

CITY OF BRENHAM HOHLT PARK
SYNTHETIC TURF IMPROVEMENT PROJECT
RFP NO. 23-006

City of Brenham Brenham, Texas

Proposal Documents 2023

Engineer:

CEI ENGINEERING ASSOCIATES, INC.
3030 LBJ FREEWAY, SUITE 100
DALLAS, TX 75234
(817) 507-8305

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Proposal Documents
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Jeffery J. Bresee
07/27/23

Prepared by:

CEI ENGINEERING ASSOCIATES, INC.
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FOR
CITY OF BRENHAM, HOHLT PARK SYNTHETIC TURF IMPROVEMENTS PROJECT**

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ADVERTISEMENT FOR COMPETATIVE SEALED PROPOSALS FOR

**CITY OF BRENHAM TEXAS, HOHLT PARK SYNTHETIC TURF
IMPROVEMENTS PROJECT, RFP No. 23-006**

BRENHAM, TEXAS

The City of Brenham will receive Competitive Sealed Proposals for the “**RFP No. 23-006, HOHLT PARK SYNTHETIC TURF IMPROVEMENTS PROJECT**” until 2:00 p.m. local time on August 29th, 2023. Proposals shall be addressed to Dane Rau, City of Brenham Texas, 200 W. Vulcan, Brenham, TX 77833 and shall be submitted in a sealed envelope marked with the project name and RFQ number or, submitted electronically as detailed in the RFP form.

This project consists of demolition work, earthwork, concrete work, synthetic turf system installation work, storm drain improvement work, minor grass and irrigation repair work, and all appurtenant work.

Copies of the Proposal Documents including Drawings and Technical Specifications may be obtained by contacting the Engineer, CEI Engineering Associates, Inc., Attention, Jeff Bresee at (817) 507-8305. Paper copies will be sent via mail upon payment of \$125.00 (non-refundable) for each printed set. Electronic copies are available via email without charge.

A non-mandatory pre-proposal meeting will be held at the City of Brenham Texas city offices located at 200 W. Vulcan, Brenham, TX 77833 at 10:00 a.m. local time on August 15th, 2023.



Request for Proposals (“RFP”)
Holt Park Synthetic Turf Improvements

RFP NO. 23-006

EVENT	DATE
Issuance of RFP	Thursday, August 3, 2023
1 st Publication Date	Thursday, August 3, 2023
2 nd Publication Date	Thursday, August 10, 2023
Non-Mandatory Pre-proposal Meeting (10:00 a.m.)	Tuesday, August 15, 2023
RFP Question Deadline (5:00 p.m.)	Tuesday, August 22, 2023
Deadline to Request Electronic Submission (2:00p.m)	Monday, August 28, 2023
Proposal Submission Deadline (2:00 p.m.)	Tuesday, August 29, 2023
Possible City Council Consideration/Award	Thursday, September 21 st , 2023

INTENT

The City of Brenham is seeking proposals from qualified vendors to operate and manage food and beverage concession services within the City of Brenham’s athletic park system. The purpose of offering a concession program within the park system is to provide convenience and enhance the enjoyment of park patrons. More information regarding the City of Brenham is available on the City of Brenham website. cityofbrenham.org

RECEIPT AND OPENING OF PROPOSALS

Proposers shall submit **one (1) original and one (1) copy** of their proposal. The original proposal must be clearly marked “**Proposal for RFP No. 23-006**” and include an original signature, in ink, in order to be accepted. Proposals must be received in the City Secretary’s Office no later than **2:00 p.m. (CST) on Tuesday, August 29, 2023**. It is the Proposer’s sole responsibility to assure that the proposal is delivered in a timely fashion. Proposals received after this time will be rejected and returned unopened. There will be no public opening; however, the name of each proposal received will be read aloud for public record. **Any proposal received after 2:00 p.m. (CST) on Tuesday, August 29, 2023 shall not be considered.**

Proposals should be prepared simply, providing straightforward, concise description of the Proposer’s approach and capabilities necessary to satisfy the requirements of the RFP. Technical literature and elaborate promotional materials, if any, must be submitted separately. Emphasis in the proposal should be on completeness, clarity of content and adherence to the presentation structure required by the RFP.

Proposals shall be delivered using one of the following methods:

<u>Hand-deliver to:</u>	<u>Mail to:</u>	<u>Ship to (FedEx, UPS, DHL, etc.):</u>
200 W. Vulcan Street	P.O. Box 1059	200 W. Vulcan Street
Suite 203	Brenham, TX 77834-1059	Brenham, TX 77833
Brenham, TX 77833	ATTN: City Secretary	ATTN: City Secretary

The City will accept electronic proposals via download into a secure electronic depository. Proposals submitted by e-mail will not be accepted. If a Proposer would like to submit electronically, they must notify the City no later than **2:00 p.m. (CST) on August 28, 2023**.

Notifications for electronic submissions must be sent to Kyle Branham, Purchasing and Fleet Supervisor, P. O. Box 1059 (200 W. Vulcan St.), Brenham, Texas 77834, or e-mailed to kbranham@cityofbrenham.org. All e-mails must indicate “RFP No. 23-006 Electronic Submission Request” in the subject line. It is the sender’s responsibility to verify receipt of email; read receipt is acceptable.

CONTRACT TERMS AND CONDITIONS

GENERAL TERMS AND CONDITIONS

General Terms and Conditions for request for proposals from the City of Brenham may be found in Attachment “A” of this document. Should any contradiction be found to exist between those terms and conditions and the body of this RFP, the RFP will prevail.

