEARANCE SPACE AVAILABLE, OFFSETS REQUIRED, STRUCTURAL OPENINGS, AND WORK BY OTHER TRADES.
- ALL ELECTRICAL MATERIAL AND EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE NEW AND FREE OF DEFECTS. ALL WORK PERFORMED FOR THIS PROJECT SHALL BE CARRIED OUT BY SKILLED WORKERS REGULARLY ENGAGED IN THE PERFORMANCE OF SUCH DUTIES. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED CLEAN AND FREE FROM DENTS, SCARS OR DEFORMITIES.
- ANY PATCHING OF WALLS SHALL MATCH NEW ARCHITECTURAL FINISHING REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE A GROUNDING SYSTEM PER SECTION 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL 120V BRANCH CIRCUITS SHALL HAVE A DEDICATED NEUTRAL (L2) CONDUCTOR.
- REFERENCE TO A PARTICULAR PRODUCT BY MANUFACTURER, TRADE NAME, OR CATALOG NUMBER ESTABLISHES THE QUALITY STANDARDS OF MATERIAL AND EQUIPMENT REQUIRED FOR THIS INSTALLATION AND IS NOT INTENDED TO EXCLUDE PRODUCTS EQUAL IN QUALITY AND SIMILAR DESIGN.
- THE ACCURACY OF GRADE, ELEVATION, DIMENSIONS, OR LOCATIONS OF THE EXISTING CONDITION IS NOT GUARANTEED BY THE ENGINEER OR THE OWNER. IF THE CONTRACTOR PERFORMS A CONSTRUCTION ACTIVITY WHEN THE CONTRACTOR KNOWS, OR SHOULD KNOWING EXERCISE IN REASONABLE DILIGENCE THAT AN ACTIVITY INVOLVES AN ERROR IN CONSISTENCY OR OMISSION IN CONTRACT DOCUMENTS, THE CONTRACTOR SHALL ASSUME APPROPRIATE RESPONSIBILITY FOR SUCH PERFORMANCE AND BEAR AN APPROPRIATE AMOUNT OF THE COSTS ATTRIBUTABLE FOR CORRECTIONS.
- THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL A NEW PUSHBUTTON SWITCH ON THE SIDE OF THE NEW LIGHTING CONTROL PANEL ON THE NEW EQUIPMENT RACK LOCATED INSIDE THE FENCE ENCLOSURE. THE SWITCH SHALL BE WEATHER PROOF AND RATED TO BE OPERATED IN WET LOCATIONS (SEE DRAWING NO. E-4.0).
- THE EXISTING SCOREBOARD POWER CIRCUIT BREAKER (LOCATED IN EXISTING POWER PANEL "P") SHALL BE RE-USED. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO REMOVE THE EXISTING CONDUIT, DISCONNECT SWITCH AND CONDUCTORS FROM THE EXISTING POWER PANEL TO THE EXISTING SCORE BOARD.
- THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO CLEAN THE EXISTING SCORE BOARD CIRCUIT BREAKER AND INSTALL NEW CONDUCTORS FROM THE EXISTING POWER PANEL TO THE NEW SCORE BOARD.

LIGHT FIXTURE SCHEDULE					
POLE DESIGNATION	MANUFACTURER	CATALOG NUMBER	MOUNTING TYPE/POLE HEIGHT(FT)	LAMPS	
				MTG HEIGHT (FT)	NO. TYPE
A1	MUSCO LIGHTING	TLC-LED-1200	POLE/70'-0"	70'	4 1170W LED
		TLC-LED-400		70'	2 1170W LED
A2	MUSCO LIGHTING	TLC-LED-1200	POLE/70'-0"	70'	4 1170W LED
		TLC-LED-400		70'	2 400W LED
B1	MUSCO LIGHTING	TLC-LED-1500	POLE/80'-0"	80'	7 1430W LED
		TLC-LED-575		16'	2 575W LED
		TLC-LED-400		80'	1 400W LED
		TLC-LED-900		80'	1 890W LEW
B2	MUSCO LIGHTING	TLC-LED-1500	POLE/80'-0"	80'	7 1430W LED
		TLC-LED-575		16'	2 575W LED
		TLC-LED-400		80'	1 400W LED
C1	MUSCO LIGHTING	TLC-1500	POLE/70'-0"	70'	6 1430W LED
		TLC-400		70'	1 575W LED
		TLC-575		16'	1 400W LED
C2	MUSCO LIGHTING	TLC-1500	POLE/70'-0"	70'	6 1430W LED
		TLC-400		16'	1 575W LED
		TLC-575		70'	1 400W LED

NOTE: ALL FIXTURES AND ACCESSORIES SHALL BE PROVIDED BY THE CITY OF MOBILE.



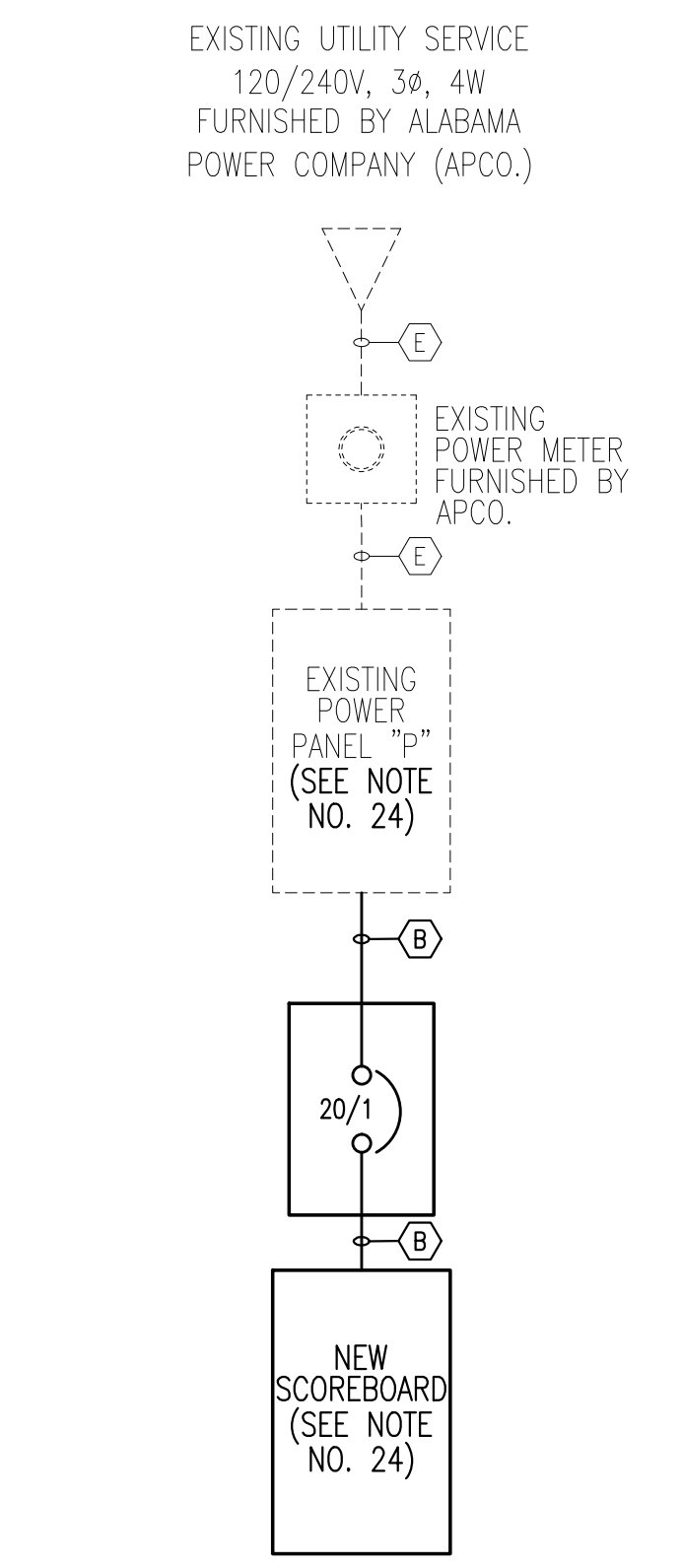
**Demolition Electrical  
277/480V One-Line Diagram**  
NOT TO SCALE



**Proposed Electrical  
277/480V One-Line Diagram**  
NOT TO SCALE

Cable Schedule	
SYMBOL	DESCRIPTION
(A)	2 #14, 2#14 SPARE, 3/4" C
(B)	2 #12, 1#12 GND., 3/4" C
(C)	2-RUNS: 18#10, 1#10 GND., 1 1/2" C
(D)	3 #4/0, 1#4 GND., 2" C
(E)	EXISTING

⊗ SHALL BE DEMOLISHED



**Proposed Electrical 120/240V  
One-Line Diagram**  
NOT TO SCALE

**CITY OF MOBILE, ALABAMA**  
**MATHEWS PARK SYNTHETIC FIELD A**  
**LIGHTING**  
 3700 MICHAEL BOULEVARD, MOBILE, ALABAMA 36609

411 North Beach Mobile, Alabama 36688  
 Office: 251.344.2022 Fax: 251.944.3022  
 www.isaiahengineering.com

**ISAIAH ENGINEERING**  
 Building The Future

DATA
SCALE: AS NOTED
PROJECT NO.: 03-2022-01
DRAWN BY: B. BERTRAND
DESIGN BY: N. EVERETT
REVIEWED BY: R. MUNIZ
APPROVED BY: N. EVERETT

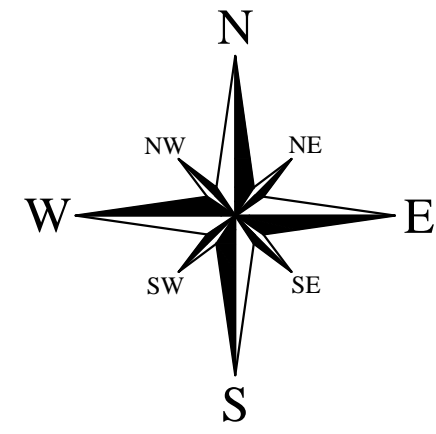
REVISIONS

ALABAMA REGISTERED PROFESSIONAL ENGINEER  
 N. EVERETT  
 No. 1401  
 State of Alabama

STAMP VALID ONLY IF SIGNED & DATED

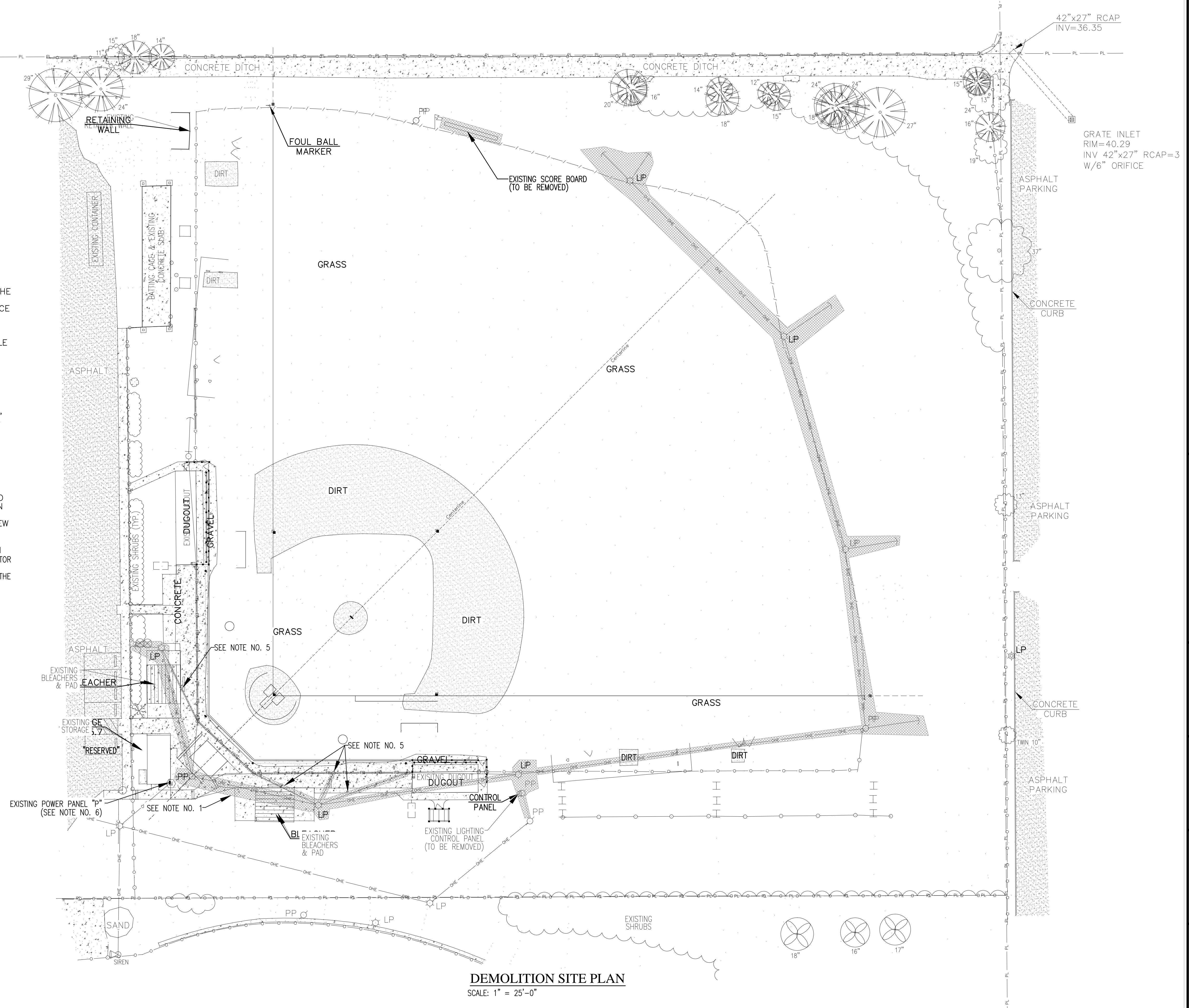
FILE: MATHEWS PARK BASEBALL FIELD LIGHTING  
 DATE: 5/18/22

**E-1.0**  
 SYMBOLS, NOTES  
 AND LEGENDS



**NOTES:**

1. THIS IS AN EXISTING FACILITY AND DEMOLITION WORK SHALL BE REQUIRED. DEMOLITION WORK SHALL INCLUDE BUT SHALL NOT BE LIMITED TO THE LABOR AND MATERIALS TO DEMOLISH ALL OF THE EXISTING BASEBALL FIELD LIGHT FIXTURES, SURFACE MOUNTED CONDUITS AND RECEPTACLES.
2. PLANS ARE BASED ON PLANS PROVIDED BY THE CLIENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BUT SHALL NOT BE LIMITED TO FIELD VERIFYING ALL DIMENSIONS, EXISTING AND NEW EQUIPMENT LAYOUT, ALL ELECTRICAL PANELS AND CIRCUITS AS REQUIRED TO PROVIDE FULLY FUNCTIONAL AND WORKING SYSTEM.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, THE OCCUPATIONAL SAFETY AND HEALTH ACT, ALL ELECTRICAL CODES LOCALLY BEING ENFORCED BY LOCAL AUTHORITY HAVING (AHJ) IN THE PROJECT AREA AND THE CONTRACT AND THE CONTRACTING OFFICER (C.O.).
4. THE CONTRACTOR SHALL ALSO REFER TO THE ELECTRICAL SPECIFICATION SECTION 16100.
5. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO REMOVE THE EXISTING NET TENSION CABLE FROM THE EXISTING LIGHT POLES AND INSTALL NEW NET TENSION CABLES AFTER THE NEW POLES HAVE BEEN INSTALLED.
6. THE EXISTING SCOREBOARD POWER CIRCUIT BREAKER (LOCATED IN EXISTING POWER PANEL "P") SHALL BE RE-USED. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO REMOVE THE EXISTING CONDUIT, DISCONNECT SWITCH AND CONDUCTORS FROM THE EXISTING POWER PANEL TO THE EXISTING SCORE BOARD.



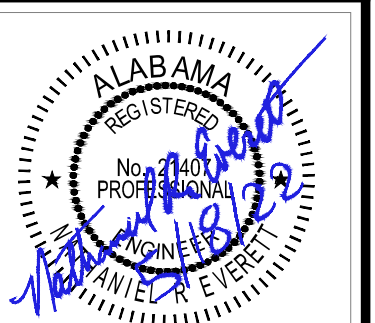
**DEMOLITION SITE PLAN**  
SCALE: 1" = 25'-0"

**CITY OF MOBILE, ALABAMA**  
**MATHEWS PARK SYNTHETIC FIELD A**  
**LIGHTING**  
3700 MICHAEL BOULEVARD, MOBILE, ALABAMA 36609



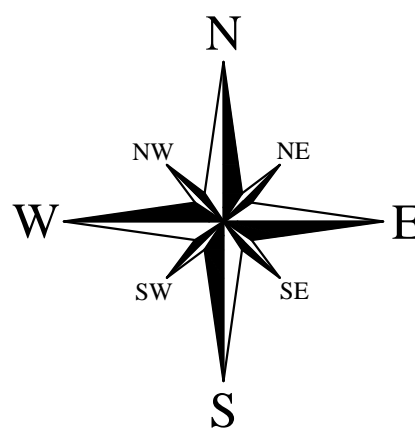
DATA
SCALE: AS NOTED
PROJECT NO.: 03-2022-01
DRAWN BY: B. BERTRAND
DESIGN BY: N. EVERETT
REVIEWED BY: R. MUNIZ
APPROVED BY: N. EVERETT

REVISIONS



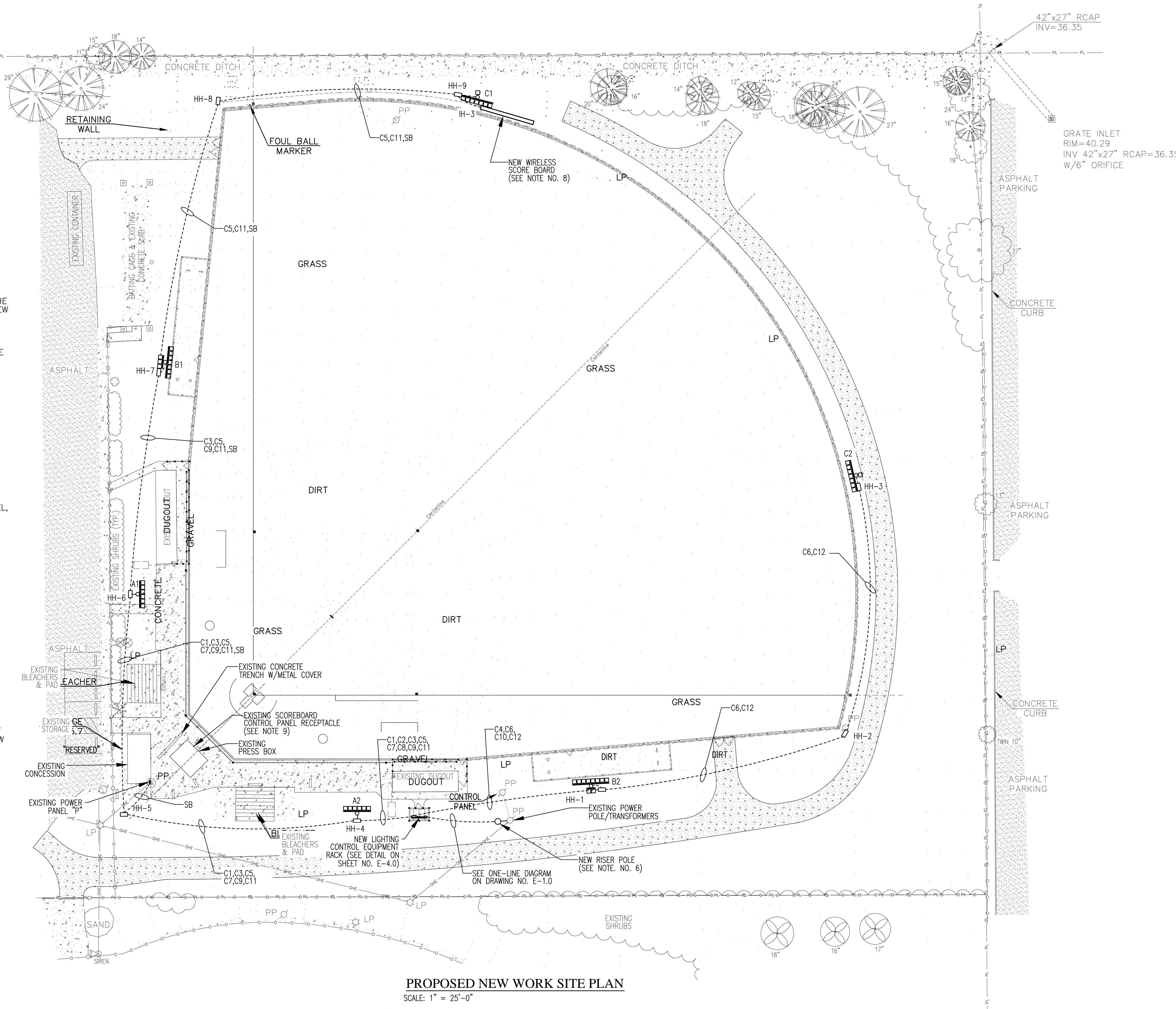
STAMP VALID ONLY IF SIGNED & DATED  
FILE: MATHEWS PARK BASEBALL FIELD LIGHTING  
DATE: 5/18/22