INDEMNITY

The Contractor agrees to indemnify and hold harmless the City of Brenham and its officers, agents, and employees from any and all claims, causes of action, and damages of every kind, for injury to or death of any person and damages to property arising out of or in connection with the work done by the Contractor, and including acts or omissions of the City of Brenham, its officers, agents or employees in connection with said Contract.

H.B. 1295 COMPLIANCE

The Awarded Vendor for the contract shall comply with the requirements of Section 2252.908 of the Texas Government Code as adopted in 2015 as House Bill 1295. The law requires that a governmental entity may not enter in certain contracts with a business entity unless the business entity submits a Disclosure of Interested Parties to the governmental entity. The law applies only to a contract that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million.

Compliance with the law requires that the awarded Vendor utilize the Texas Ethics Commission website to enter the required information on Form 1295 and print a copy of the complete form. The form must be signed and submitted to the contracting government entity.

The City of Brenham, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the completed Form 1295 within five (5) working days thereafter.

CHAPTER 220 COMPLIANCE

The Awarded Vendor for the contract shall comply with the requirements of Subtitle F, Title 10, Government Code Chapter 2270 and shall be required to provide conformation that the Vendor: Does not boycott Israel currently; and will not boycott Israel during the term of the contract the above-named Company, business or individual with the City of Beaumont, Texas. Pursuant to Section 2270.001, Texas Government Code:

Boycott Israel” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and Company” means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly- owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

The City of Brenham, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the required confirmation within five (5) working days thereafter. Confirmation shall, by reference, be included as a part of the contract.

INSURANCE

The awarded contractor shall obtain insurance as specified in Attachment “A” of this RFP and shall maintain coverage in full effect through the duration of the contract. Certificates of Insurance shall be provided to the City within five (5) working days of formal notice of award by the City.

CHANGES, QUESTIONS, AND INQUIRIES

Any and all questions regarding this RFP must be submitted in writing and addressed to Kyle Branham, Purchasing and Fleet Supervisor, P.O. Box 1059 (200 W. Vulcan St.), Brenham, Texas 77834, or e-mailed to kbranham@cityofbrenham.org. All e-mails must indicate “RFP No. 23-006” in the subject line. It is the sender’s responsibility to verify receipt of email. The deadline for submittal of questions regarding this RFP is **end of day Tuesday, August 22, 2023**.

No person has the authority to verbally alter the terms of this RFP. Any changes to this RFP will be made in the form of an Addendum which will be made available online at www.cityofbrenham.org. It shall be the responsibility of interested proposers to check the website for addenda up to the proposal submission deadline. The complete RFP and all Addendums will be posted on the City’s website.

Term of Contract

The contract shall remain in force and effect throughout the duration of the construction period and throughout the terms of the associated warranty periods which shall be eight (8) years from the date of substantial completion for the new synthetic turf surfaces (carpet and infill and perimeter anchoring systems) and one (1) year for all other work.

Information

Overview

All proposals meeting the minimum qualifications requirements of this RFP will be reviewed and evaluated based on pre-determined evaluation criteria. The categories for evaluation are listed herein, below.

Holt Park Ballfield Conditions

- **Hohlt Park Baseball Complex**; 2425 North Park Street – this facility is to be improved by converting the existing grass and clay infield portions of the 4-field clover that lies nearest to SH 36 to synthetic turf surfacing. This work shall also include related work such as storm drain and electrical improvements.

RFP Terms & Conditions

This RFP does not commit the City of Brenham to award a contract. No other party, including any proposer, is intended to be granted any rights hereunder. Proposals which, in the sole discretion of the City of Brenham, do not meet minimum qualification requirements will not be reviewed. This RFP and the process it describes are proprietary to the City of Brenham and are for the sole and exclusive benefit of the City of Brenham. Any response to this RFP will become the property of the City of Brenham and subject to the Public Information Act of Texas. The City of Brenham is not liable for any costs associated with the development, preparation, transmittal or presentation of any proposal or material submitted in response to this RFP.

The City of Brenham reserves the right to award contracts on the basis of proposals submitted or to negotiate with selected proposer for modification of the selected proposals (which may include alternate concepts), at the City of Brenham's option. By submission of a proposal, the selected proposer agrees to be legally bound if the City of Brenham accepts the proposal.

RFP Overview

Any and all agreements arising out of proposals submitted hereunder (including any negotiations that follow) will not be binding on the City of Brenham, its officers, employees, or agents unless set forth in a Concession Agreement duly executed by the City Manager of the City of Brenham or appointed designee in accordance with applicable governing codes.

The Selection Committee will evaluate each responsive proposal submitted to the City of Brenham. Each proposal will be evaluated according to the following process:

- The first step in the evaluation process will be to determine whether the proposal conforms to the minimum qualification requirements for evaluation. Those proposals failing to meet minimum requirements, including completeness, format and content, will be rejected without further evaluation.
- Proposals not rejected will be submitted to the Selection Committee to be evaluated according to the criteria listed.
- The proposal evaluation criteria have been established to assist the Selection Committee in determining which proposer will provide the best overall mix of products, service, choice and quality to the City of Brenham Park patrons.

The evaluation categories are as follows:

Total price of Base Proposal and any selected alternates, 40%.

Reputation of Contractor and Contractor's experience record with projects similar to the scope of this project, 20%.

Ability of Contractor to meet project timeline, 20%.

Extent to which goods and services proposed by the contractor meet District's needs, 20%.

Minimum Qualification Requirements

- Description of proposer's relative experience with the installation of granular infill synthetic turf, primarily with similar ballfield, infield conversions.
- Description of proposer's key staff and their qualifications.
- Minimum of three references to demonstrate the proposer's experience in successfully installing synthetic turf systems and converting ballfield infield areas from clay/grass to synthetic turf.
- A physical sample of the turf carpet system(s) being proposed for use on this project.
- Proof of commercial liability, worker's compensation, and automotive insurance.
- Proposal bond and proof of contractors ability to meet project bonding requirements.

PROPOSAL SUBMISSION AUTHORIZATION

- An authorized representative must sign proposal, with the Proposer's address, telephone and email information provided. Unsigned proposals may not be considered.
- If the proposal is made by an individual, the name, mailing address and signature of the individual must be shown.
- If the proposal is made by a firm or partnership, the name and mailing address of the firm or partnership and the signature of at least one of the general partners must be shown.
- If the proposal is made by a corporation, the name and mailing address of the corporation and the signature and title of the person who signs on behalf of the corporation must be shown.
- The City reserves the right to request documentation showing the authority of the individual signing the proposal to execute contracts on behalf of anyone, or any corporation, other than himself/herself. Refusal to provide such information upon request may cause the proposal to be rejected as non-responsive.

The undersigned certifies that the information provided above is a true representation of its company's qualifications and agrees to comply with these assurances following award of the RFP.

Signature: _____

Printed Name: _____

Title: _____ Date: _____

NON-COLLUSION CERTIFICATE

STATE OF _____

COUNTY OF _____

The undersigned, being duly sworn, deposes and says that the person, firm, association, co-partnership or corporation herein named, has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competition in the preparation and submission of a proposal to the City of Brenham for consideration in the award of a contract on the improvement described as follows:

RFP NO. 23- 006 – Holt Park Synthetic Turf Improvements

(Name of Firm)

By: _____
(Authorized Signature)

Title: _____

Sworn to before me this _____ day of _____, 2023.

Notary Public

NOTARY SEAL:

Difference

TERMS AND CONDITIONS FOR BIDS

Definitions:

In order to simplify the language throughout this request for bids, the following definitions shall apply:

CITY – OWNER - Same as City of Brenham.

CONTRACT - An agreement between the City and a Vendor to furnish goods or services over a designated period of time during which repeated purchases may be made of the goods or services specified.

VENDOR – The successful Bidder(s) of this bid request.

Instructions:

The following instructions apply to all bids and become a part of terms and conditions of any bid submitted to the City of Brenham Purchasing Department, unless otherwise specified elsewhere in this bid request.

Form:

Bids must be submitted on this form only. **Bidders are required to submit one (1) original and one (1) copy.** All bids submitted must be itemized with prices extended when practical. **BIDDER MUST RETURN THE ENTIRE ORIGINAL BID DOCUMENT WITH BID OR PROPOSAL.**

Bid Return:

Bid must be sealed, and to ensure proper recognition upon its arrival, list the Bid Number, Bid Description and the Bid Opening Date on the outside of your envelope.

Late Bids:

Bids must be received by the Purchasing Department prior to the time indicated on this form. Late bids will not be opened and will be returned to the bidder only upon written request.

Acceptance:

The City of Brenham reserves the right to accept or reject any or all bids, to waive any informalities and technicalities, to accept the offer considered most advantageous **in order to obtain the best value for the City.** Causes for rejection of a bid may include but are not limited to the bidder's current violation of any City ordinance, the bidder's current inability to satisfactorily perform the work or service, or the bidder's previous failure to timely perform its obligation under a contract with the City.

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

1. Failure to use the proposal form furnished by the Owner;
2. Lack of signature by an authorized representative on the proposal form;
3. Failure to properly complete the proposal;
4. Evidence of collusion among proposers;
5. Omission of uncertified personal or company check as a proposal guarantee (**if Bid Bond required**); or
6. Unauthorized alteration of bid form.

Owner reserves the right to waive any informality or irregularity.

All bidders are hereby notified that the City of Brenham shall consider all factors it believes to be relevant in selecting the offer that provides the best value for the City including, but not limited to the purchase price, the proximity of the bidder as it relates to bidder's ability to perform the contract for the City, the delivery date, the reputation of the bidder and the bidder's goods or services, the quality of the bidder's goods or services, the extent to which the goods or services meet the City's needs, the impact on the ability of the City to comply with laws and rules relating to contracting with historically underutilized business and non-profit organizations employing persons with disabilities, the total long-term cost of the City to acquire the bidder's goods or services, the bidder's past performance under contracts with the City, the bidder's compliance

with City ordinances, and any relevant criteria specifically listed in this request for bid.

The City is committed to obtaining its goods, products and services at the lowest price possible which benefits all citizens of Brenham. Therefore, in order to accomplish this objective/goal, it is not the intention of the City to exclude particular vendors or manufacturers nor to create restrictive situations in its request for bids and proposals. Any manufacturer's name, trade names, brand names, catalog numbers, technical data, etc. used in the specifications are there for the sole purpose of establishing and describing general performance, quality levels, type and dimensions and such references are not intended to be restrictive. Alternate bids on similar or comparable products and/or services of any manufacturer or vendor equal to the products and/or services described in the specifications are invited and will be given careful consideration provided the alternate will accomplish the same task. The City shall be the sole judge on whether the alternate product and/or service is similar to, equal to and in compliance with that specified. The decision of the City shall be final.