**E-2.0**  
DEMOLITION SITE PLAN



**NOTES:**

1. THIS IS AN EXISTING FACILITY AND DEMOLITION WORK SHALL BE REQUIRED AND THE INSTALLATION OF NEW EQUIPMENT. THE NEW PROPOSED WORK SHALL INCLUDE BUT SHALL NOT BE LIMITED TO THE LABOR AND MATERIALS TO INSTALL ALL OF THE NEW LIGHT FIXTURES, SURFACE MOUNTED CONDUITS, CONDUCTORS, AND RECEPTACLES.
2. PLANS ARE BASED ON PLANS PROVIDED BY THE CLIENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BUT SHALL NOT BE LIMITED TO FIELD VERIFYING ALL DIMENSIONS, EXISTING AND NEW EQUIPMENT LAYOUT, ALL ELECTRICAL PANELS AND CIRCUITS AS REQUIRED TO PROVIDE FULLY FUNCTIONAL AND WORKING LIGHTING SYSTEM.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, THE OCCUPATIONAL SAFETY AND HEALTH ACT, ALL ELECTRICAL CODES LOCALLY BEING ENFORCED BY LOCAL AUTHORITY HAVING (AHJ) IN THE PROJECT AREA AND THE CONTRACT AND THE CONTRACTING OFFICER (C.O.).
4. THE CONTRACTOR SHALL ALSO REFER TO THE ELECTRICAL SPECIFICATION SECTION 16100.
5. ALL THE LIGHT FIXTURES, LIGHTING CONTROL PANEL, SCOREBOARD AND POLES SHALL BE PROVIDED BY THE CITY OF MOBILE. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO COORDINATE WITH THE LIGHTING EQUIPMENT SUPPLIER TO INSTALL THE LIGHT POLES AND TO CONFIGURE/POSITION THE LIGHT FIXTURE TO MEET THE REQUIRED LIGHTING LEVELS FOR A BASEBALL FIELD.
6. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL A NEW RISER POLE IN ACCORDANCE WITH ALABAMA POWER COMPANY REQUIREMENTS AND THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
7. SEE LIGHT FIXTURE SCHEDULE ON DRAWING NO. E-1.0.
8. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL A NEW WEATHER PROOF RECEPTACLE AND DISCONNECT SWITCH FOR THE NEW SCOREBOARD.
9. THE CONTRACTOR SHALL RE-USE THE EXISTING SCOREBOARD RECEPTACLE FOR POWER. IF THE EXISTING RECEPTACLE IS LOCATED IN A AREA THAT DOES NOT ALLOW PROPER OPERATION OF THE NEW WIRELESS SCOREBOARD CONTROL PANEL, THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL A NEW RECEPTACLE IN THE PROPER LOCATION.



**PROPOSED NEW WORK SITE PLAN**  
SCALE: 1" = 25'-0"

**CITY OF MOBILE, ALABAMA**  
**MATHEWS PARK SYNTHETIC FIELD A**  
**LIGHTING**  
3700 MICHAEL BOULEVARD, MOBILE, ALABAMA 36609



DATA
SCALE: AS NOTED
PROJECT NO.: 03-2022-01
DRAWN BY: B. BERTRAND
DESIGN BY: N. EVERETT
REVIEWED BY: R. MUNIZ
APPROVED BY: N. EVERETT

REVISIONS

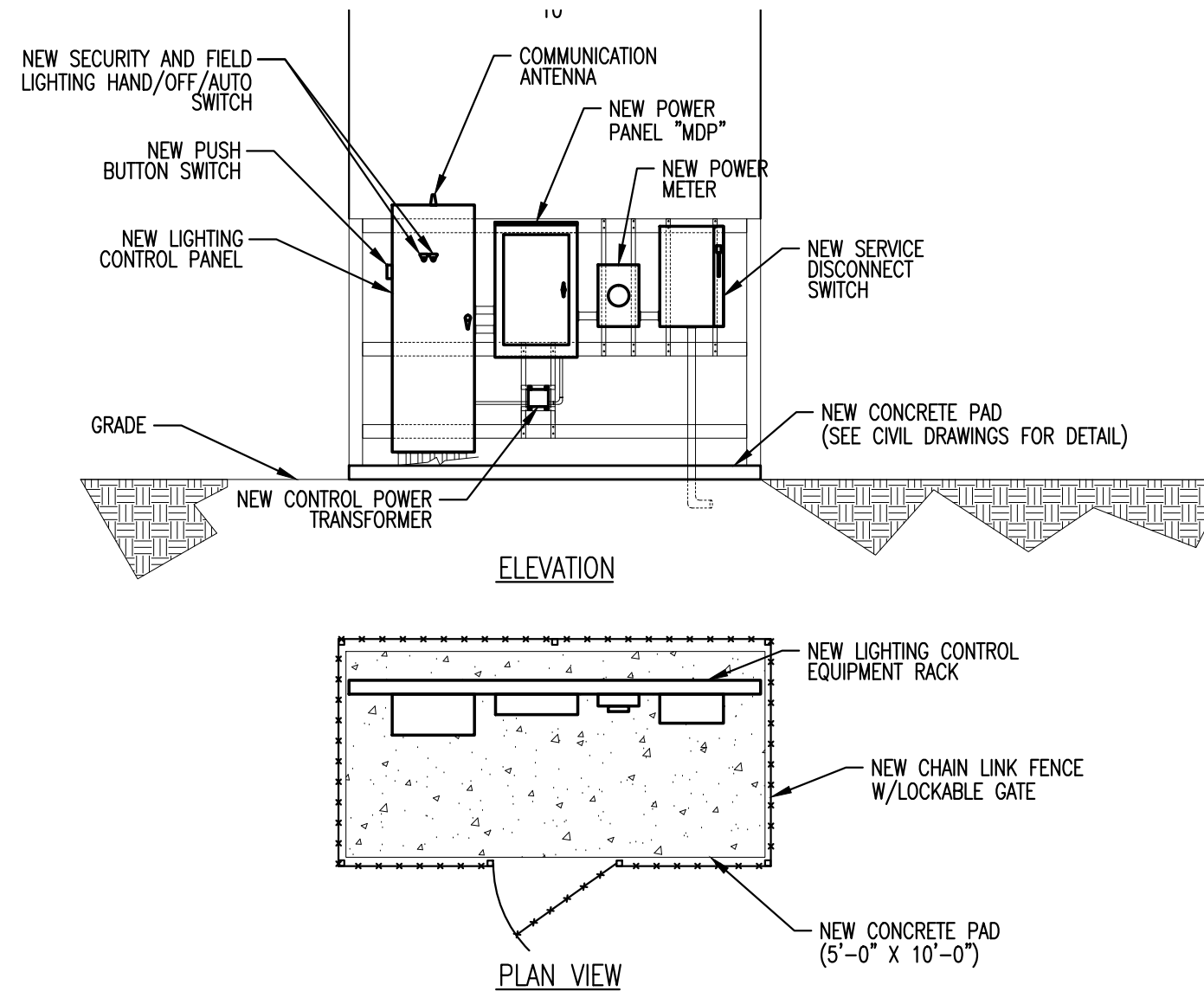


STAMP VALID ONLY IF SIGNED & DATED  
FILE: MATHEWS PARK BASEBALL  
FIELD LIGHTING  
DATE: 5/18/22

**E-3.0**  
PROPOSED WORK SITE  
PLAN

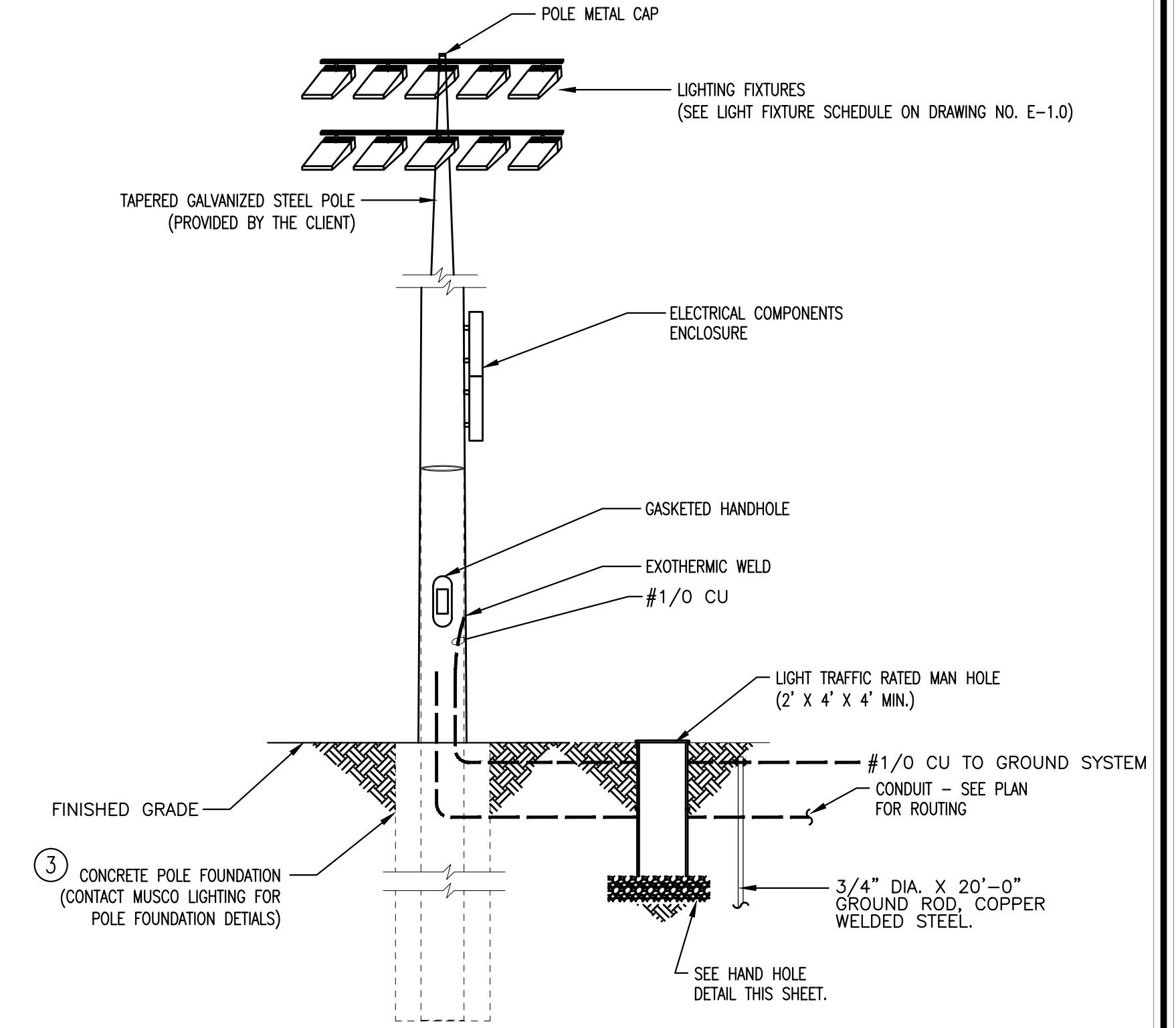
LOAD DESCRIPTION	WIRE SIZE	KVA LOAD			CKT. NO.	BKR. TRIP	MAIN	L1	L2	L3	BKR. TRIP	CKT. NO.	KVA LOAD			LOAD DESCRIPTION	WIRE SIZE		
		ØA	ØB	ØC									ØA	ØB	ØC				
CONTACTOR NO. C1	*	2.09			1	30					30	2	2.09				CONTACTOR NO. C2	*	
	*		2.09		3	3P					3P	4	2.09					*	
	*			2.09	5	3P					3P	6		2.09				*	
CONTACTOR NO. C3	*	5.12			7	30					30	8	4.59				CONTACTOR NO. C4	*	
	*		5.12		9	3P					3P	10		4.59				*	
	*			5.12	11	3P					3P	12			4.59			*	
CONTACTOR NO. C5	*	3.74			13	30					30	14	3.74				CONTACTOR NO. C6	*	
	*		3.74		15	3P					3P	16		3.74				*	
	*			3.74	17	3P					3P	18			3.74			*	
CONTACTOR NO. C7	*	0.46			19	30					30	20	0.46				CONTACTOR NO. C8	*	
	*		0.46		21	3P					3P	22		0.46				*	
	*			0.46	23	3P					3P	24			0.46			*	
CONTACTOR NO. C9	*	0.23			25	30					30	26	0.23				CONTACTOR NO. C10	*	
	*		0.23		27	3P					3P	28		0.23				*	
	*			0.23	29	3P					3P	30			0.23			*	
CONTACTOR NO. C11	*	0.23			31	30					30	32	0.23				CONTACTOR NO. C12	*	
	*		0.23		33	3P					3P	34		0.23				*	
	*			0.23	35	3P					3P	36			0.23			*	
	*			0.23	37	3P					20	38	1.00				LTC CONTROL PWR/REC	20	
	*			0.23	39	3P					20	40	0.18				SPARE		
	*			0.23	41	3P					42								
SUBTOTAL VA:		11.86	11.86	11.86									12.34	11.52	11.34		SUBTOTAL VA		
VOLTAGE SOURCE: UTILITY/GENERATOR/AITS		TOTAL KVA ØA:		24.20		NEW PANEL "MDP"													
VOLTAGE: 277/480		TOTAL KVA ØB:		23.38		CIRCUIT SCHEDULE													
TOTAL CKTS: 42		TOTAL KVA ØC:		23.20															
TRIM: NEMA 3R SURFACE		TOTAL CONN. KVA:		70.78															
INTERRUPT RATING: 42,000 A.I.C. SYMMETRICAL		EST. DEMAND:		85.14		LOCATION: NEW LTC CONTROL EQ. RACK													

\* SEE CABLE AND CONDUIT SCHEDULE ON DRAWING NO. E-3.0 CABLE AND CONDUIT SIZES.



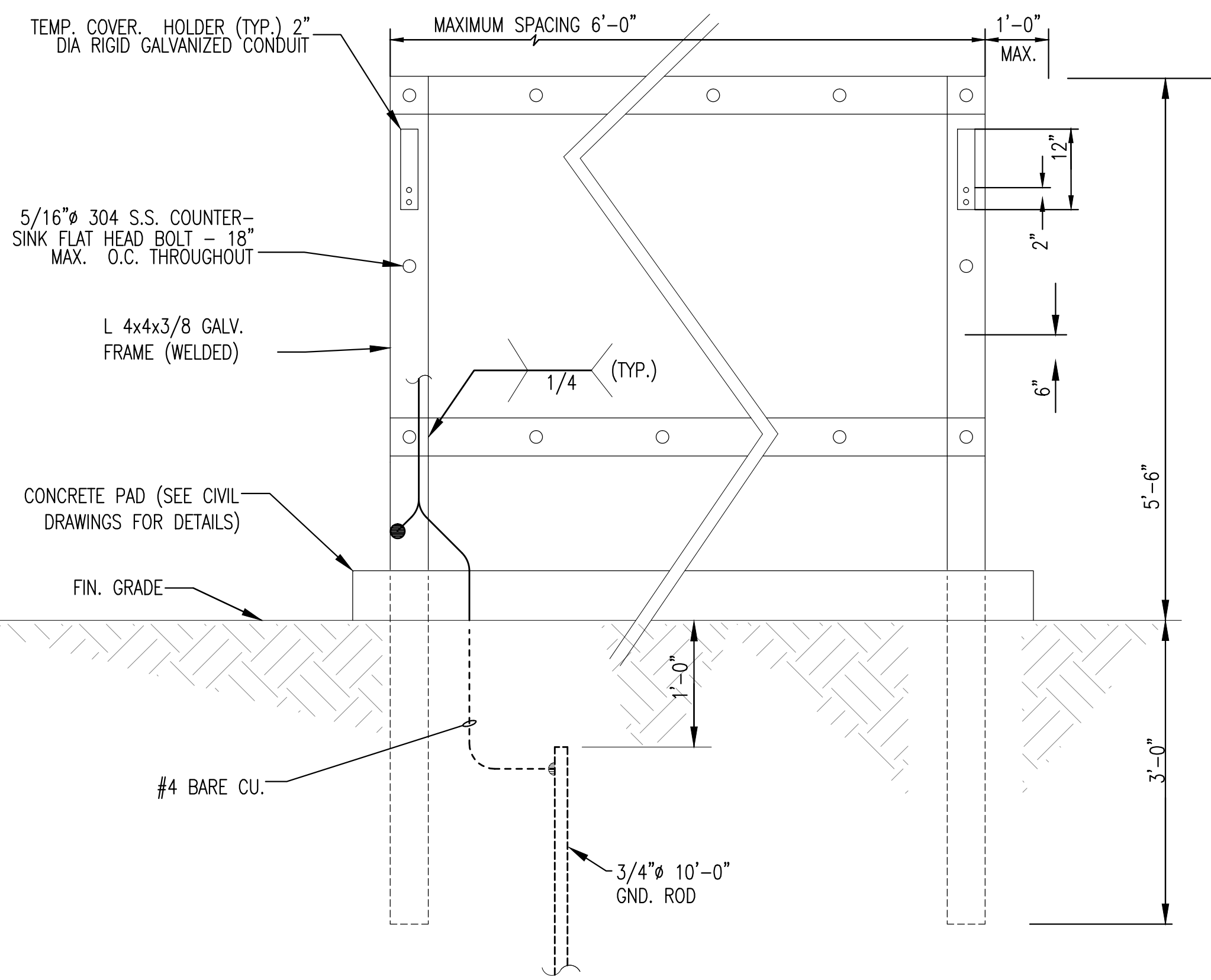
### NEW LIGHTING CONTROL EQUIPMENT RACK

N.T.S



### FIELD LIGHT POLE DETAIL

N.T.S

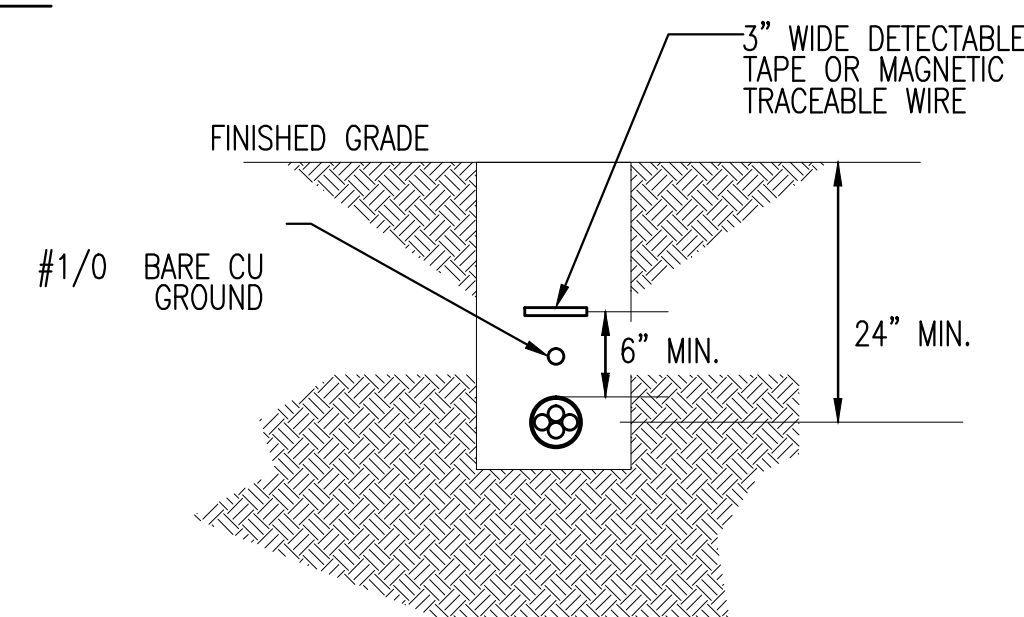


### TYPICAL EQUIPMENT MOUNTING RACK

NOT TO SCALE

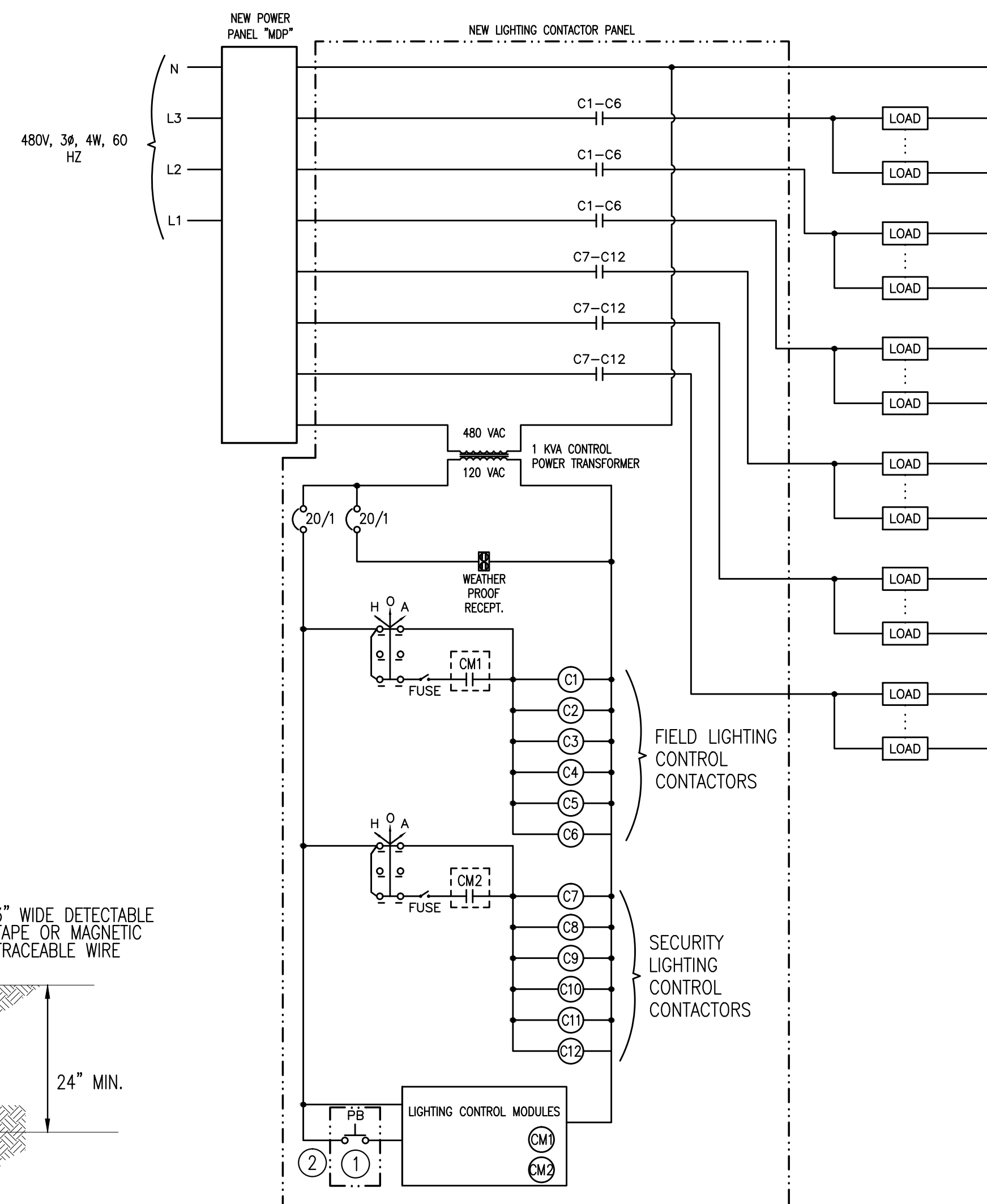
#### KEYNOTES:

- THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL THE NEW LIGHTING PUSHBUTTON ON THE SIDE OF LIGHTING CONTROL PANEL. THE PUSHBUTTON SHALL WEATHER TIGHT AND RATED FOR OPERATION IN WET LOCATIONS.
- THE PUSHBUTTON SHALL BE USED TO ALLOW THE FIELD LIGHTS TO BE TURNED ON AND OFF DURING PRESET HOURS OF THE DAY AS DETERMINED BY THE CLIENT.
- THE LIGHT POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH MUSCO LIGHTING POLE FOUNDATION REQUIREMENT. THE MUSCO LIGHTING CONTACT PERSON IS MR. TODD GAINES, 334-313-2176.



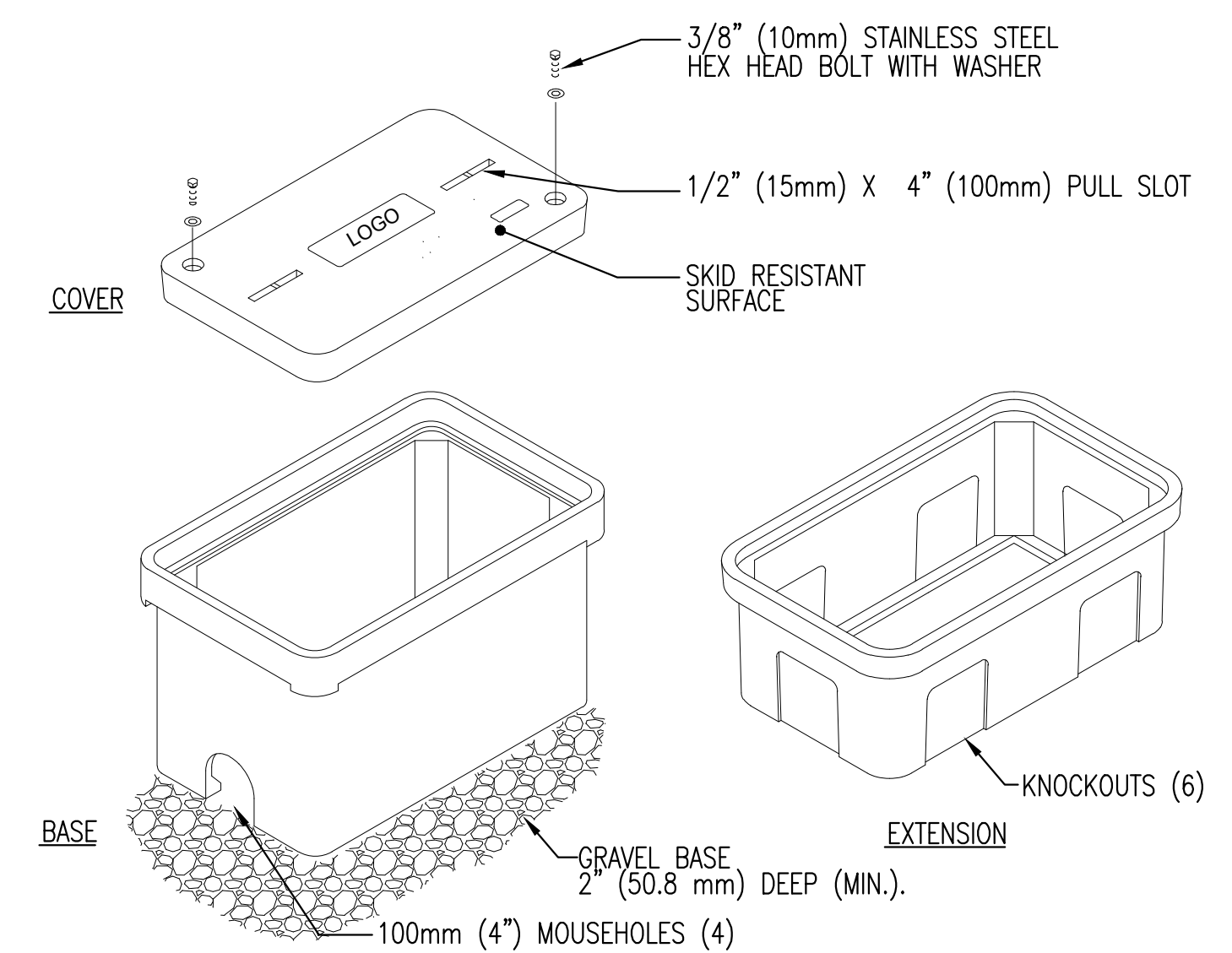
### CONDUIT TRENCH DETAIL

N.T.S.



### TYPICAL LIGHTING CONTROL PANEL DIAGRAM

NOT TO SCALE



### TYPICAL HAND HOLE DETAIL

NOT TO SCALE

#### HAND HOLE NOTES:

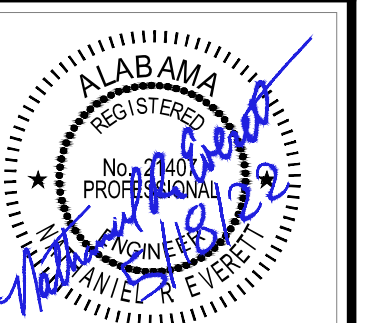
- ALL HAND HOLES SHALL HAVE OPEN BOTTOMS AND SHALL BE INSTALLED ON A 2" (50.8 mm) BED OF CRUSHED GRAVEL EXTENDING A MINIMUM OF 3" (76.2 mm) OUTSIDE THE MANHOLE BASE.

CITY OF MOBILE, ALABAMA  
 MATHEWS PARK SYNTHETIC FIELD A  
 LIGHTING  
 3700 MICHAEL BOULEVARD, MOBILE, ALABAMA 36609



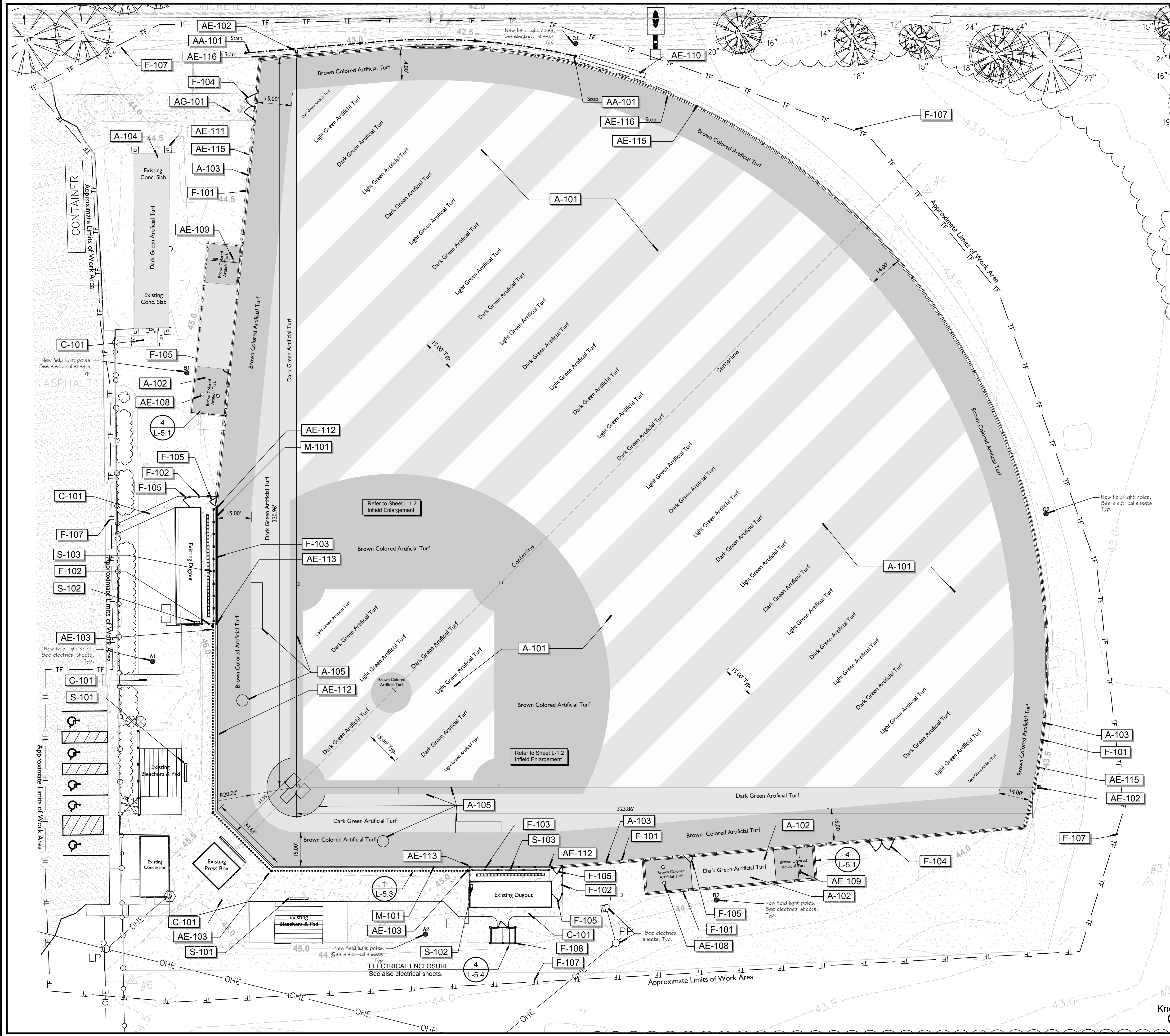
DATA  
 SCALE: AS NOTED  
 PROJECT NO.: 03-2022-01  
 DRAWN BY: B. BERTRAND  
 DESIGN BY: N. EVERETT  
 REVIEWED BY: R. MUNIZ  
 APPROVED BY: N. EVERETT

REVISIONS



STAMP VALID ONLY IF SIGNED & DATED  
 FILE: MATHEWS PARK BASEBALL  
 FIELD LIGHTING  
 DATE: 5/18/22

E-4.0  
 DETAILS



- NOTES:
1. Survey provided by owner.
  2. Field verify all layout and dimensions prior to construction.
  3. Field verify location of all structures, hardscape, utilities, drainage, vegetation, & conditions.
  4. Contractor shall be responsible for all site layout using a licensed surveyor.
  5. Contractor shall be responsible to preserve and protect all existing conditions to remain.
  6. Contractor is responsible for calling line locate and verifying presence of any & all utilities. Utilities shown are for information only.
  7. Contractor is responsible for ensuring positive drainage.
  8. Contractor shall obtain all required permits.
  9. Quantities are provided for convenience only. Contractor shall verify.
  10. Report any discrepancies to Landscape Architect immediately.

Note: All baseball field dimensions & layout shall be per the current NFHS Rules & Alabama Highschool Sports Rules. (typ.)

REFER TO LAYOUT SHEETS, DETAILS, & SPECIFICATIONS.

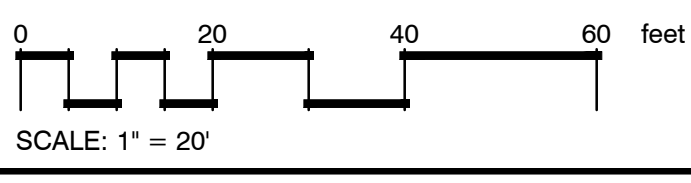
GENERAL NOTES:

1. The Contractor shall be responsible for all required permits, licenses, fees related to executing this work. This work shall comply with all local, state, & federal codes.
2. Existing conditions shown are based on survey information provided by Wattier Surveying, Inc. Contractor shall report any discrepancies found in the field to Landscape Architect for clarification.
3. Before beginning work, the contractor shall thoroughly acquaint himself with the existing site conditions and proposed plans. The intent is to provide a smooth transition between existing conditions that are to remain and the new site features with minimal damage to existing trees and vegetation.
4. Contractor is made aware of active existing underground utilities. It is the contractor's responsibility to familiarize himself with the location of said utilities and other obstructions. The contractor shall investigate and verify, in the field, the existence and location of all utilities and any existing irrigation piping, and take necessary precautions to prevent their disturbance and avoid interruption of service. Contractor is responsible for calling appropriate line location service. All damaged utilities shall be replaced to owners satisfaction by contractor with no additional charge to owner.
5. The contractor shall protect all finished surfaced that are existing and remain. Items to remain that are damaged by this work shall be replaced by this contractor at no expense to the owner.
6. Once delivered to the site, the contractor is responsible for the protection, including theft, of all materials.
7. The landscape architect shall have the right to reject any and all work and/or materials at any stage of progress which in his opinion do not meet the requirements of these plans and specifications. Such rejected material shall be removed from the site immediately and replaced with acceptable materials.
8. No work shall be performed in any R.O.W. without approval by the appropriate Federal, State, County, or City authority.

Note: General contractor shall receive, store, secure, schedule, coordinate, & oversee owner provided materials & installers as part of this work



Know what's below. Call before you dig.



Espalier, LLC  
P.O. Box 1247  
Fairhope, Alabama 36533  
P. 251.454.3500  
espalierdesign.com

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# MATTHEWS PARK

PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED

30% Review
60% Review 4/1/22
90% Review 5/2/22
Bid/Permit 5/18/22

FIELD SITE PLAN

DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET
CREATED BY JC	
PROJECT NO. 2201	L-1.1
DATE 1/26/22	

DRAFT - FOR REVIEW ONLY  
NOT FOR CONSTRUCTION



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Call before you dig.