Award of Contract:

The contract may be awarded either to the lowest responsible bidder or to the bidder who provides goods or services at the best value for the City. The bid award may be based on, but not necessarily limited to, the following factors:

- a. the purchase price, including payment discount terms;
- b. the reputation of the bidder and of the bidder's goods or services;
- c. the quality of the bidder's goods or services;
- d. the extent to which the goods or services meet the City's needs;
- e. the bidder's past relationship with the City;
- f. the impact on the ability of the City to comply with laws and rules relating to contracting with historically underutilized businesses and nonprofit organizations employing persons with disabilities;
- g. the total long-term cost of the City to acquire the bidder's goods or services; and

- h. any relevant criteria specifically listed in this request for bid.

The City prefers to award the entire contract to a single bidder; although, the City reserves the right to award a primary contract and a secondary contract in an effort to secure a back-up contractor to be used in emergency situations in the event the primary contractor is unable to respond as needed.

Term of Contract:

This Contract shall become effective from date of acceptance and approval by the City of Brenham. It shall remain in force and effect with firm fixed bid prices for a period of one (1) year, beginning on the date of award of contract.

Extension of Contract:

Upon completion of the term of the original contract and mutual agreement of both parties, the contract may be extended for up to two (2) additional one (1) year terms (three (3) years total). The renewal will be under the same terms and conditions as the original contract. In the event a new contract cannot be executed at the anniversary date of the original term or any renewal term, the contract may be renewed month-to-month until a new contract is executed.

Assignment of Contract:

This contract cannot be transferred or assigned to another party without written consent of the City and may be subject to cancellation by the City if such consent is requested.

Contract Termination:

The City may terminate this Contract at any time upon thirty (30) calendar day's written notice. Upon the Vendor's receipt of such notice, the Vendor shall cease work immediately. The Vendor shall be compensated for the services satisfactorily performed prior to the termination date.

If, through any cause, the Vendor fails to fulfill its obligations under this contract, or if the Vendor violates any of the agreements of this Contract, the City has the right to terminate this

Contract by giving the Vendor five (5) calendar days written notice. The Vendor will be compensated for the services satisfactorily performed before termination date. Termination of the contract for cause shall be deemed as sufficient evidence and cause to remove the Vendor's name from the bidder's list for receiving future bids.

No term or provision of this Contract shall be construed to relieve the Vendor of liability to the City for damages sustained by the City because of any breach of contract by the Vendor. The City may withhold payments to the Vendor for the purpose of setoff until the exact amount of damages due the City from the Vendor is determined and paid.

Reimbursements:

There is no expressed or implied obligation for the City to reimburse responding firms for any expenses incurred in preparing bids in response to this Request for Bids and the City will not reimburse responding firms for these expenses, nor will the City of Brenham pay any subsequent costs associated with the provision of any additional information or presentation, or to procure a contract for these services.

Minority Owned Businesses:

Minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex, or national origin in consideration for an award.

Error-Quantity:

Bids must be submitted on units of quantity specified. In the event of errors in extended process, the unit price shall govern. Any suggested quantity to secure better prices is welcomed. When discrepancies occur between words and figures, the words shall govern.

Quantities:

Quantities indicated in the Bid are estimated based upon the best available information. The City reserves the right to increase or decrease the quantities by any amount deemed necessary to

meet its needs without any adjustments in the unit bid prices.

Variations:

Any variation (deviation) from these specifications must be indicated on a separate form and be made part of the bid.

F.O.B. – Damage

Bids will not be considered unless bid F.O.B. delivered to Brenham, Texas. If shipping costs are not included in the unit bid price, bidder must give exact delivery cost, which is to be prepaid or added to the invoice. The City assumes no liability of goods delivered in a damaged or unacceptable condition.

Firm Prices:

Bidders must hold bid prices firm for 90 days after the bid opening date to allow the City sufficient time to award a contract. Once a Contract is awarded, the successful bidder must hold bid prices firm for the duration of the Contract. Sealed competitive bids may not be negotiated, amended or changed after the bid opening date.

Cooperative Agreements:

Successful bidder agrees to extend prices and terms to all governmental entities that have entered into, or will enter into, joint purchasing interlocal cooperation agreements with the City.

Authorized Signature:

Bids must show full firm name and mailing address of bidder and be manually signed by an authorized representative of the bidder. Firm name and authorized signature should appear on each page of bid where spaces are provided. Submission of a signed bid will be interpreted to mean that bidder has hereby agreed to all terms and conditions set forth in all of the sheets which make up this invitation.

Withdrawal-Alteration Of Bids:

Bids cannot be altered after receiving time or opening time. No bid may be withdrawn after

opening time without acceptable reason in writing and with the approval of the City Council.

Lump Sum Bids:

Lump sum bids will be considered only if unit prices are quoted also. However, the totals of such quoted unit prices and the lump sum bids will not be considered if the price quoted also involves prices of commodities requested on an entirely separate bid request.

All-Or-None Bids:

All-or-none bids will be considered only if bidder quoted prices on all items requested. If a bidder desires the City to consider an all-or-none bid, it must be stated in the bid document. All-or-none bids will not be considered if prices quoted involved prices of items and services requested on an entirely separate bid request.