Note: General contractor shall receive, store, secure, schedule, coordinate, & oversee owner provided materials & installers as part of this work

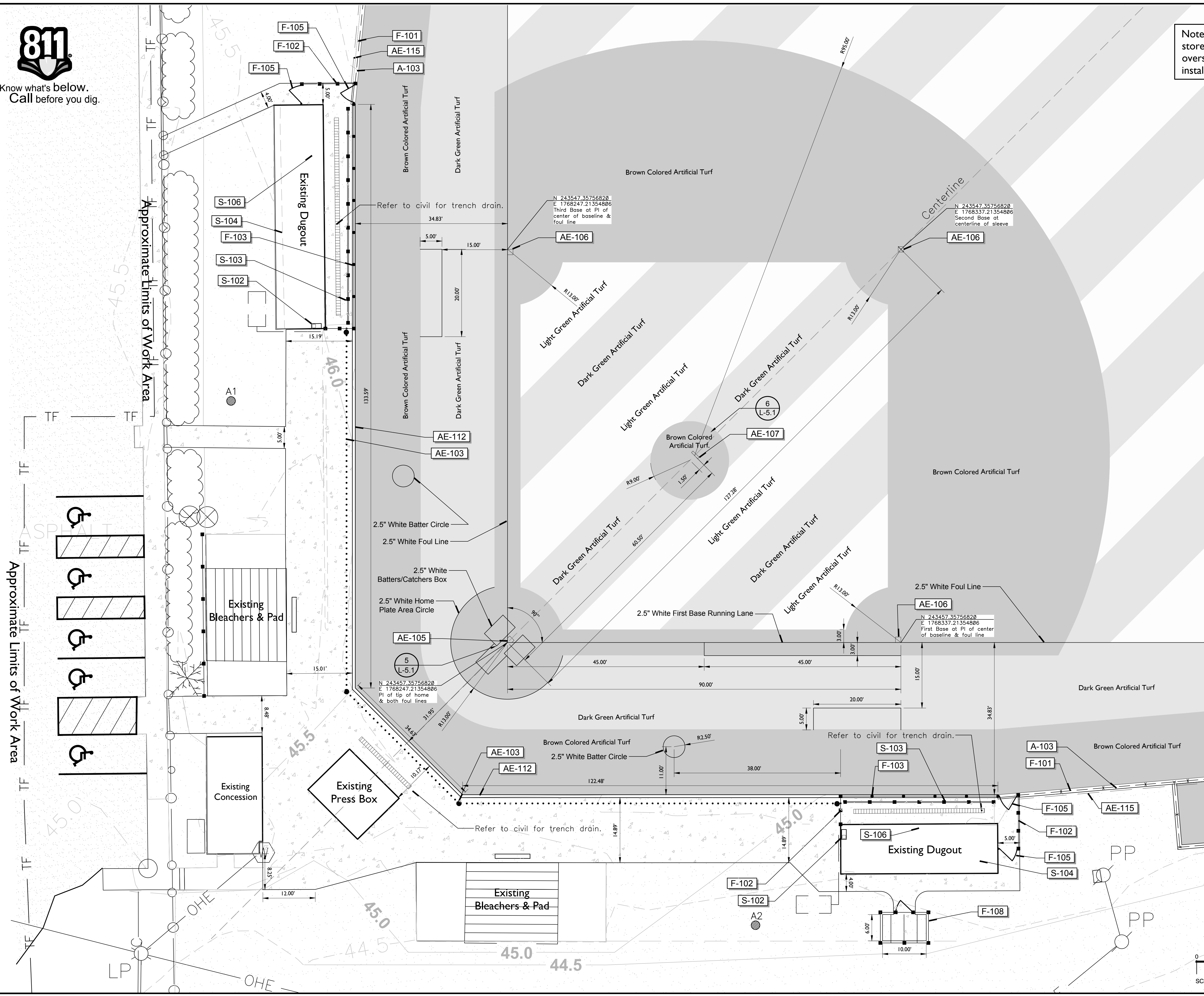


Espalier, LLC  
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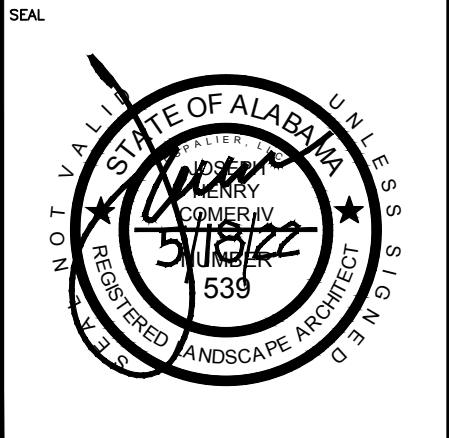
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# MATTHEWS PARK

PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL



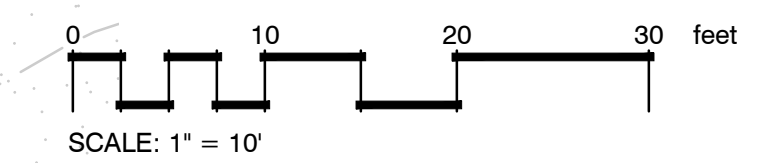
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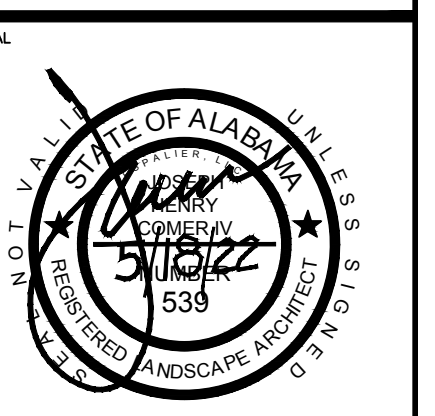
ISSUED/REVISED
30% Review
60% Review 4/1/22
90% Review 5/2/22
Bid/Permit 5/18/22

SHEET TITLE  
**INFIELD ENLARGEMENT**

DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET L-1.2
CHECKED BY JC	
PROJECT NO. 2201	
DATE 1/26/22	



**MATTHEWS PARK**  
PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL

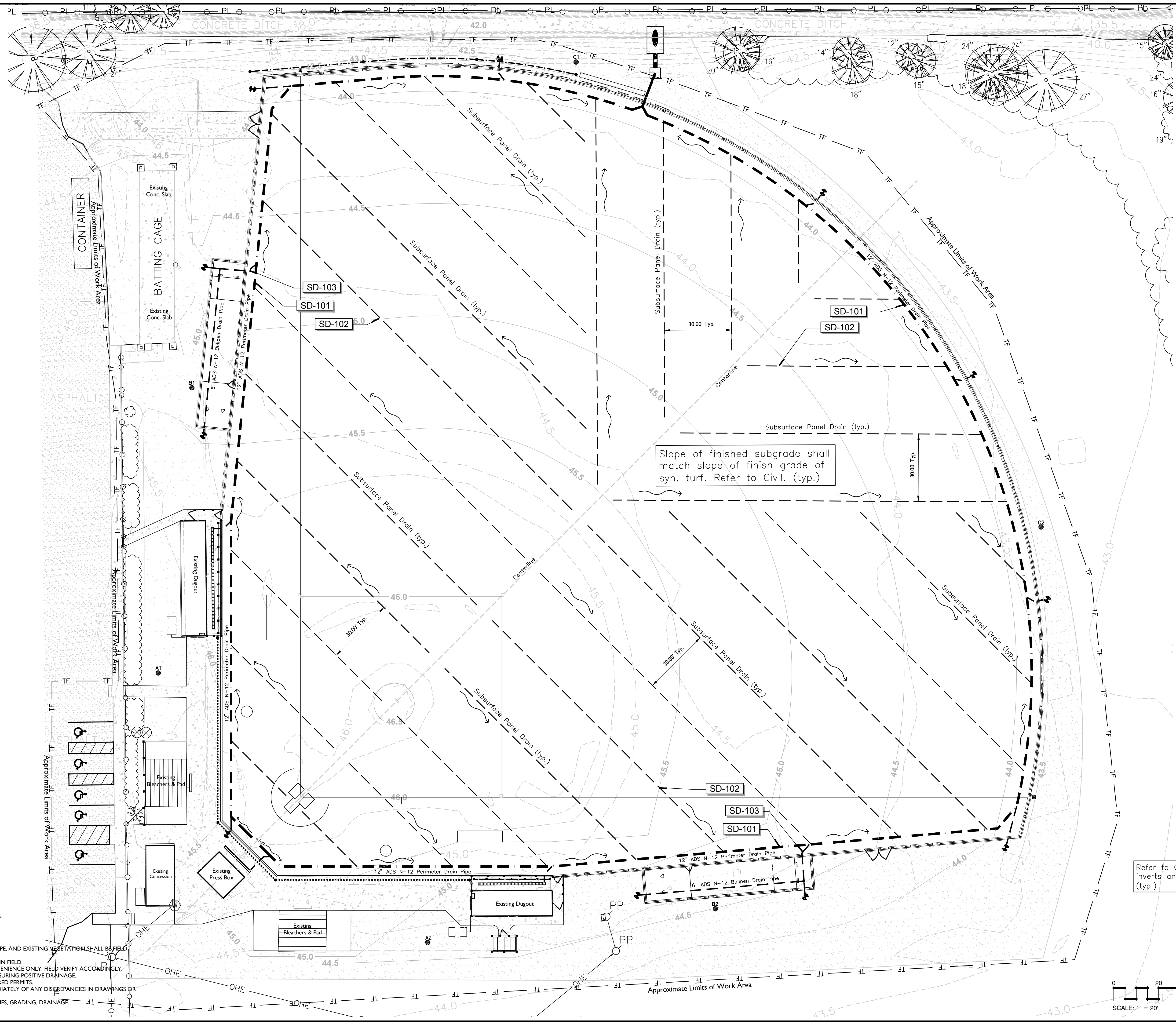


ISSUED/REVISED
30% Review
60% Review 4/1/22
90% Review 5/2/22
Bid/Permit 5/18/22

**FIELD SUBDRAINAGE PLAN**

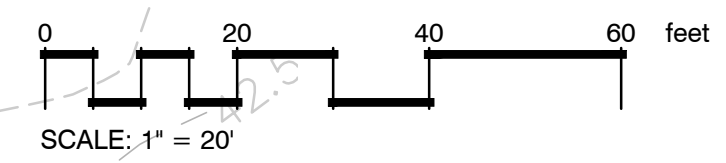
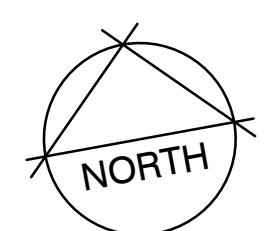
DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2201	L-2.1
DATE 1/26/22	

FOR PERMITTING ONLY



Slope of finished subgrade shall match slope of finish grade of syn. turf. Refer to Civil. (typ.)

Refer to Civil for pipe inverts and elevations. (typ.)



- NOTES:
1. SURVEY PROVIDED BY OWNER.
  2. LOCATION OF STRUCTURES, HARDSCAPE, AND EXISTING VEGETATION SHALL BE FIELD VERIFIED.
  3. VERIFY ALL LAYOUT AND DIMENSIONS IN FIELD.
  4. QUANTITIES PROVIDED ARE FOR CONVENIENCE ONLY. FIELD VERIFY ACCORDINGLY.
  5. CONTRACTOR IS RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE.
  6. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS.
  7. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN DRAWINGS OR FIELD CONDITIONS.
  8. REFER TO ARCH. / CIVIL FOR ALL UTILITIES, GRADING, DRAINAGE.



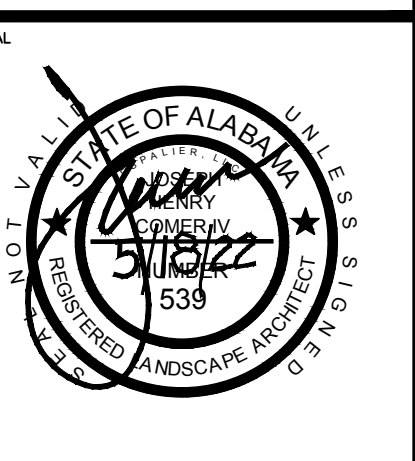
Know what's below.  
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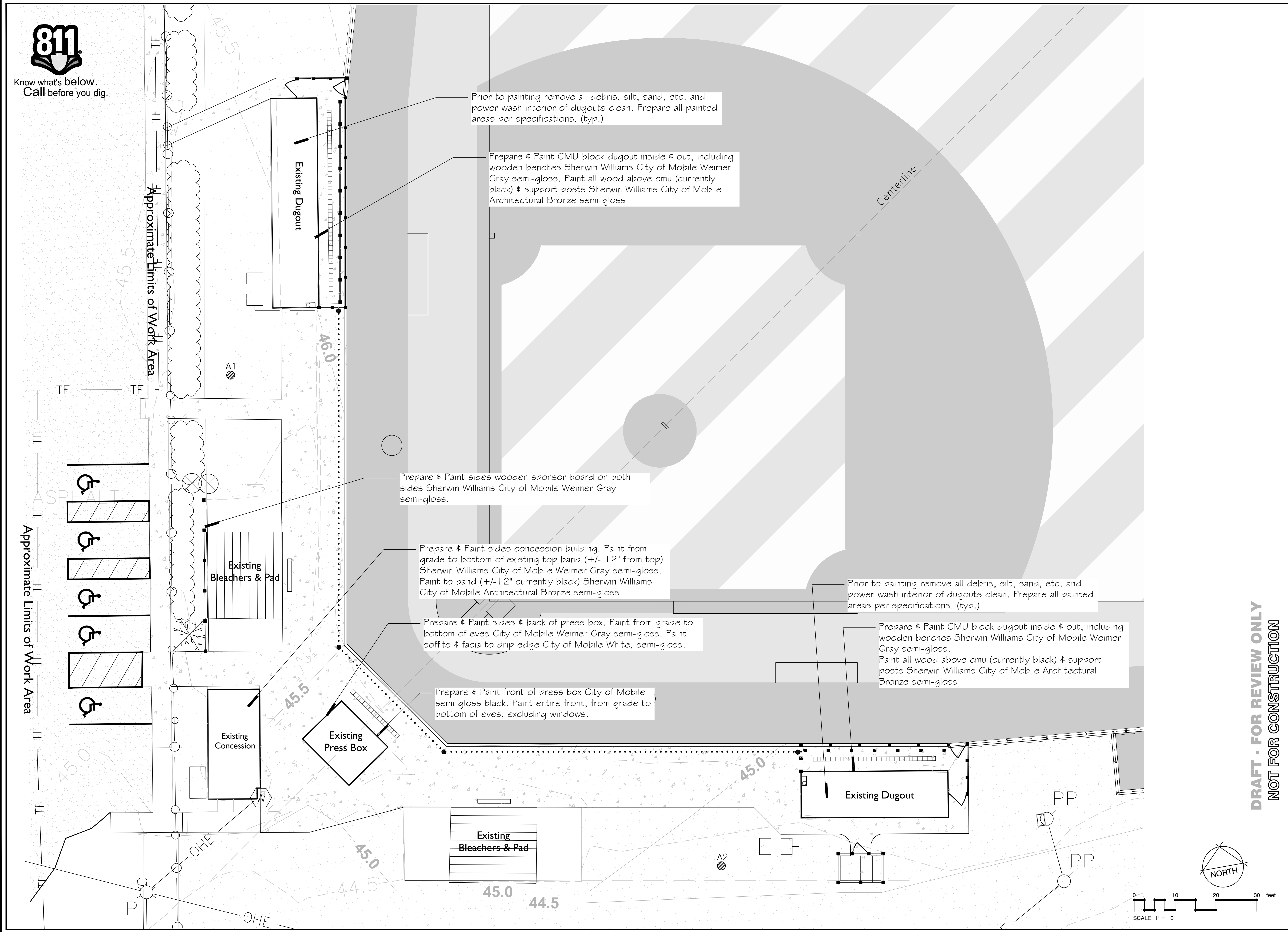
**MATTHEWS PARK**  
PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED  
90% Review 5/2/22  
Bid/Permit 5/18/22

SHEET TITLE  
**PAINTING PLAN**

DESIGNED BY: JC  
DRAWN BY: JC  
CHECKED BY: JC  
PROJECT NO.: 2201  
DATE: 1/26/22  
FILE NAME: MATTSYN  
SHEET: L-3.1



Prior to painting remove all debris, silt, sand, etc. and power wash interior of dugouts clean. Prepare all painted areas per specifications. (typ.)

Prepare & Paint CMU block dugout inside & out, including wooden benches Sherwin Williams City of Mobile Weimer Gray semi-gloss. Paint all wood above cmu (currently black) & support posts Sherwin Williams City of Mobile Architectural Bronze semi-gloss

Prepare & Paint sides wooden sponsor board on both sides Sherwin Williams City of Mobile Weimer Gray semi-gloss.

Prepare & Paint sides concession building. Paint from grade to bottom of existing top band (+/- 12" from top) Sherwin Williams City of Mobile Weimer Gray semi-gloss. Paint to band (+/- 12" currently black) Sherwin Williams City of Mobile Architectural Bronze semi-gloss.

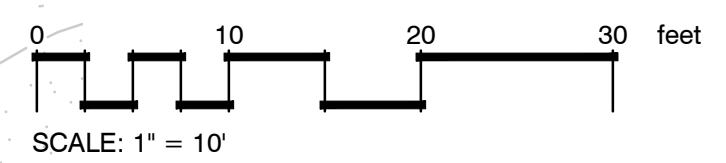
Prepare & Paint sides & back of press box. Paint from grade to bottom of eves City of Mobile Weimer Gray semi-gloss. Paint soffits & facia to drip edge City of Mobile White, semi-gloss.

Prepare & Paint front of press box City of Mobile semi-gloss black. Paint entire front, from grade to bottom of eves, excluding windows.

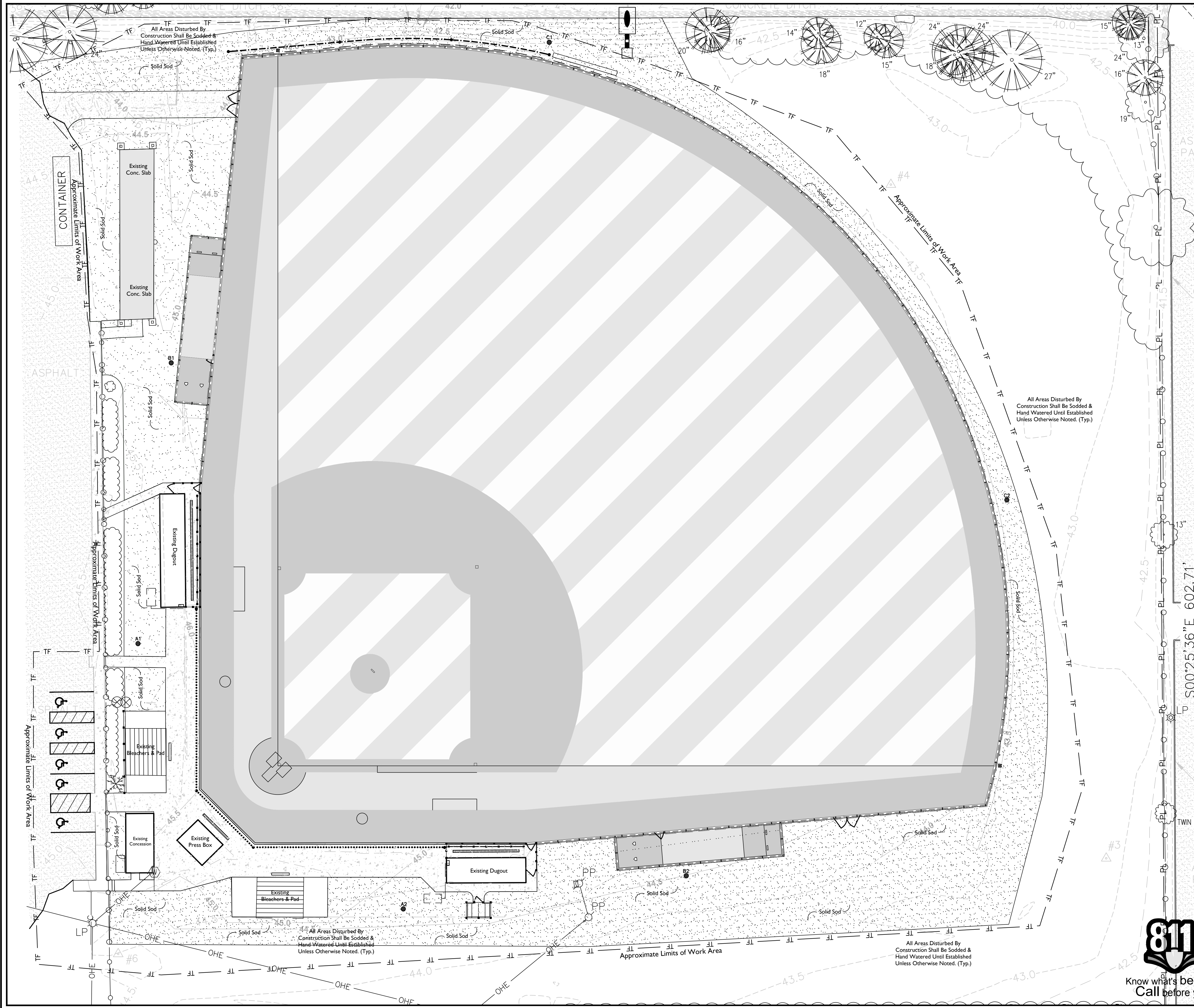
Prior to painting remove all debris, silt, sand, etc. and power wash interior of dugouts clean. Prepare all painted areas per specifications. (typ.)

Prepare & Paint CMU block dugout inside & out, including wooden benches Sherwin Williams City of Mobile Weimer Gray semi-gloss. Paint all wood above cmu (currently black) & support posts Sherwin Williams City of Mobile Architectural Bronze semi-gloss

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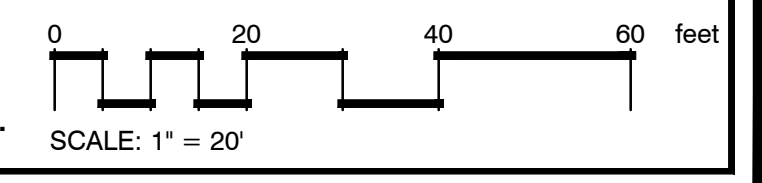
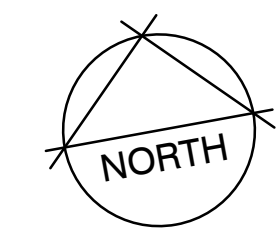
- Notes:
1. Hand water all sod until established.
  2. See project manual for specifications on preparing & installing sod areas & pre-plant amendments.

See sheet L-1.54 for reference schedule.

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**NOT FOR CONSTRUCTION**



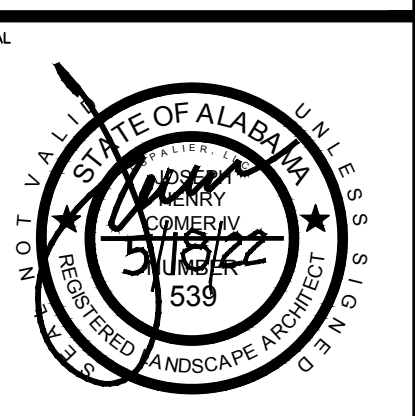
Know what's below.  
Call before you dig.



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P.O. Box 1247  
Fairhope, Alabama 36533  
P. 251.454.3500  
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**MATTHEWS PARK**  
PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED  
90% Review 5/2/22  
Bid/Permit 5/18/22

LANDSCAPE PLAN

DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET
CHECKED BY JC	L-4.1
PROJECT NO. 2201	
DATE 4/25/22	

**CAPITAL IMPROVEMENT PLAN**  
 AUTHORIZED BY  
**CITY OF MOBILE**  
 WILLIAM S. STIMPSON, MAYOR  
 DISTRICT 5 COUNCIL MEMBER JOEL DAVES  
 PR-015-19 MEDAL OF HONOR ATHLETIC FIELD IMPROVEMENTS  
 PROJECT COST: \$ (INSERT DOLLAR AMOUNT)  
 ESPALIER, LLC - LANDSCAPE ARCHITECT  
 (INSERT CONTRACTOR'S NAME) - CONTRACTOR

**PROJECT SIGN DETAIL**

- SIGN SHALL BE CONSTRUCTED OF 3/4" EXTERIOR GRADE PLYWOOD PAINTED ON ALL SIDES AND EDGES WITH 2 COATS EXTERIOR SEMI-GLOSS WHITE ENAMEL AND LETTERED WITH EXTERIOR BLACK ENAMEL "ARIAL BOLD" FONT.
- SIGN TO BE PLACED AT LOCATION(S) DIRECTED BY THE CITY OF MOBILE ARCHITECTURAL ENGINEERING DEPARTMENT.
- SIGN SHALL BE FRESHLY PAINTED AND MAINTAINED IN GOOD CONDITION UNTIL COMPLETION OF PROJECT, AND THEN REMOVED FROM THE SITE.
- PROJECT COST SHALL BE NEATLY PAINTED ON ORIGINAL SIGN, NOT ON A BOARD NAILED TO THE SIGN.
- 4 x 4 PRESSURE-TREATED WOOD POSTS TO BE PAINTED WITH 2 COATS EXTERIOR SEMI-GLOSS WHITE ENAMEL.
- CONTRACTOR SHALL PROVIDE A SHOP DRAWING OF SIGN FOR APPROVAL PRIOR TO ORDERING OR CONSTRUCTING SIGN.

**1 PROJECT SIGN DISTRICT 5**  
 NOT TO SCALE P-CO-MAT-01

**4 SYNTHETIC BULL PEN DETAIL**  
 1/8" = 1'-0" P-CO-MAT-04

**4 SYNTHETIC BULL PEN DETAIL**  
 1/8" = 1'-0" P-CO-MAT-04

**2 CONCRETE WALK / CONTROL JOINTS**  
 1 1/2" = 1'-0"

**2 CONCRETE WALK / CONTROL JOINTS**  
 1 1/2" = 1'-0"

**ENLARGED TYPICAL CAULKED JOINT**  
 3/16" = 1'-0"

**ENLARGED TYPICAL CAULKED JOINT**  
 3/16" = 1'-0"

**5 BATTERS BOX DETAIL**  
 1/4" = 1'-0" P-CO-MIM-06

**5 BATTERS BOX DETAIL**  
 1/4" = 1'-0" P-CO-MIM-06

**6 BASEBALL PITCHERS MOUND DETAIL**  
 1/4" = 1'-0" B-06

**6 BASEBALL PITCHERS MOUND DETAIL**  
 1/4" = 1'-0" B-06

**3 TYPICAL CHAIN LINK FENCE DETAIL**  
 1/2" = 1'-0" P-CO-MIM-03

**3 TYPICAL CHAIN LINK FENCE DETAIL**  
 1/2" = 1'-0" P-CO-MIM-03

**3 TYPICAL FENCE POST CENTERED ON CURB**  
 1/4" = 1'-0"

**3 TYPICAL FENCE POST CENTERED ON CURB**  
 1/4" = 1'-0"

STANDARD POST FOOTING DEPTH & DIAMETER  
 Standard Application. See notes for posts in curb.

	4'-0" OR LESS		OVER 4' TO 8'	
	WIDTH	DEPTH	WIDTH	DEPTH
LINE & BRACE POSTS	8"	3'	10"	3'
TERMINAL POST	10"	3'	12"	3'

	6 & 8' HT.		4' HT.	
	WIDTH	DEPTH	WIDTH	DEPTH
CORNER GATE & TERMINAL POSTS	3" ø	3" ø	3" ø	3" ø
LINE POSTS	2-1/2" ø	2" ø	2" ø	2" ø
TOP & BOTTOM RAILS	1-5/8" ø	1-5/8" ø	1-5/8" ø	1-5/8" ø
GATE FRAMES	2" ø	2" ø	2" ø	2" ø
FENCE FABRIC	2" SQUARE	2" SQUARE	2" SQUARE	2" SQUARE



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**MATTHEWS PARK**  
 PR-022-21 -- SYNTHETIC TURF FIELD A  
 3700 MICHAEL BLVD., MOBILE, AL



ISSUED/REVISED

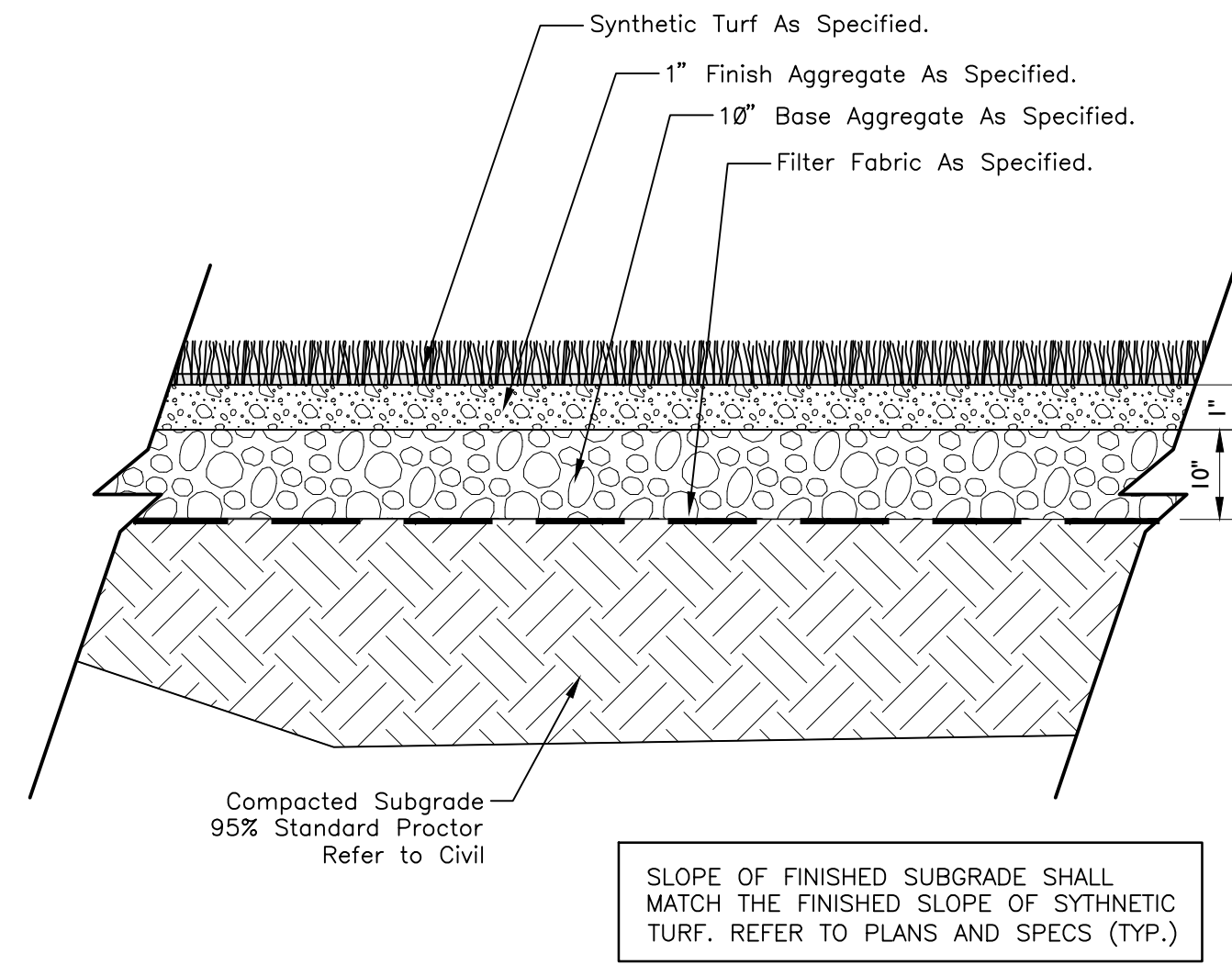
30% Review
60% Review 4/1/22
90% Review 5/2/22
Bid/Permit 5/18/22

**FIELD DETAILS**

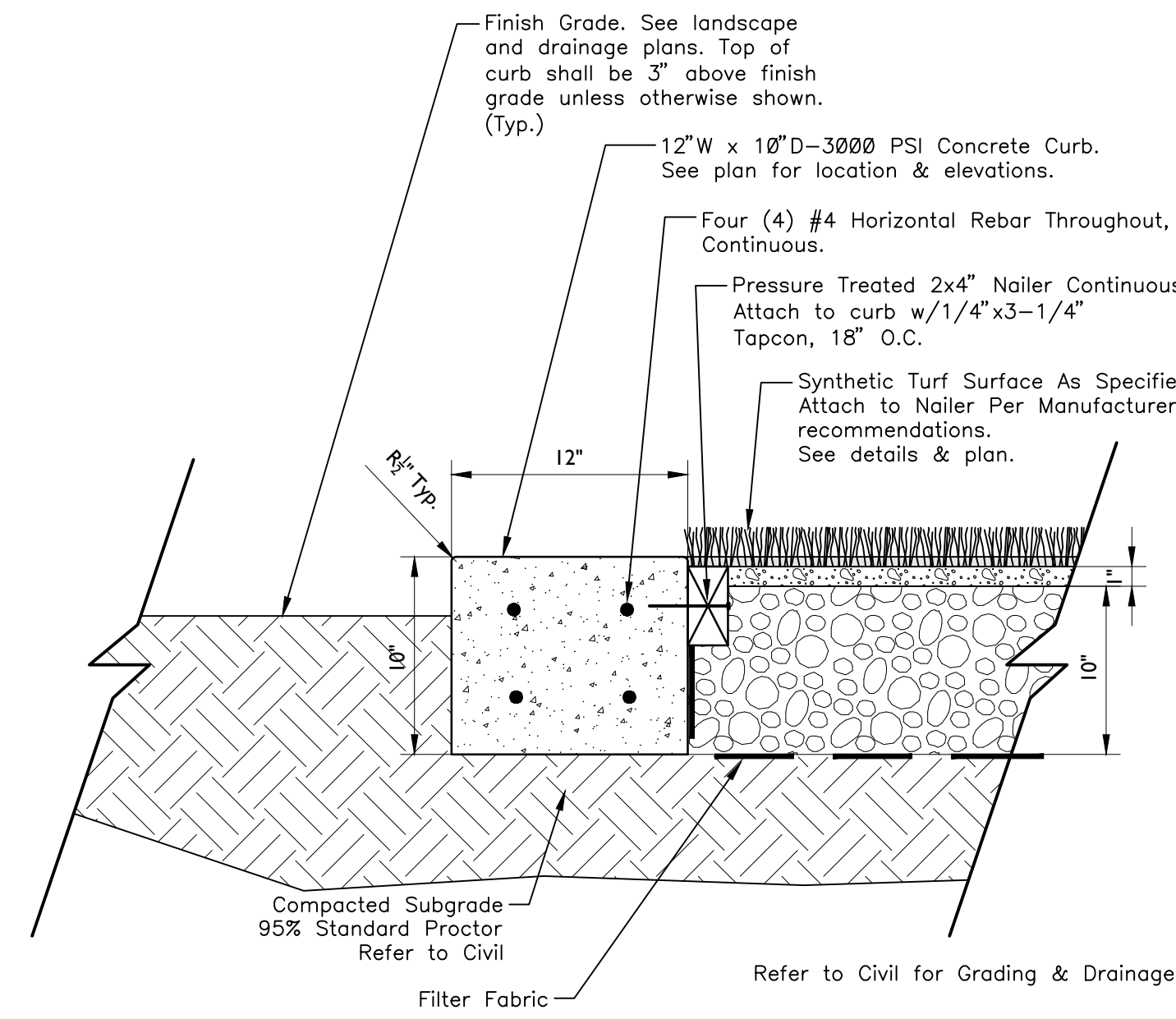
DESIGNED BY: JC  
 DRAWN BY: JC  
 CHECKED BY: JC  
 PROJECT NO.: 2201  
 DATE: 1/26/22

FILE NAME: MATTSYN SHEET  
 L-5.1

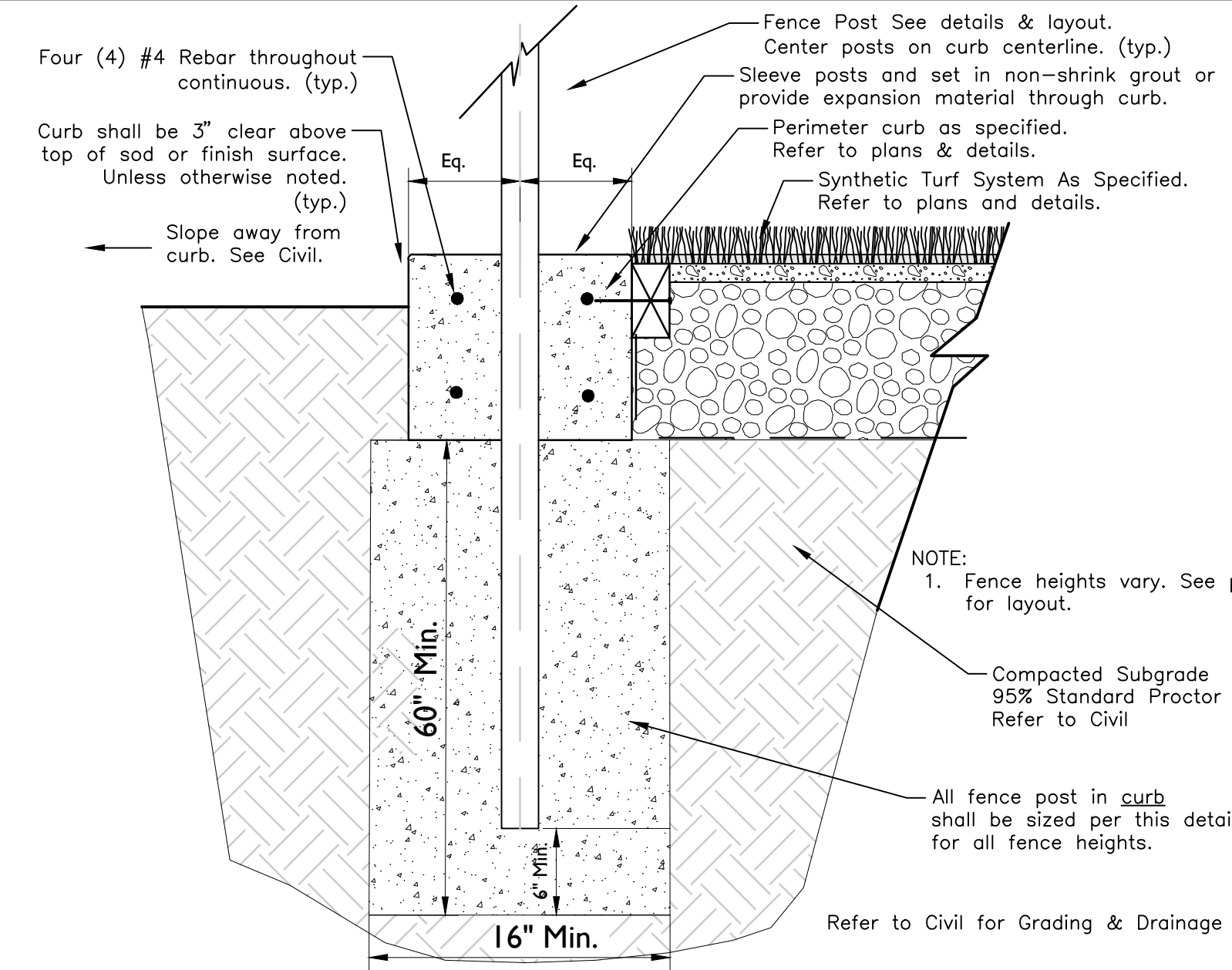
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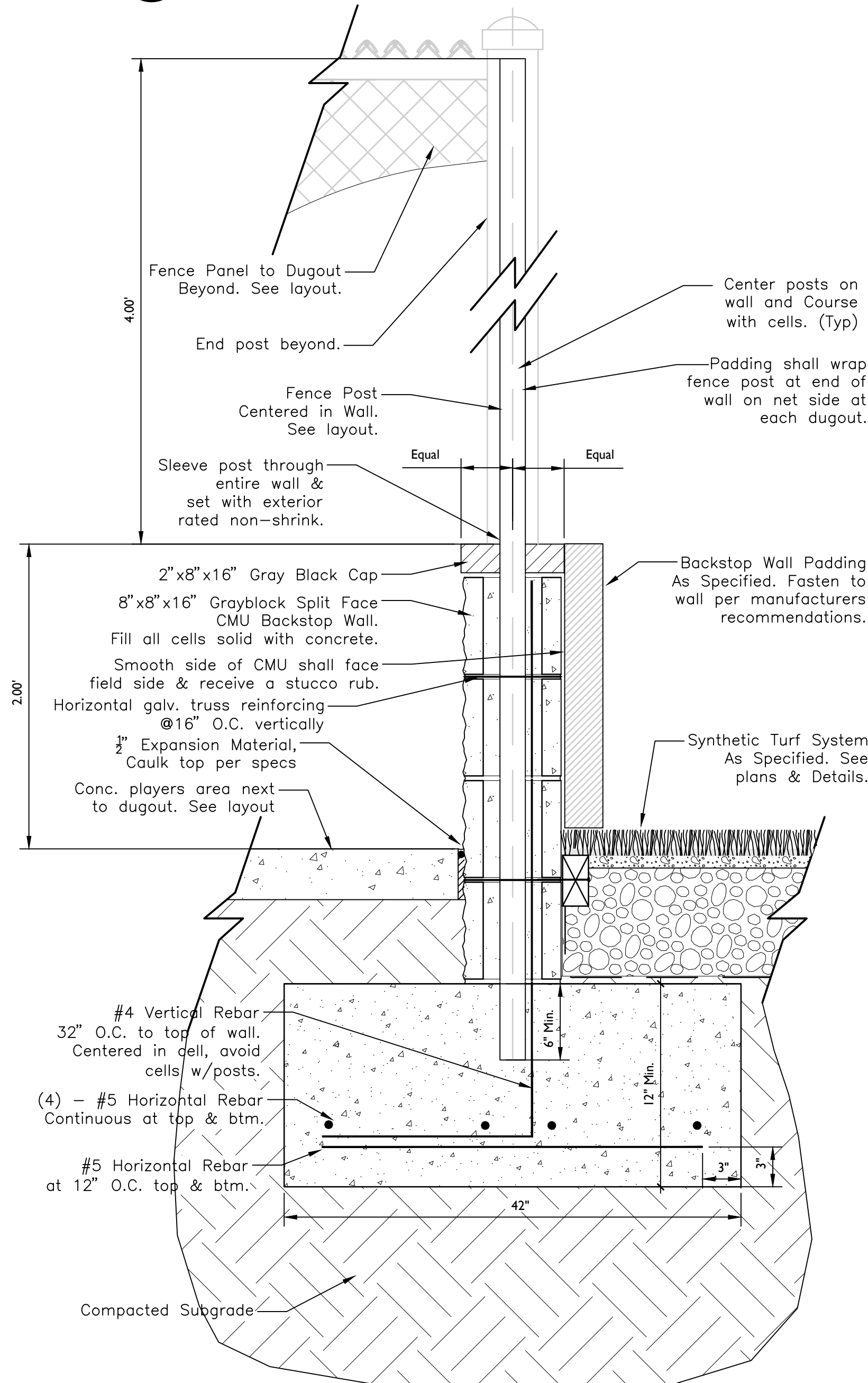
**1 SYNTHETIC TURF DETAIL**  
NOT TO SCALE P-CO-MED-02