Payment Of Invoices:

Invoices must be submitted by the successful bidder to the City of Brenham, Finance Department, P.O. Box 1059, Brenham, Texas 77835-1059. All invoices to be paid in full within thirty (30) days after satisfactory delivery and billing, whichever is the latter. The City will not be liable for payment of invoices received more than sixty (60) days after delivery of order, or completion of service.

Cash Discounts:

Bidders may quote additional cash discount terms. If no discount is shown, prices are to be assumed net. Discount period to be started from the date of completion of entire order or date of receipt of invoice, whichever occurs last regardless of date of invoice.

Taxes:

The City of Brenham is exempt from Federal Excise, State Sales and Transportation Taxes. TAX MUST NOT BE INCLUDED IN BID. The City upon request will execute Tax Exemption Certificates. The City of Brenham is statutorily exempt from State and Local Sales tax and a permit number is not required.

Delivery:

Bids must show the number of consecutive calendar days required to deliver the materials, services or equipment under normal conditions. Failure to specify delivery time will be considered reason enough to cause the bid to be disregarded. Delivery time quoted will be given consideration in awarding bids. If delivery is not made within ten (10) days after number of days specified on bid, entire order may be canceled and bidder's name removed from mailing list.

All deliveries are to be made to the Central Warehouse located at 315 West Second Street, unless otherwise specified in the Bid Request or Purchase Order. Deliveries will be accepted only during normal working hours on normal working days. Unless otherwise indicated, items received must be new and in first-class condition. Types of materials normally packaged for protection and convenience in storage shall be in the proper containers.

Liability:

Vendor shall be liable for all damages incurred while in performance of the work to be performed hereunder. Vendor assumes full responsibility for the work to be performed hereunder, and hereby releases, relinquishes, and discharges the City, its officers, agents, and employees, from all claims, demands, and causes of action of every kind and character including the cost of defense thereof, for any injury to, including death of, any person whether that person be a third person, vendor, or an employee of either parties hereto, and any loss of or damage to property, whether the same be that of either of the parties hereto or of third parties, caused by or alleged to be caused by, arising out of or in connection with the issuance of this order to Vendor, whether or not said claims, demands and causes of action in whole or in part are covered by insurance. Certificate of Insurance may be required for but not limited to Commercial General Liability, Commercial Auto Liability, Workers Compensation, and Professional Liability Insurance.

Material Safety Data Sheets (MSDS):

MSDS's must be provided prior to or with receipt of order, and when revised. Containers must be properly labeled and identified in accordance with the OSHA Hazard Communications Standard. Improperly labeled containers will result in refusal of the shipment and possible change in vendors.

Patents, Franchises, etc.:

The successful bidder agrees to protect the City from any claim involving patent right infringements, copyrights or sales franchises.

No Bids:

If bidder is unable to quote, the bid form should be returned to the purchasing agent before opening time, and reason given for not bidding if bidder desires to bid on future purchases.

Addenda:

In the event of a needed change in the published documents, it is understood that all the foregoing terms and conditions and all performance requirements will apply to any published addendum.

All published addenda shall be signed and included with your response package as acknowledgement of the addendum. Bidders are responsible for obtaining all published addenda from the City of Brenham Purchasing office. The City assumes no responsibility for the Bidders failure to obtain and/or properly submit any addendum. Failure to acknowledge and submit any addendum may be cause for the bid to be rejected. The City's decision to accept or reject any particular bid due to a failure to acknowledge and submit addenda shall be final.

Fiscal Funding:

The City operates and is funded on a fiscal year basis; accordingly, the City reserves the right to terminate, without liability, any contract for which funding is not available. Renewal of a contract will be in accordance with Local Government Code 271.903 concerning non-appropriation of funds for multi-year contracts.

The City reserves the right to rescind the contract at the end of each fiscal year if it is determined that there are insufficient funds to extend the contract. The fiscal year for the City extends from October 1st of each calendar year to September 30th of the following calendar year.

H.B. 1295 Compliance:

The Vendor for the Contract shall comply with the requirements of Section 2252.908 of the Texas Government Code as adopted in 2015 as House Bill 1295. The law requires that a governmental entity may not enter in certain contracts with a business entity unless the business entity submits a Disclosure of Interested Parties to the governmental entity. The law applies only to a contract that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million.

Compliance with the law requires that the Vendor utilize the Texas Ethics Commission website to enter the required information on Form 1295 and print a copy of the complete form. The form must be signed, notarized and submitted to the contracting government entity

The City, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the completed Form 1295 within five (5) working days thereafter.

No Boycott of Israel:

By acceptance of this Contract, Vendor hereby certifies that it is not a company identified on the Texas Comptroller's list of companies known to have contacts with, or provide supplies or services to, a foreign organization designated as a Foreign Terrorist Organization by the U.S. Secretary of State. Vendor further certifies and verifies that neither vendor, nor any affiliate, subsidiary, or parent company of Vendor, if any, the "Vendor Companies"), boycotts Israel, and Vendor agrees that Vendor and Vendor Companies will not boycott Israel during the term of this Agreement. For purposes of this Agreement, the term "boycott" shall mean and include terminating business activities or otherwise taking any action that is intended to

penalize, inflict economic hoard on, or limit commercial relations with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory.

Engaged in Business with Iran, Sudan, or Foreign Terrorist Organization:

Pursuant to Texas Government Code Chapter 2252, Subchapter F, Vendor affirms that it is not identified on a list created by the Texas Comptroller of Public Accounts as a company known to have contracts with or provide supplies or services to a foreign terrorist organization.