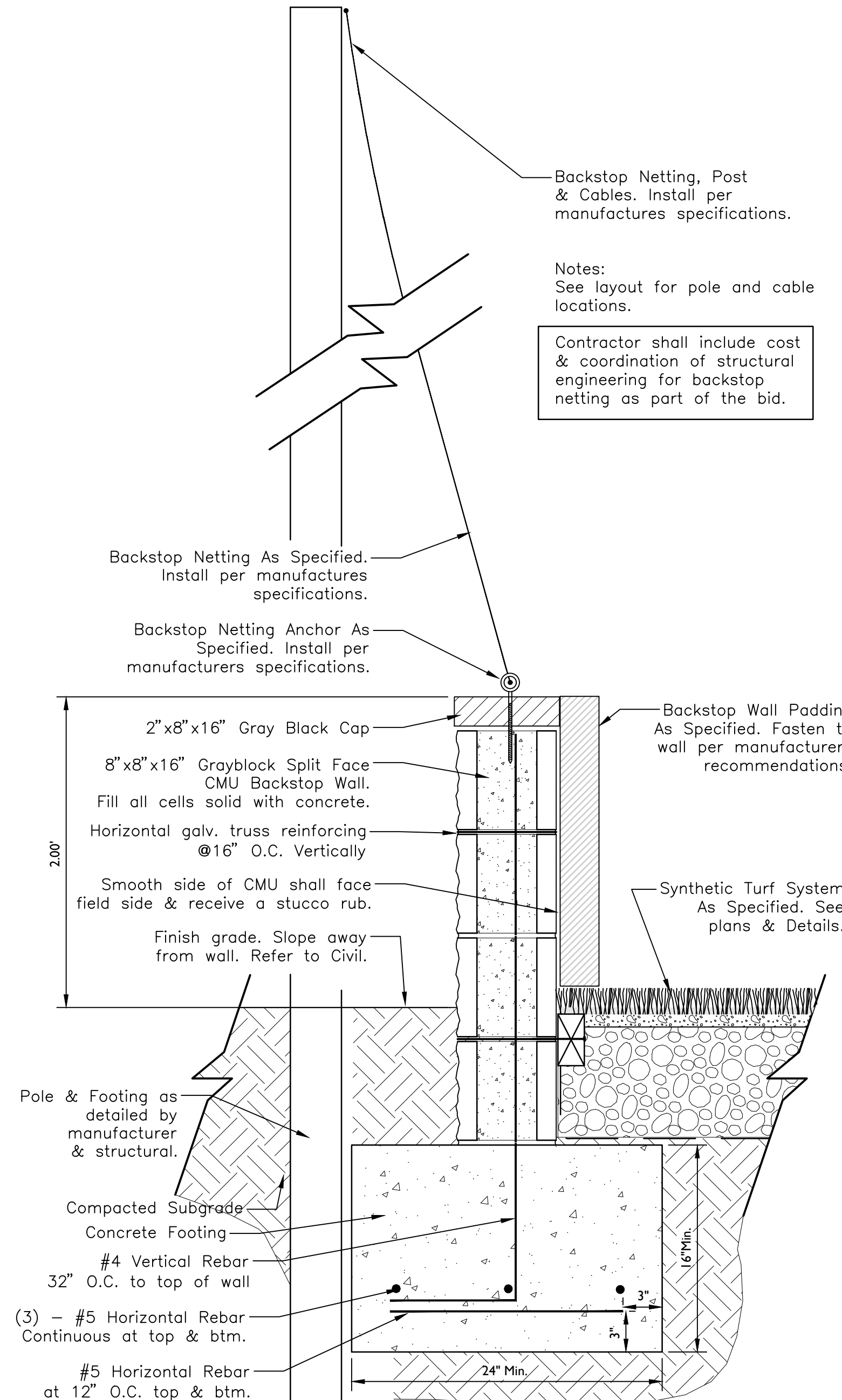
**2 SYNTHETIC TURF @ PERIMETER CURB**  
NOT TO SCALE P-CO-MAT1-01



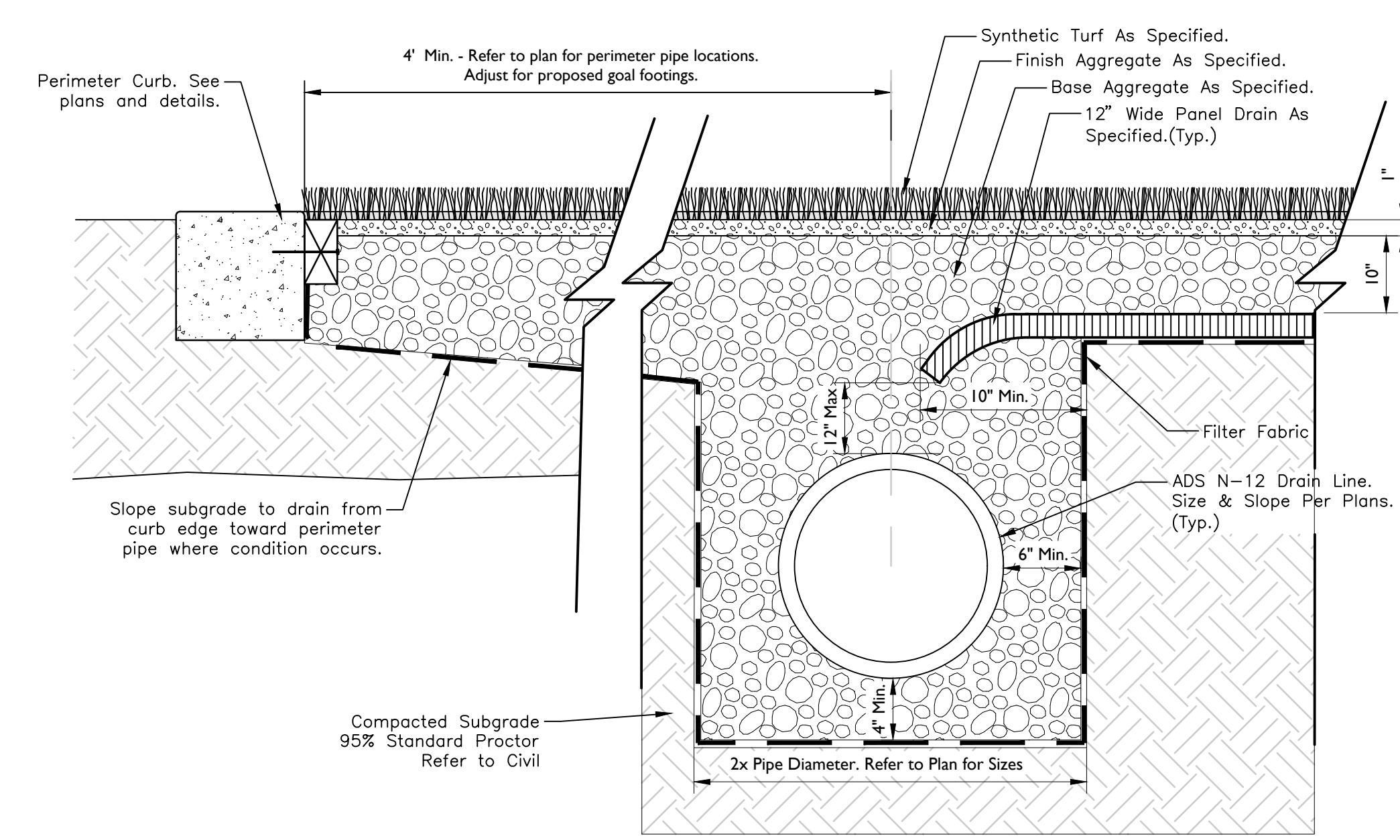
**3 FENCE SECTION AT PERIMETER CURB**  
NOT TO SCALE P-CO-MAT-02



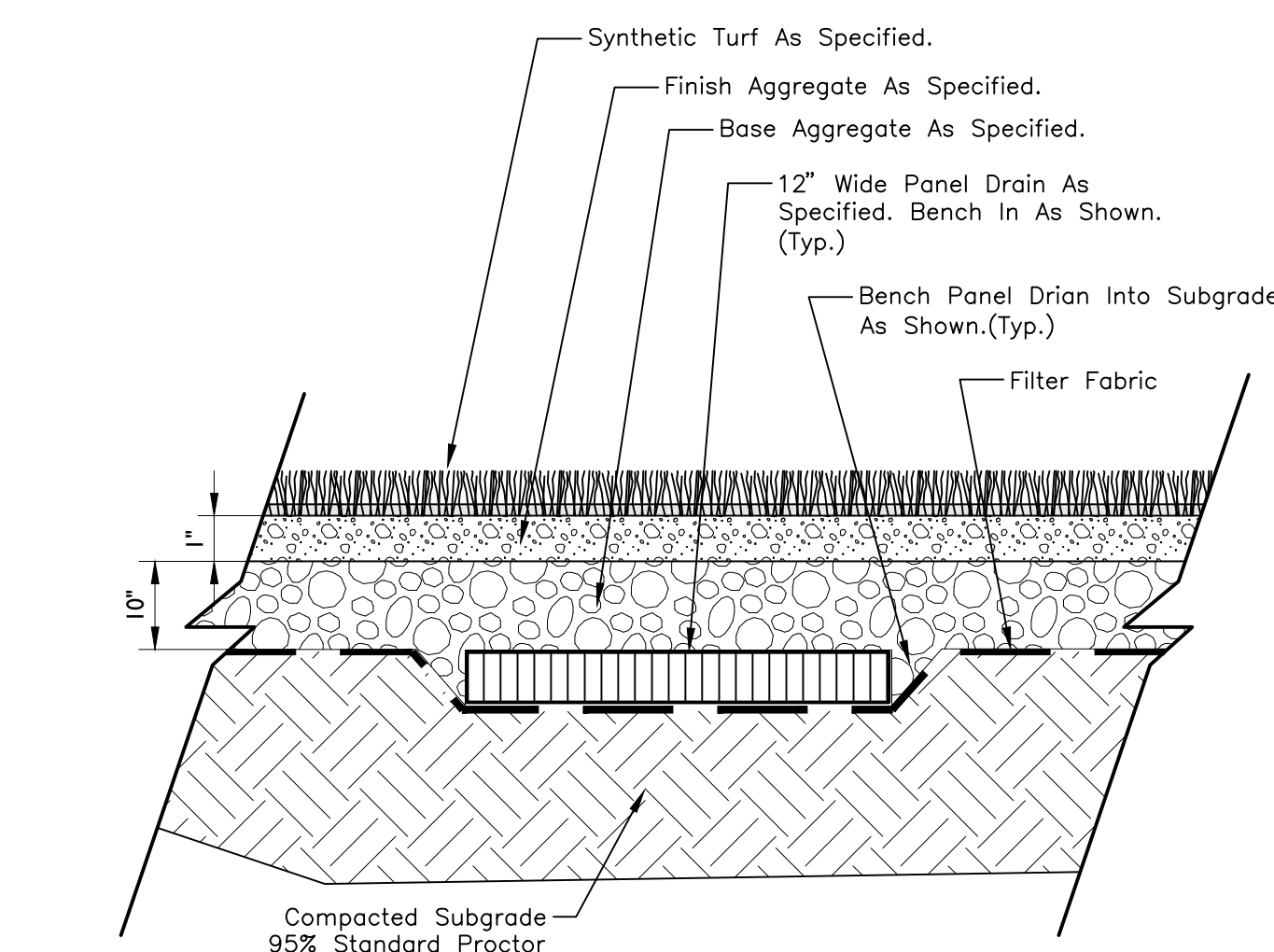
**4 BACKSTOP WALL DETAIL AT DUGOUT**  
1 1/2" = 1'-0" P-CO-MAT-09



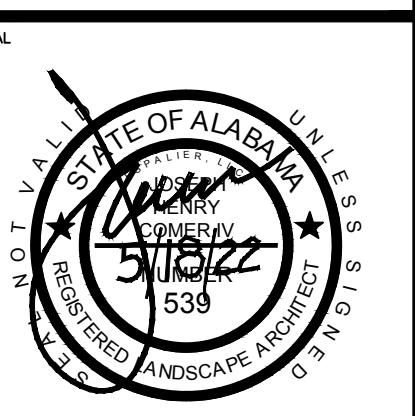
**5 BACKSTOP WALL DETAIL AT NET**  
1 1/2" = 1'-0" P-CO-MAT-11



**7 PERIMETER DRAIN SECTION @ PANEL DRAIN**  
NOT TO SCALE P-CO-MED-04



**8 PANEL DRAIN DETAIL**  
NOT TO SCALE P-CO-MED-03



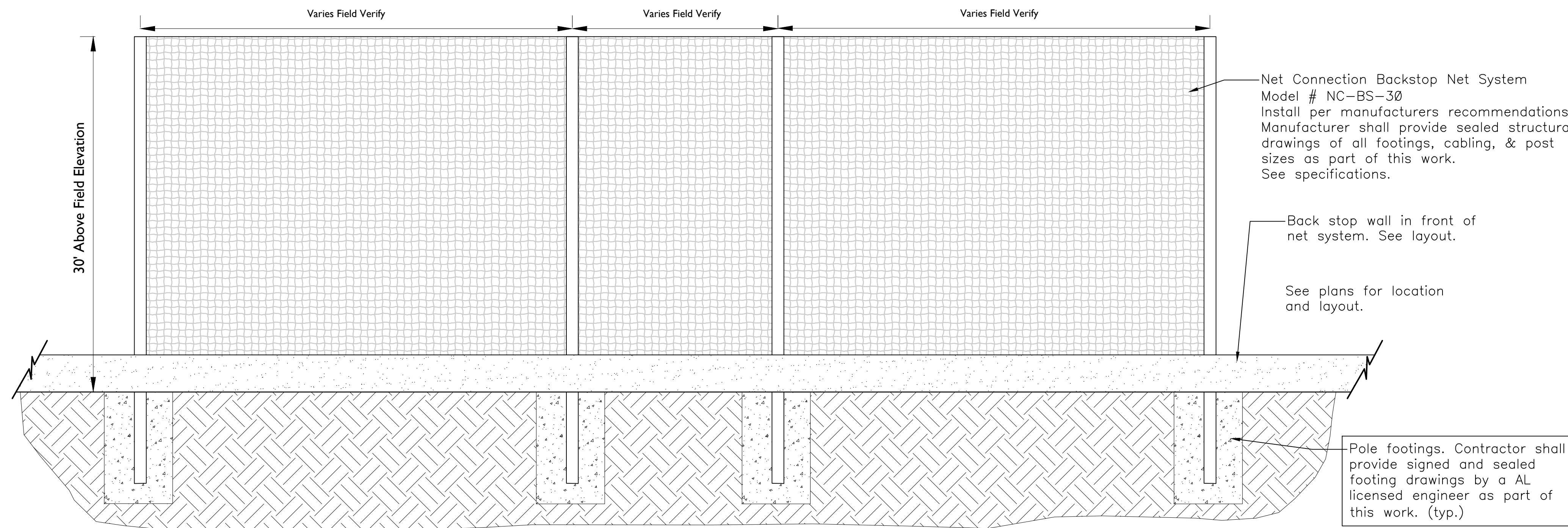
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90% Review 5/2/22
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SHEET TITLE  
**FIELD DETAILS**

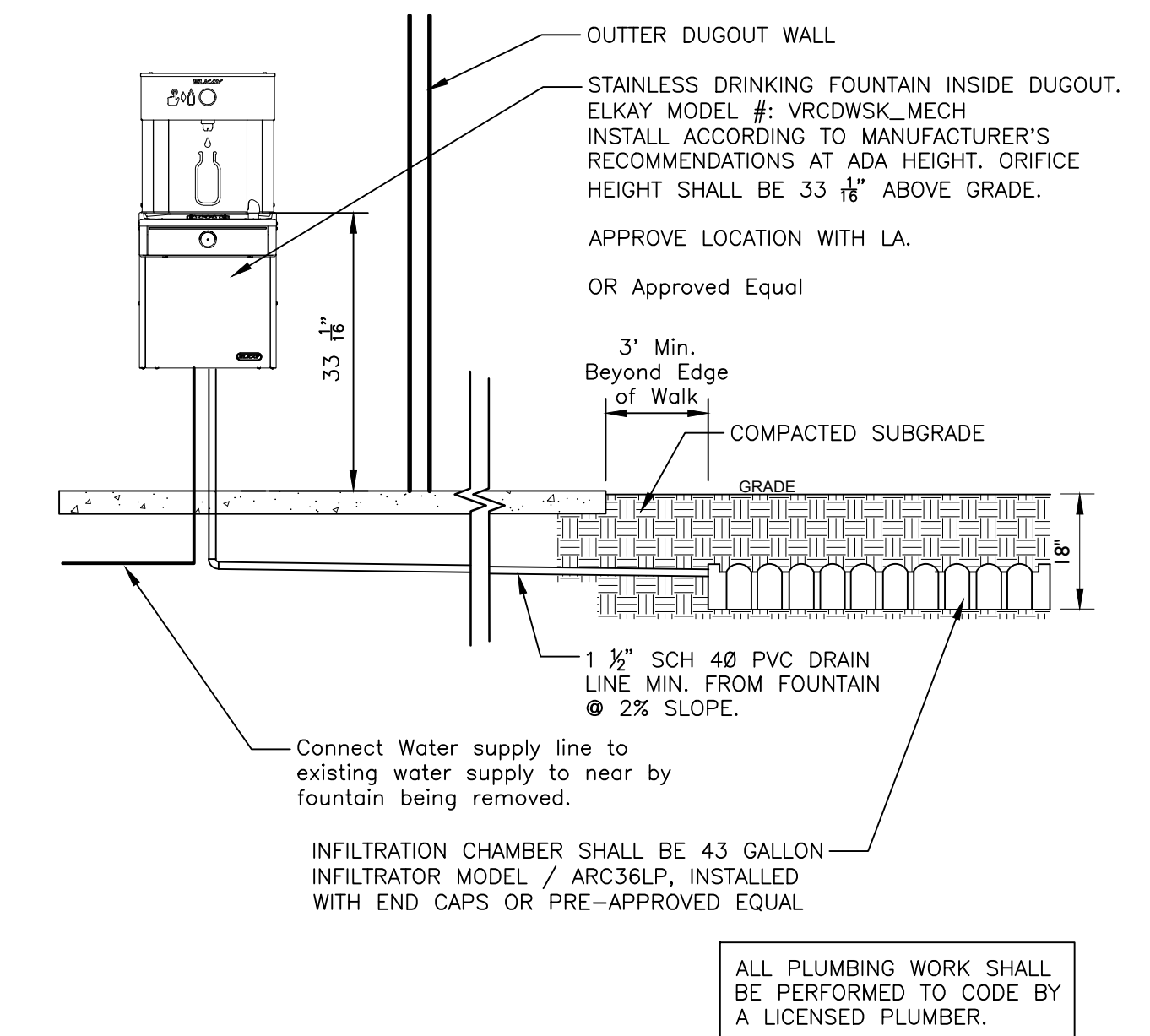
DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2201	L-5.2
DATE 1/26/22	