Conflict of Interest:

By doing business or seeking to do business with the City, Vendor acknowledges that they have been notified of the requirements of Chapter 176 of the Texas Local Government Code and that they are solely responsible for compliance.

Applicable Law and Venue

This Contract shall be governed by the laws of the State of Texas. The parties agree that performance and all matters related thereto shall be in Washington County, Texas and venue for any lawsuit, claim or dispute arising out of the contract shall be in Washington County, Texas. Further, neither party will seek to remove such litigation to the federal court system by application of conflicts of laws or any other removal process.

Insurance

1. The Vendor shall procure and maintain at its sole cost and expense for the duration of the Contract insurance coverage for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, volunteers, employees or subcontractors. The Contractor's insurance coverage shall be primary insurance with respect to the City, its officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its

officials, employees or volunteers shall be considered in excess of the Contractor's insurance and shall not contribute to it. Further, the Contractor shall include the City as an additional insured under its policy. All coverage for subcontractors shall be subject to all of the requirements stated herein. Certificates of Insurance and endorsements shall be furnished to the City and approved by the City before work commences.

2. Standard Insurance Policies Required:
 - a) Commercial General Liability Policy
 - b) Automobile Liability Policy
 - c) Workers' Compensation Policy
3. General Requirements Applicable to All Policies:
 - a) General Liability and Automobile Liability insurance shall be written by a carrier with an A: VIII or better rating in accordance with the current Best Key Rating Guide.
 - b) Only Insurance Carriers licensed and admitted to do business in the State of Texas will be accepted.
 - c) Deductibles shall be listed on the Certificate of Insurance and are acceptable only on a per occurrence basis for property damage only.
 - d) "Claims Made" policies will not be accepted.
 - e) The City of Brenham, its officials, employees and volunteers, are to be added as "Additional Insured" to the General Liability policy. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officials, employees or volunteers.
 - f) A Waiver of Subrogation in favor of the City with respect to Workers' Compensation Insurance must be included.
 - g) Each insurance policy shall be endorsed to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior

written notice has been given to the City.

- h) Upon request, certified copies of all insurance policies shall be furnished to the City.

4. Commercial General Liability

- a) Minimum Combined Single Limit of \$1,000,000.00 per occurrence for bodily injury and property damage.
- b) No coverage shall be deleted from the standard policy without notification of individual exclusions being attached for review and acceptance.

5. Automobile Liability

- a) Minimum Combined Single limit of \$500,000.00 per occurrence for bodily injury and property damage.

6. Worker's Compensation

- a) Statutory

7. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent. And shall contain the following provisions and warranties:

- a) The company is licensed and admitted to do business in the State of Texas.
- b) The insurance policies provided by the insurance company are underwritten on forms that have been provided by the Texas Board of Insurance.
- c) All endorsements and insurance coverage according to requirements and instructions contained herein.
- d) The form of the notice of cancellation, termination, or change in coverage provisions to the City of Brenham.
- e) Original endorsements affecting coverage required by this section shall be furnished with the certificates of insurance.

Workers' Compensation Provisions
(State law requires the following language in contracts on public works projects).

DEFINITIONS:

Certificate of Coverage (certificate) – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the Texas Workers' Compensation Commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the Project – includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the City.

Persons providing services on the project ("subcontractor" in 406.096) – includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitations, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnished persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other services related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, that meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

The Contractor must provide a certificate of coverage to the City **prior** to being awarded the contract.

If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the City showing that coverage has been extended.

The Contractor shall obtain from each person providing services on a project, and provide to the City:

- a. a certificate of coverage, prior to that person beginning work on the project, so the City will have on file certificates showing coverage for all persons providing services on the project; and
- b. no later than seven calendar days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

The Contractor shall notify the City in writing by certified mail or personal delivery, within ten (10) calendar days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation commission, informing all persons providing services on the project that they are required to be covered and stating how a person may verify coverage and report lack of coverage.

The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:

- (a) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, that meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
- (b) provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on a project, for the duration of the project;
- (c) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (d) obtain from each person with whom it contracts, and provide to the Contractor:
 1. a certificate of coverage, prior to the person beginning work on the project; and
 2. a new certificate of coverage showing the extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- (e) retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter;
- (f) notify the City in writing by certified mail or personal delivery, within ten (10) calendar days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
- (g) contractually require each person with whom it contracts, to perform as required by paragraphs (a) – (g), with the certificates of coverage to be provided to the person for whom they are providing services.

By signing the contract, or providing, or causing to be provided a certificate of coverage, the Contractor is representing to the City that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the Commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor that entitles the City to declare the contract void if the contractor does not remedy the breach within ten (10) calendar days after receipt of notice of breach from the City.