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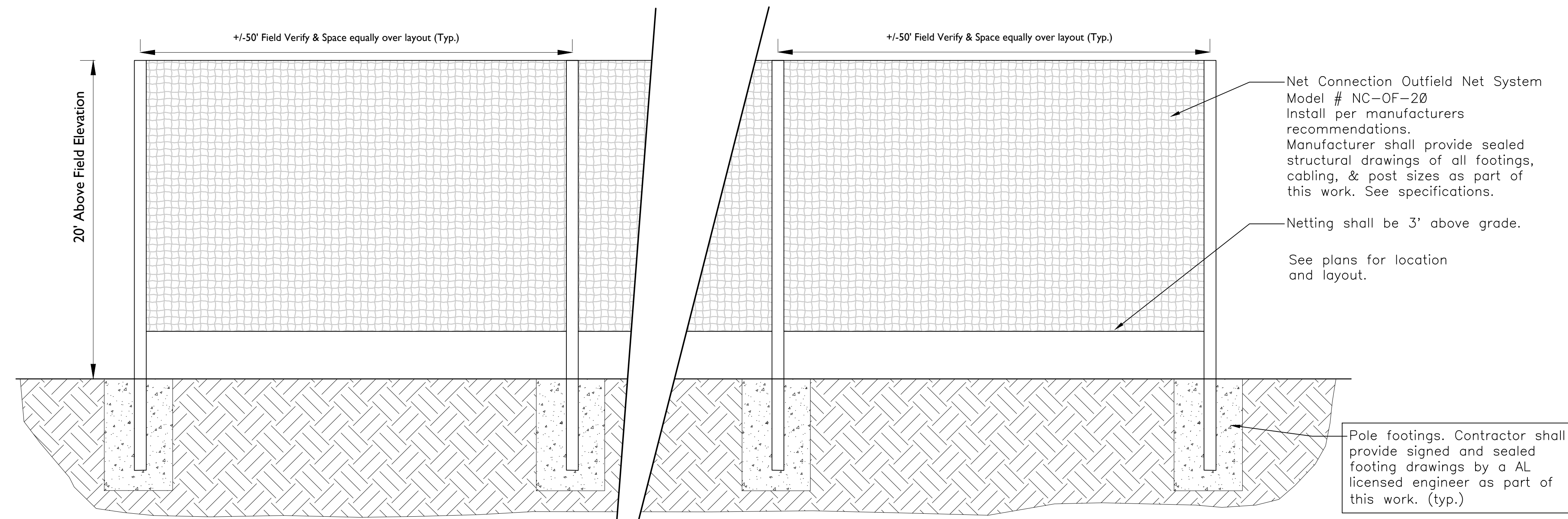
1 BACK STOP NET ELEVATION  
NOT TO SCALE

P-CO-MIM-13



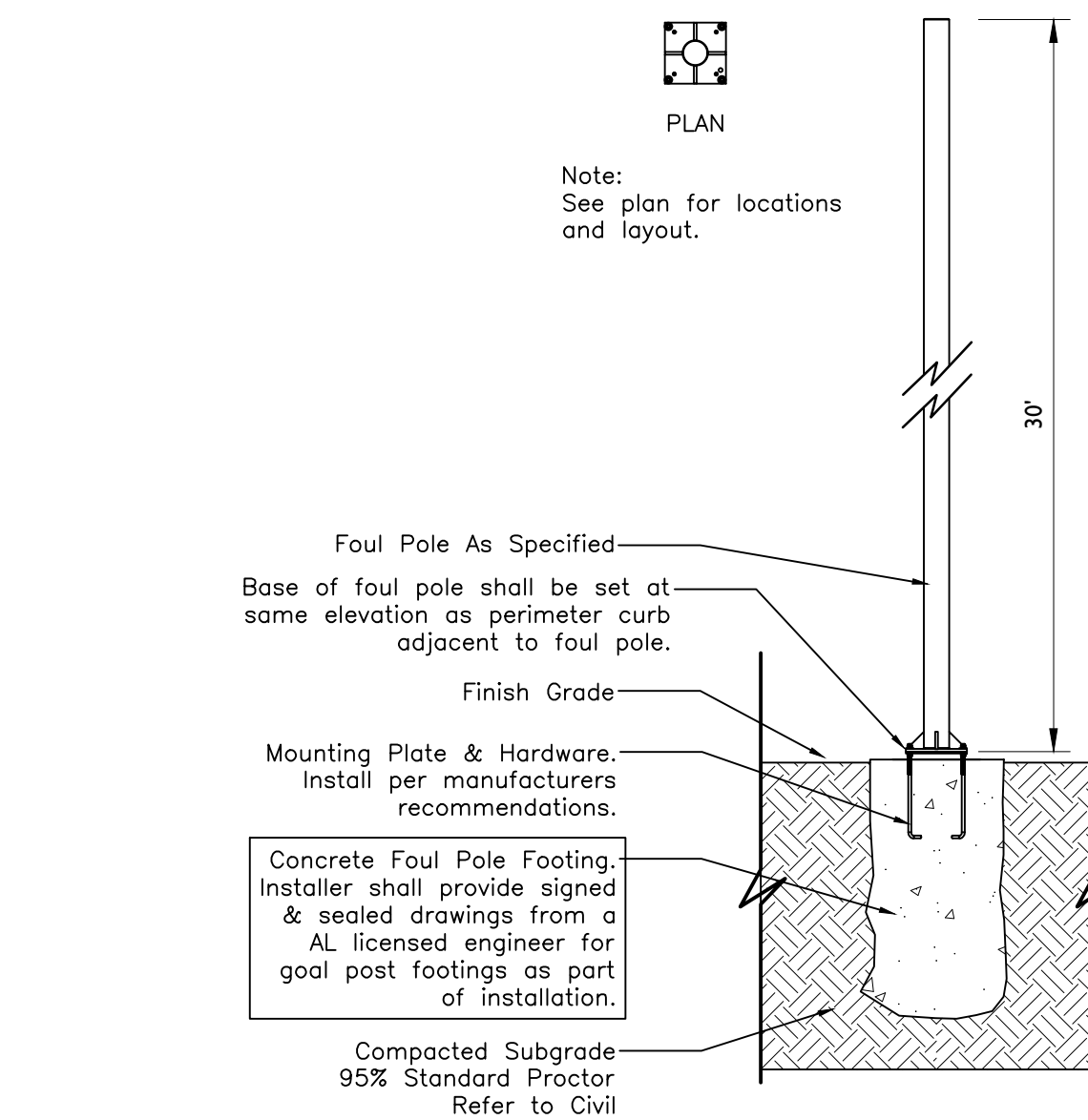
3 DRINKING FOUNTAIN/BOTTLE FILLER DETAIL  
NOT TO SCALE

P-CO-MAT-05



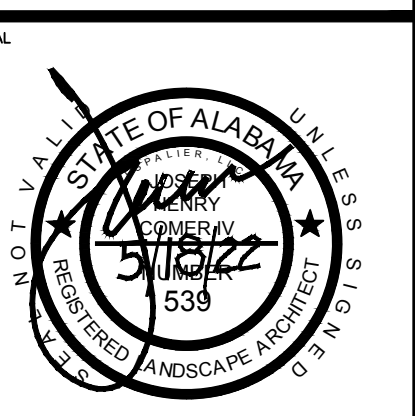
2 ADD ALTERNATE #1-OUTFIELD NET ELEVATION  
NOT TO SCALE

P-CO-MAT-06



4 FOUL POLE DETAIL  
3" = 1'-0"

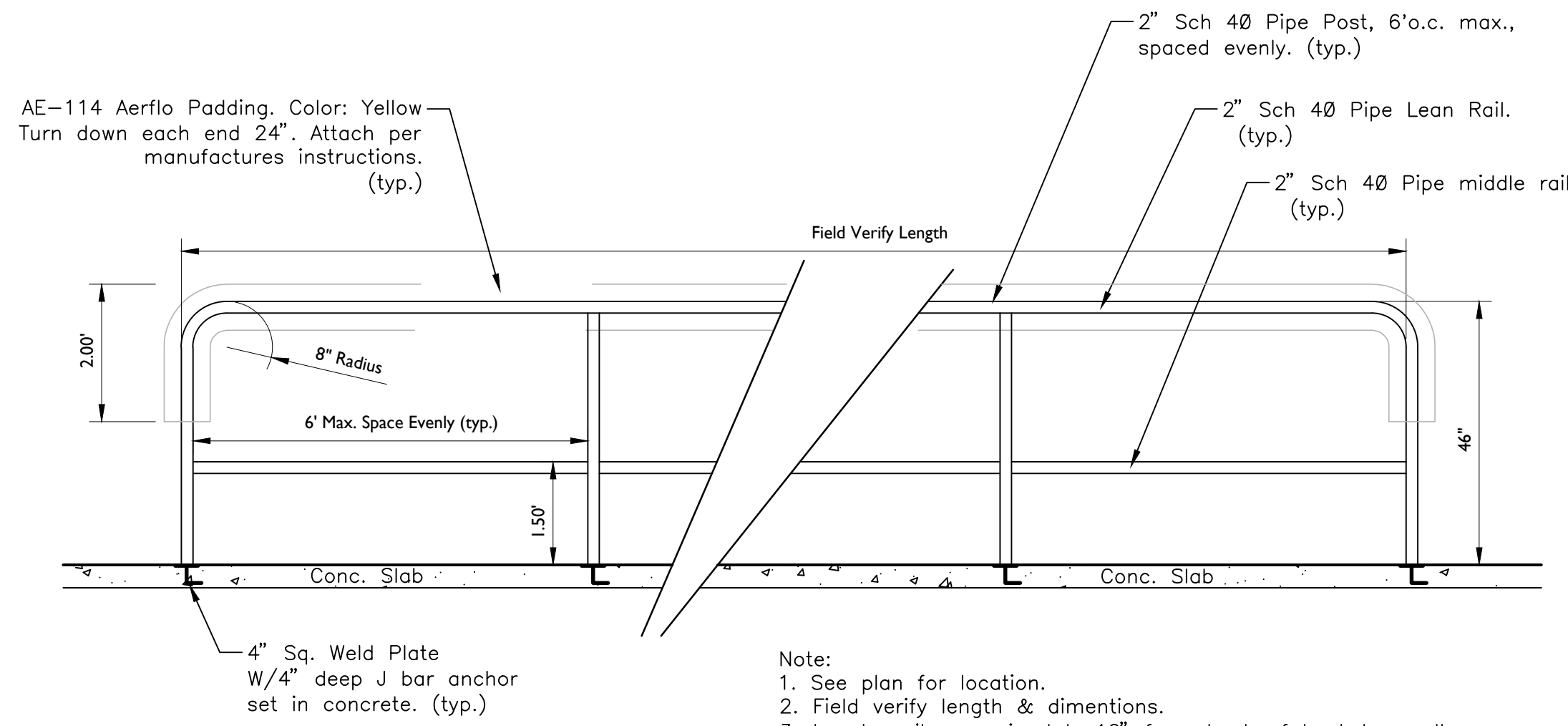
P-CO-MIM-07



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90% Review 5/2/22
Bid/Permit 5/18/22

SHEET TITLE  
FIELD DETAILS

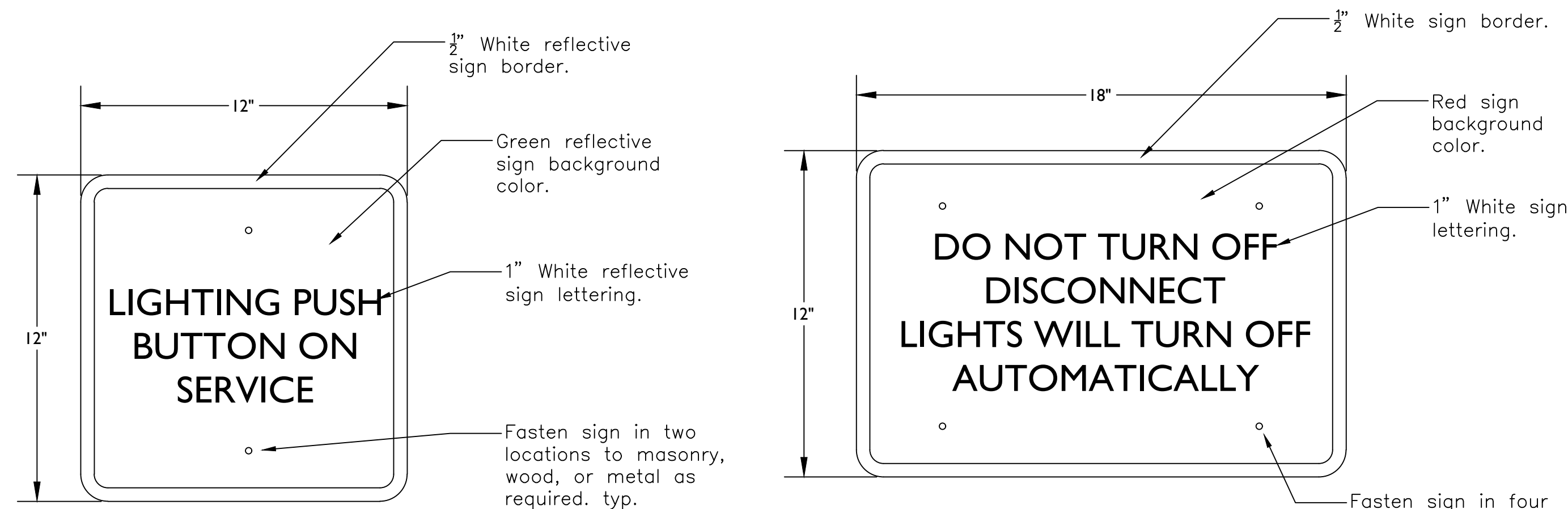
DESIGNED BY JC	FILE NAME MATTSYN
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2201	L-5.3
DATE 1/26/22	



**1 DUGOUT LEAN RAIL DETAIL**

1/2" = 1'-0"

P-CO-MAT1-02



Notes:  
1. Provide proof of signage for Owner/LA approval prior to fabrication.  
2. Confirm signage location with Owner.

Notes:  
1. Provide proof of signage for Owner/LA approval prior to fabrication.  
2. Confirm signage location with Owner.

**2 LIGHTING SIGN**

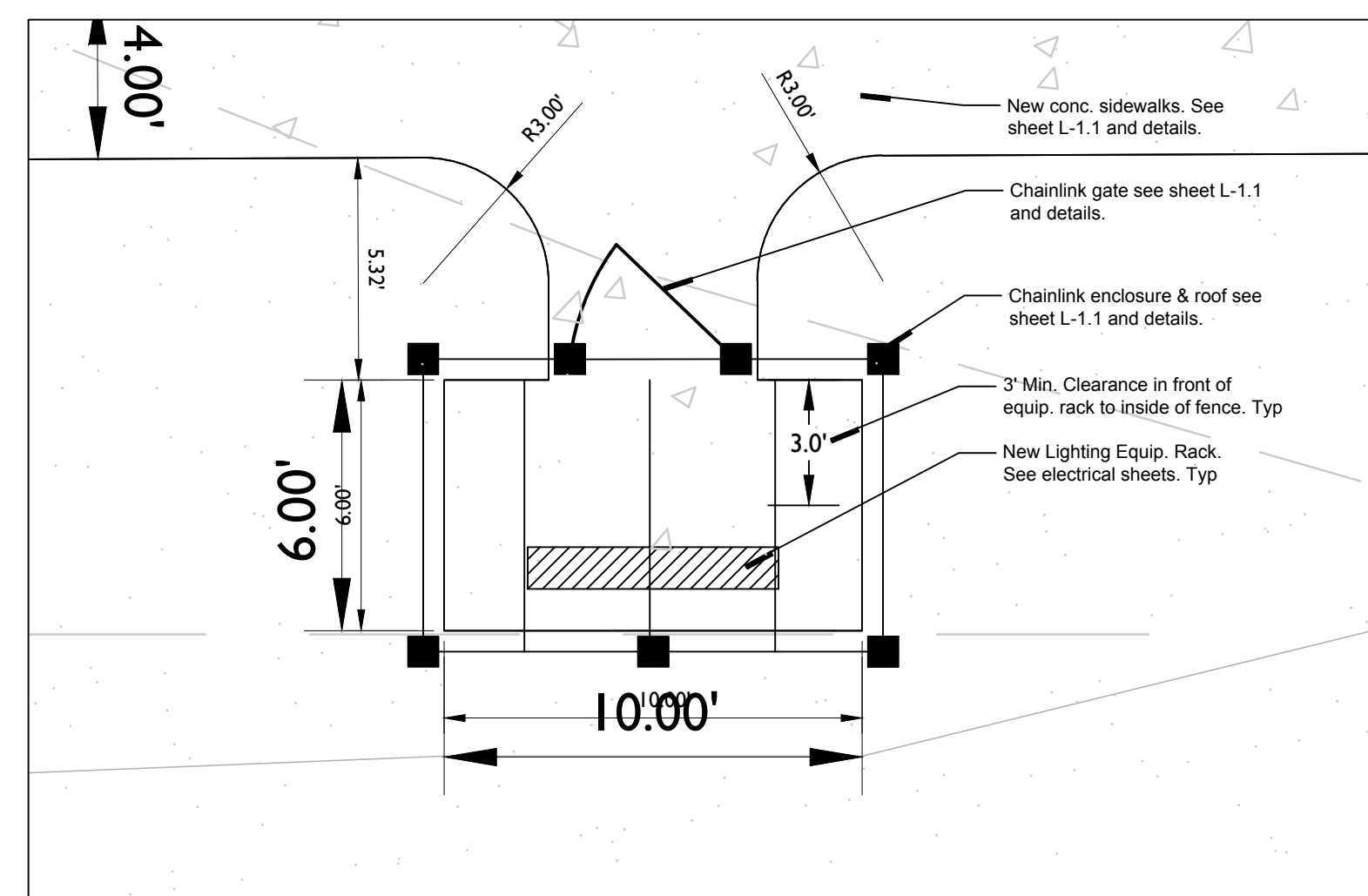
3" = 1'-0"

P-CO-MAT-07

**3 LIGHTING SIGN #2**

3" = 1'-0"

P-CO-MAT-08



**4 ELECTRICAL ENCLOSURE DETAIL**

1/4" = 1'-0"

**REFERENCE NOTES SCHEDULE**

SYMBOL	ATHLETIC SURFACES DESCRIPTION	QTY	DETAIL	SYMBOL	FENCING DESCRIPTION	QTY	DETAIL
A-101	Synthetic Turf Field. See details & specifications. Turf carpet provided & installed by owner. GC shall receive, secure, protect, schedule, & coordinate turf carpet installation provided by owner as part of this work.	110,775 sf	1/L-5.2	F-101	6' Black Vinyl Chain Link Fence On Curb: Master Halco Permafused Fabric 8 GA Finish, Type 1 Spectra Framework, Steel Ties. Knuckle Selvage Top & Bottom of Fabric, Sch 40 Posts. See plan for gate locations. Provide shop drawings for approval. OR Approved Equal	1,181 lf	3/L-5.1
A-102	(2) Synthetic Turf Bull Pen Areas. See details and specifications. Install (2) dual concrete pitchers mounds w/pitching rubbers & landing pads per 1 & 3/L5.3. Install per manufacturers specifications. Note: This quantity is 5F for both bull pen areas. Turf carpet provided & installed by owner. GC shall receive, secure, protect, schedule, & coordinate turf carpet installation provided by owner as part of this work.	2,072 sf	4/L-5.1	F-102	6' Black Vinyl Chain Link Fence: Master Halco Permafused Fabric 8 GA Finish, Type 1 Spectra Framework, Steel Ties. Knuckle Selvage Top & Bottom of Fabric, Sch 40 Posts. See plan for gate locations. Provide shop drawings for approval. OR Approved Equal	37 lf	3/L-5.1
A-103	Synthetic Turf 12" Concrete Perimeter Curb	1,196 lf	2/L-5.2	F-103	4' Black Vinyl Chain Link Fence On Backstop Wall: Master Halco Permafused Fabric 8 GA Finish, Type 1 Spectra Framework, Steel Ties. Knuckle Selvage Top & Bottom of Fabric, Sch 40 Posts. See plan for gate locations. Provide shop drawings for approval. OR Approved Equal	87 lf	3/L-5.1
A-104	Synthetic Turf Batting Cage Surface Provided and Installed By Owner. Turf carpet provided & installed by owner. GC shall receive, secure, protect, schedule, & coordinate turf carpet installation provided by owner as part of this work.	1,183 sf		F-104	New 6' Tall double 6' wide access gate to match proposed fence. See plan for quantity.	2	3/L-5.1
A-105	Field Lines By Owner: All baseball field lines shall be 2.5" White Inlaid or Tuffed. GC shall receive, secure, protect, schedule, & coordinate turf carpet installation provided by owner as part of this work.			F-105	New 6' Tall x 5' Wide Gate to Match New Fencing. Gate shall be lockable with standard pad lock. See plan for quantity.	6	3/L-5.1
	<b>Add Alternates DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>				
AA-101	ADD ALTERNATE #: Outfield Net System: Net Connection Model # NCOF20 with #36 twisted knotted nylon net. 20' Height above chainlink perimeter fence. Field verify all measurements. Install per manufacturers recommendations. Provide shop drawing. Contractor shall provide stamped footing design by AL licensed engineer as part of this work. Net Connection 205-948-7504	145 lf	2/L-5.3	F-107	Temporary Chain Link Construction Fencing (TF): Contractor shall maintain a secure job site for duration of the project with temporary chainlink fencing. Access points shall be locked after hours or when work personnel not present. Place weatherproof field closure notice every 50' along fence and at all access points as provided by Owner. Contractor is responsible for securing the site from public for duration of contract. Place fencing prior to performing any work.	1,664 lf	
	<b>Athletic Field Equipment DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>				
AE-102	Baseball Foul Pole: Sportsfield Specialties Model #: FP630PL 30' Foul Pole. Color Yellow. Contractor shall provide footing design stamped by a AL licensed engineer as part of this work. Install per manufacturers recommendations OR Approved Equal	2	4/L-5.3	F-108	Lighting Controls Enclosure: 7' Black Vinyl Chain Link Fence with Black Pricacy Slats (all sides & gate) & Chain Link Fabric Roof. Place 2" horizontal roof supports @ 3' O.C. Max., Include 7' Gate. Master Halco Permafused Fabric 8 GA Finish, Type 1 Spectra Framework, Steel Ties. Knuckle Selvage Top & Bottom of Fabric, Sch 40 Posts. See plan for gate locations. Provide shop drawings for approval. OR Approved Equal	56 lf	3/L-5.1
AE-103	Backstop Net System: Net Connection Model # NCBN30 with #36 twisted knotted nylon net. 30' Height above field level. Field verify all measurements. Install per manufacturers recommendations. Provide shop drawing. Contractor shall provide stamped footing design by AL licensed engineer as part of this work. Net Connection 205-948-7504	1	1/L-5.3		<b>Masonry DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>
AE-105	Home Plate: Sportsfield Specialties Model# HPFS Home Plate Forming System & Schutt SHSRHP Hollywood Bury All Home Plate. Install per manufacturers recommendations OR Approved Equal	1		M-101	Back Stop Wall: 24" Tall Block USA Gray Block Split Face Backstop Wall with GrayBlock 2" Cap. Smooth side of wall shall face field & be padded. See details.	292 lf	6/L-5.2
AE-106	Baseball Bases: Set of 3 Sportsfield Specialties Model # SHIBL Shutt hollywood Impact Base With Model# SHAFIT Access Frame Kit. Install matching turf and infill to cover plug. Install per manufacturers recommendations. Hard pipe drainage stub to nearest collector pipe at 1/2" Min. fall. OR Approved Equal	1			<b>Site Furnishings DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>
AE-107	Pitching Rubber: Sportsfield Specialties Model# SHLBMPR224 Schutt Hollywood Dual stanchion pitching rubber with SHAFPRIT Dual Anchor Access Frame with Infill Retainer System. Install per manufacturers recommendations. Hard pipe drainage stub to nearest collector pipe at 1/2" Min. fall. OR Approved Equal	1		S-101	Benches: GT Grandstands Model #: TB-SSG08 Backless 8' Surface Mount Bench. Install per manufacturers specifications. 813-305-1415 OR Approved Equal	2	
AE-108	Bull Pen Home Plates: White inlaid turf cut outs to match regulation home plate size.	4		S-102	Drinking Fountain/Bottle Filler: Elkay Model #: VRCTLDDWSK_MECH Install new Sump Drain as specified. See detail. Reconnect existing water supply as needed using a licensed plumber.	2	3/L-5.3
AE-109	Bull Pen Pitching Rubber: Sportsfield Specialties Model# SHLBMPR224 Schutt Hollywood Dual stanchion Pitching Rubber. Install per manufacturers recommendations. OR Approved Equal	4		S-103	Dugout Lean Rail with padding. See detail. AE-114 Aerflo Padding Color: Yellow	83 lf	1/L-5.4
AE-110	Scoreboard: Electro-Mech Scoreboard Co. Model # LX1740 w/SL400 Wireless System & ID Panels Per Details. Color: Black Contractor shall include all mounting hardware, structure, & installation for a 100% operating scoreboard. Refer also to electrical & structural drawings.	1		S-104	Metal Signage In Dugouts: Provide & Install (2) two 12"x12" reflective directional signs for lighting controls per detail. Confirm location & proof for Owner approval.	2	2/L-5.4
AE-111	Batting Cage Frame and Netting On existing Conc. Slab: Net Connections Model # NC-BC1 Single Batting Cage System with 12' x 15' x 76' CNW #42 Knotted Nylon Netting Tunnel. Field verify all measurements. Install per manufacturers recommendations. Provide shop drawing. Contractor shall provide stamped footing design by AL licensed engineer as part of this work. Net Connection 205-948-7504 OR Approved Equal.	1		S-105	Metal Signage In Elec. Enclosure: Provide & Install (1) one 12"x18" sign per detail. Confirm location & proof for Owner approval.	1	3/L-5.4
AE-112	Wall Backstop Padding: Aer-Flo Aer-Cushion Stadium Wall Pad Model# ACSWP. Install per manufacturers recommendations. Color: Black. Field verify all measurements. Padding shall run from dugout to dugout. Net Connection 205-948-7504 OR Approved Equal	291 lf	6/L-5.2	S-106	See Sheet S-1 for dugout support repairs.		
AE-113	Fence Post Padding: Aer-Flo, Aer-Cushion Rail Pad. Color: Yellow 8" Wide x 1" Thick for full height (+/- 1/4" Ea.) of chain link posts as located on layout. Install per manufacturers recommendations. OR Approved Equal				<b>Synthetic Turf Sub-Surface Drainage DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>
AE-115	Saf-Top Fence Guard: Color: Yellow Install from dugout gate to dugout gate. Fasten per manufacturers instructions. Net Connection 205-948-7504	976 lf		SD-101	Perimeter Drain Pipe. See plan for location & size.	1,248 lf	7/L-5.2
AE-116	Wind Screen Fabric. Fasten to 6' chain link fence. Color: Black Aer-Flo Tuffy Windscreen OR Approved Equal. Install per manufacturers specifications.	184 lf		SD-102	12" Panel Drain. See plan for layout.	3,521 lf	8/L-5.2
	<b>Aggregate Surface DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>	SD-103	6" N-12 Bull Pen Drain Pipe	184 lf	
AG-101	Gravel Access Drive: 8" of compacted Caliche Base over filter cloth. Provide stone sample with submittals.	1,063 sf					
	<b>Concrete Paving DESCRIPTION</b>	<b>QTY</b>	<b>DETAIL</b>				
C-101	Concrete Walks. See Plan for locations & widths.	5,546 sf	2/L-5.1				

**PLANT SCHEDULE**

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING
	CT	33,448 sf	Cynodon dactylon 'Tif 419'	Tifton 419 Bermuda	sod	

NOTES:  
1. Quantities are for convenience only. Contractor shall verify.  
2. All areas disturbed by construction shall be sodded and hand watered until established.

Note: General contractor shall receive, store, secure, schedule, coordinate, & oversee owner provided materials & installers as part of this work



Know what's below. Call before you dig.

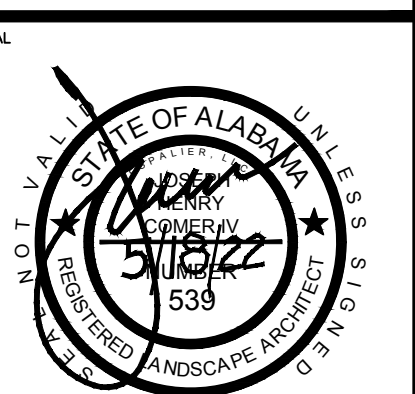
**DRAFT - FOR REVIEW ONLY NOT FOR CONSTRUCTION**



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3700 MICHAEL BLVD., MOBILE, AL



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30% Review
60% Review 4/1/22
90% Review 5/2/22
Bid/Permit 5/18/22

SHEET TITLE  
**FIELD DETAILS**

DESIGNED BY	FILE NAME
JC	MATTSTYN
DRAWN BY	SHEET
JC	
CHECKED BY	PROJECT NO.
JC	2201
DATE	DWG
1/26/22	

L-5.4

# STRUCTURAL DESIGN CRITERIA

## APPLICABLE CODES

- 2015 INTERNATIONAL BUILDING CODE
- ASCE 7-10 – MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES
- AISC 360-10 (14TH EDITION) – STEEL CONSTRUCTION MANUAL
- ACI 318-14 – BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

## WIND LOADS (ASCE 7-10)

- WIND SPEED  $V_{ult} = 143$  MPH;  $V_{asd} = 111$  MPH
- WIND RISK CATEGORY = 1
- WIND EXPOSURE CATEGORY = "C"

# STRUCTURAL GENERAL NOTES

## FOUNDATIONS/SOILS:

- ALL SUBGRADE PREPARATION INCLUDING PLACEMENT AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS AS CONTAINED IN THE DOCUMENT "SOILS EXPLORATIONS AND GEOTECHNICAL ENGINEERING STUDIES FOR PROPOSED ATHLETIC FIELD LIGHT POLES AT FIELD A AT MATTHEWS PARK IN MOBILE, ALABAMA" DATED MARCH 29, 2022 AS PREPARED BY GEOTECHNICAL ENGINEERING-TESTING, INC. (GET PROJECT NUMBER 22-126).
- ALL SOILS WORK SHALL BE UNDER THE DIRECTION OF A QUALIFIED SOILS ENGINEER OR SOILS TECHNICIAN.
- ALL FOUNDATIONS, OR PORTIONS THEREOF BELOW GRADE, MAY BE EARTH FORMED BY NEAT EXCAVATIONS. WHERE SOILS ARE NOT SUITABLE TO SERVE AS EARTH FORMS OR WHERE SOILS SLOUGH INTO THE FOUNDATION EXCAVATION, THEN THE SIDES OF THE FOUNDATION SHALL BE FORMED.

## CONCRETE WORK:

- CONCRETE SHALL HAVE THE MINIMUM STRENGTH AND MEET THE PROPERTIES AS DESCRIBED BELOW FOR THE VARIOUS CLASSES OF CONCRETE & GROUT:

MIX TYPE	SUPER P	MAX. SLUMP	W/C RATIO	% AIR	MAX. AGGR.	COMMENT	LOCATION
3000 PSI	N/A	4" MAX.	0.51 MAX.	4-6			FOUNDATIONS

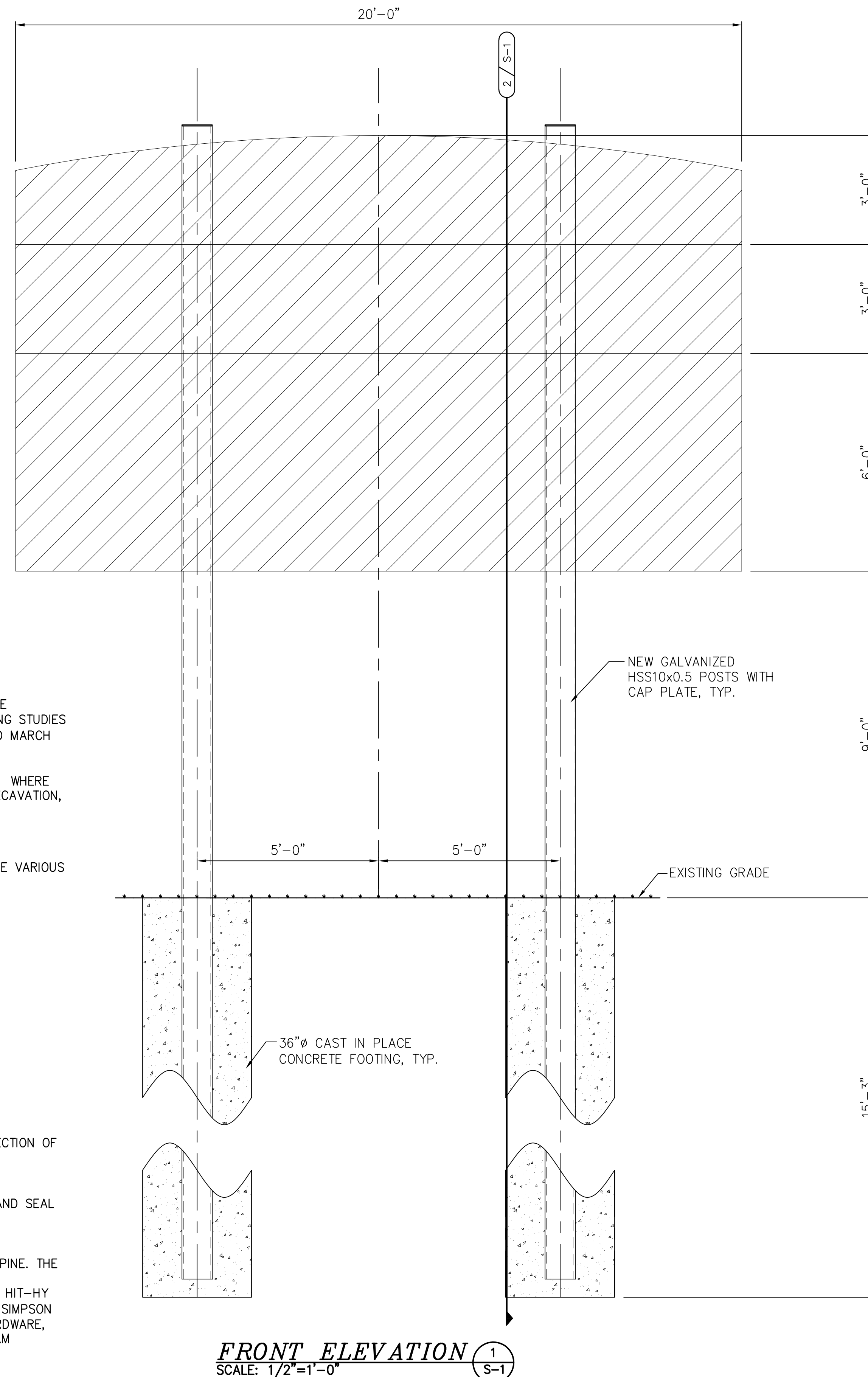
- ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE 2013 "ACI MANUAL OF CONCRETE PRACTICE."
- PORTLAND CEMENT SHALL CONFORM TO ASTM C 150, TYPE I OR II.
- ALL AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33.

## STEEL:

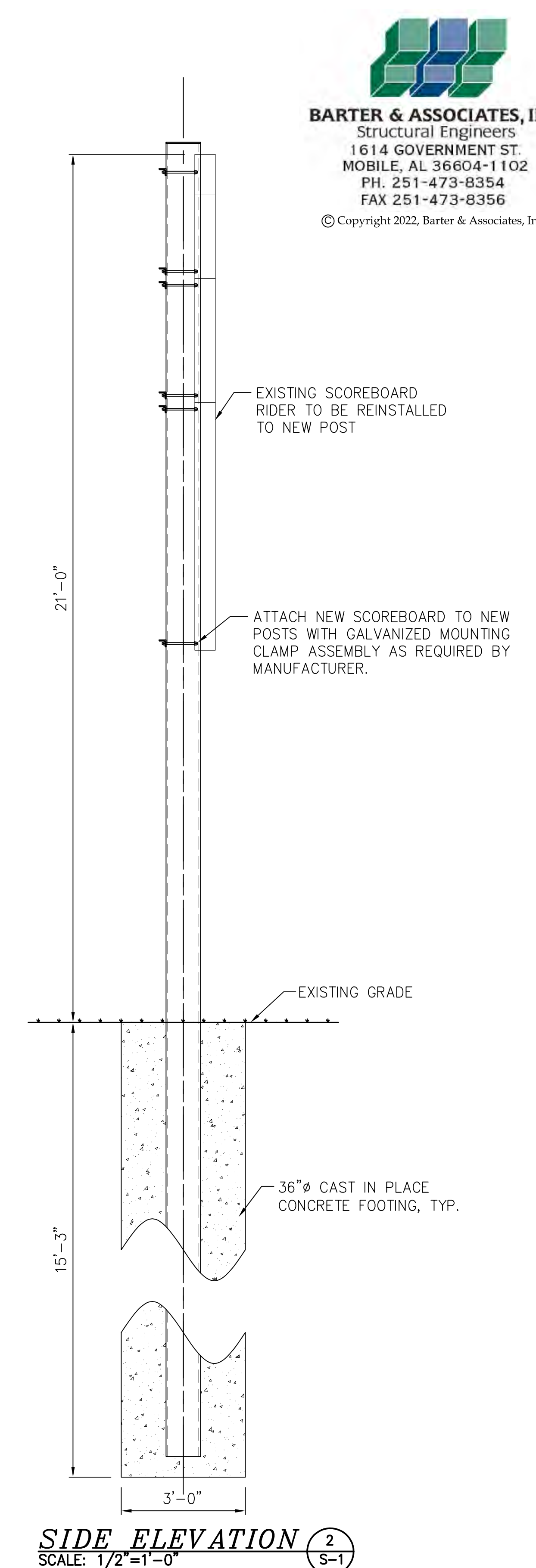
- STRUCTURAL STEEL SHALL MEET THE LATEST AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- ALL ROUND TUBING TO MEET ASTM A500, GRADE C –  $f_y = 46$ ksi.
- ALL STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
- CAP ALL OPEN-ENDED HSS SECTIONS WITH A PLATE EQUAL TO THE WALL THICKNESS (1/4" MIN. THICK.) AND SEAL WELD WITH A 1/4" FILLET WELD ALL AROUND, UNO.

## DUGOUT NOTES:

- THE EXISTING POSTS SHALL BE REPLACED WITH 6X6 POST PRESSURE TREATED, #2 KD SOUTHERN YELLOW PINE. THE BASE ATTACHMENT SHALL BE SIMPSON STRONG-TIE ADJUSTABLE POST BASE, ABU66Z ATTACHED PER MANUFACTURERS RECOMMENDATIONS. THE ANCHOR SHALL BE 5/8" (ASTM F1554 GRADE 36) SET IN HILTI HIT-HY 200R WITH 4" EMBEDMENT MIN. INSTALLATION SHALL BE PER ESR-3187. THE TOP ATTACHMENT SHALL BE SIMPSON STRONG-TIE CCQ4.62-5.50SDS, ATTACHED PER MANUFACTURERS RECOMMENDATIONS. ALL CONNECTION HARDWARE, SCREWS, AND ANCHORS SHALL BE STAINLESS STEEL. THE NEW POST CENTER LINES AND THE EXISTING BEAM CENTERLINES SHALL ALIGN.

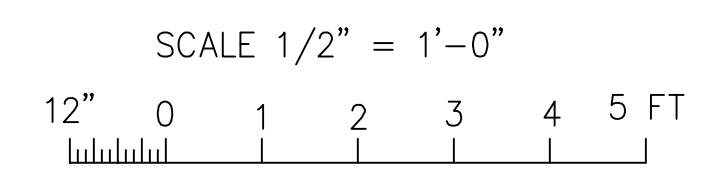


**FRONT ELEVATION** (1)  
SCALE: 1/2" = 1'-0"



**SIDE ELEVATION** (2)  
SCALE: 1/2" = 1'-0"

## GRAPHIC SCALE



**BARTER & ASSOCIATES, INC.**  
Structural Engineers  
1614 GOVERNMENT ST.  
MOBILE, AL 36604-1102  
PH. 251-473-8354  
FAX 251-473-8356  
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**ESPALIER**  
landscape architecture

Espalier, LLC  
P.O. Box 1247  
Fairhope, Alabama 36533  
P: 251.454.3500  
espalierdesign.com

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**MATTHEWS PARK**  
PR-022-21 -- SYNTHETIC TURF FIELD A  
3700 MICHAEL BLVD., MOBILE, AL

MARGARET DICKEY  
05/16/22

ISSUED/REVISED

Bid/Permit	5/18/22

## STRUCTURAL NOTES AND ELEVATIONS

DESIGNED BY MMD	FILE NAME 22026RS1.DWG
DRAWN BY MMD	SHEET
CHECKED BY MSB	S-1
PROJECT NO. 22026	
DATE 5/13/2022	