INSTRUCTIONS TO PROPOSERS

TABLE OF ARTICLES

- 1. DEFINITIONS**
- 2. PROPOSER'S REPRESENTATIONS**
- 3. PROPOSAL DOCUMENTS**
- 4. PROCEDURES**
- 5. CONSIDERATION OF PROPOSALS**
- 6. POST PROPOSAL INFORMATION**
- 7. PERFORMANCE BOND AND PAYMENT BOND**
- 8. FORM OF AGREEMENT BETWEEN CITY AND CONTRACTOR**
- 9. SUPPLEMENTARY INSTRUCTIONS**

ARTICLE 1 DEFINITIONS

- 1.10_ Proposal Documents include the Proposal Requirements and the proposed Contract Documents. The Proposal Requirements consist of the Advertisement for Proposals, RFP Form, Terms and Conditions, Instructions to Proposers, Proposal Form, Contractor's Qualifications Statement and Experience Record and other required legal forms as may be included and listed in the Table of Contents. The proposed Contract Documents consist of the form of Agreement between the City and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.
- 1.11_ Definitions set forth in the General Conditions of the Contract or in other Contract Documents are applicable to the Proposal Documents.
- 1.12_ Addenda are written or graphic instruments issued by the Engineer prior to the execution of the Contract which modify or interpret the Proposal Documents by additions, deletions, clarifications or corrections.
- 1.13_ A Proposal is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Proposal Documents.
- 1.14_ The Base Proposal is the sum stated in the Proposal Form for which the Proposer

offers to perform the work described in the Contract Documents as the base, to which additional sums may be added to or deleted from as the result of the of the City accepting Alternate Proposal(s).

- 1.15_ An Alternate Proposal (or Alternate) is an amount stated in the Proposal Form to be added to or deducted from the amount of the Base Proposal if the corresponding change in the Work, as described in the Proposal Documents for each Alternate is accepted.
- 1.16_ A Proposer is a person or entity who submits a Proposal who meets the requirements set forth in the Proposal Documents.
- 1.17_ A Sub-proposer is a person or entity who submits a proposal to a Proposer for materials, equipment or labor for a portion of the Work.

ARTICLE 2 PROPOSER'S REPRESENTATIONS

- 2.1 The Proposer by making a Proposal represents that:
 - 2.1.1 The Proposer has read and understands the Proposal Documents to the extent that such documentation relates to the work for which the Proposal is submitted, and for other portions of the Project, if any, being concurrently or presently under construction.
 - 2.1.2 The Proposal is made in compliance with the Proposal Documents.
 - 2.1.3 The Proposer has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Proposer's personal observations with the requirements of the Proposal Documents.
 - 2.1.4 The Proposal is based upon the materials, equipment and systems required by the Proposal Documents without exception.

ARTICLE 3 PROPOSAL DOCUMENTS

- 3.1 COPIES
 - 3.1.1 Proposers may obtain complete sets of the Proposal Documents from the issuing office designated in the Advertisement for Proposals in the number and for the sum stated therein.
 - 3.1.2 Proposers shall use complete sets of Proposal Documents in preparing Proposals; neither the City nor Engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Proposal

Documents.

3.1.3 The City and Engineer may make copies of the Proposal Documents available on the above terms for the purpose of obtaining Proposals on the Work. No license or grant of use is conferred by issuance of copies of the Proposal Documents.

3.2 INTERPRETATION OR CORRECTION OF PROPOSAL DOCUMENTS

3.2.1 The Proposer shall carefully study and the Proposal Documents and shall examine the site and local conditions of the Work, and shall at once report to the Engineer errors, inconsistencies or ambiguities discovered.

3.2.2 Proposers and Sub-Proposers requiring clarification or interpretation of the Proposal Documents shall make a written request which shall reach the Engineer at least five days prior to the date for receipt of Proposals.

3.2.3 Interpretations, corrections and changes of the Proposal Documents will be made by Addendum. Interpretations, corrections, and changes of the Proposal Documents made in any other manner will not be binding, and Proposers shall not rely upon them.

3.3 SUBSTITUTIONS

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

3.3.3 If the Engineer approves a proposed substitution prior to receipt of Proposals, such approval will be set forth in an Addendum. Proposers shall not rely upon approvals made in any other manner.

3.3.4 No substitutions will be considered before the Contract award unless specifically provided for by addenda.

3.4 ADDENDA

3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Proposal Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Proposal Documents are on file for that purpose.

3.4.3 Addenda will be issued no later than three days prior to the date for receipt of Proposals except an Addendum withdrawing the request for Proposals or one which includes postponement of the date for receipt of Proposals.

- 3.4.4 Each Proposer shall ascertain prior to submitting a Proposal that the Proposer has received all Addenda issued, and the Proposer shall acknowledge their receipt on the Proposal Form.

ARTICLE 4 PROCEDURES

4.1 PREPARATION OF PROPOSALS

- 4.1.1 Proposals shall be submitted on the Proposal Form included with the Proposal Documents. Proposer shall also ensure that the information required on the Contractor's Qualifications Statement and Experience Record and all forms listed in Part I of the Table of Contents are addressed and included in full and submitted with the Proposal.
- 4.1.2 All blanks on the Proposal Form shall be legibly executed in a non-erasable medium.
- 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Proposal.
- 4.1.5 All requested Alternates shall be proposed upon. If Alternate renders no change in the Base Proposal, enter "No Change".
- 4.1.6 Where two or more Proposals for designated portions of the Work have been requested, the Proposer may, without forfeiture of the proposal security, state the Proposer's refusal to accept award of less than the combination of Proposals stipulated by the Proposer. The Proposer shall make no additional stipulations on the proposal form nor qualify the Proposal in any other manner.
- 4.1.7 Each copy of the Proposal shall state the legal name of the Proposer and the nature of legal form of the Proposer. The Proposer shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Proposer to a contract. A Proposal by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Proposal submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Proposer.

4.2 PROPOSAL SECURITY

- 4.2.1 Each Proposal shall be accompanied by a proposal security in the form of a

cashier's check or bond in the amount of 5% of the Base Proposal Price. The Proposer pledges to enter into a Contract with the City on the terms stated in the Proposal and will furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Proposer refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the proposal security shall be forfeited to the City as liquidated damages, not as penalty. The amount of the proposal security shall not be forfeited to the City in the event the City fails to comply with Paragraph 6.2.

4.2.2 The attorney in fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

4.2.3 The City will have the right to retain the proposal security of Proposers to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Proposals may be withdrawn or (c) all Proposals have been rejected.

4.3 SUBMISSION OF PROPOSALS

4.3.1 The completed Proposal Form, the proposal security and any other documents containing information that is required to be submitted with the Proposal shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Proposals and shall be identified with the Project name and the Proposer's name. If the Proposal is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED PROPOSAL ENCLOSED" on the face thereof.

4.3.2 Proposals shall be deposited at the designated location prior to the time and date for receipt of Proposals. Proposals received after the time and date for receipt of Proposals will be return unopened.

4.3.3 The Proposer shall assume full responsibility for timely delivery at the location designated for receipt of Proposals.

4.4 MODIFICATION OR WITHDRAWAL OF PROPOSAL

4.4.1 A Proposal may not be modified, withdrawn or canceled by the Proposer during the stipulated time period following the time and date designated for the receipt of Proposals, and each Proposer so agrees in submitting a Proposal.

4.4.2 Prior to the time and date designated for receipt of Proposals, a Proposal submitted may be modified or withdrawn by notice to the party receiving Proposals at the place designated for receipt of Proposals. Such notice shall be in writing over the signature of the Proposer. Written confirmation over the signature of the Proposer shall be received, and date- and time-stamped by the

receiving party on or before the date and time set for receipt of Proposals. A change shall be so worded as not to reveal the amount of the original Proposal.

- 4.4.3 Withdrawn Proposals may be resubmitted up to the date and time designated for the receipt of Proposals provided that they are then fully in conformance with these Instructions to Proposers.
- 4.4.4 Proposal security shall be in an amount sufficient for the Proposal as resubmitted.
- 4.4.5 Proposal Withdrawal: No proposal may be withdrawn within thirty days after proposal opening without consent of City.
- 4.4.6 The City has stated that according to the State Attorney General, proposal modifications made on the outside of proposal envelope are to be considered non-responsive and shall not be considered.

ARTICLE 5 CONSIDERATION OF PROPOSALS

5.1 OPENING OF PROPOSALS

At the discretion of the City the properly identified Proposals received on time, as defined in the Advertisement for Proposals, will be publicly opened and will be read aloud. Within 10-day of the Proposal Opening, an abstract of the Proposals may be made available to Proposers.

5.2 REJECTION OF PROPOSALS

The City shall have the right to reject any or all Proposals. A Proposal not accompanied by the correctly completed Proposal Form, a required proposal security, and/or that is lacking data required by the Proposal Documents is subject to rejection.

5.3 ACCEPTANCE OF PROPOSAL (AWARD)

- 5.3.1 It is the intent of the City to award a Contract to the Proposer who provides a Proposal that has been submitted in accordance with the requirements of the Proposal Documents; that does not exceed the funds available for this project; and that the City, based upon established criteria, feels is the most advantageous.
 - 5.3.1.1 The City shall have the right to waive informalities and irregularities in a Proposal received that are not related to the Proposal price and to accept the Proposal which, in the City's judgment, is in the City's own best interests.
- 5.3.2 The City shall have the right to accept Alternates in any order or combination, and to determine the most advantageous Proposal while considering of the sum of the Base Proposal and Alternates accepted.

5.3.3 In determining the most advantageous Proposal, City will give serious consideration to information derived from Contractor’s Qualifications Statement and Experience Record, and other information submitted on the Proposal Form. Proposers not completing these forms and submitting all information and materials required will be subject to rejection.

5.3.4 Following the proposal deadline, City staff will evaluate and rank each proposal submitted in relation to the selection criteria set forth. The Proposal scoring the highest overall value upon evaluation will be deemed the most advantageous Proposal.

5.3.4.1 Following the Proposal evaluation, the City will attempt to negotiate an agreement with the Proposer whom they determine to offer the most advantageous Proposal. The City may discuss with the selected Proposer options for a scope or time modification and any price change associated with the modification. If the City is unable to negotiate an agreement with the selected Proposer, the City may begin the negotiation process with the second ranked Proposer. This process shall continue until an agreement has been negotiated with a ranked Proposer or the City rejects all proposals for this project.

5.3.4.2 The City will select a contractor from the respondents to this request for proposals, or reject all proposals. The City will rank the proposals based on the following:

<u>WEIGHT</u>	<u>POINTS</u>	<u>CRITERIA</u>
40%	40	Total price of Base Proposal and any selected alternates.
20%	20	Reputation of Contractor and Contractor’s experience record with projects similar to the scope of this project.
20%	20	Ability of Contractor to meet project timeline.
20%	20	Extent to which goods and services proposed by the contractor meet City’s needs

5.3.4.3 The City reserves the right to verify the accuracy and completeness of all responses by utilizing any information available to the City without regard to whether such information appears in the proposal.

ARTICLE 6 POST-PROPOSAL INFORMATION

6.1 CONTRACTOR’S QUALIFICATION STATEMENT

6.1.1 Proposers shall provide all information required in the Contractor's Qualification Statement and Experience Record. After the proposal date, the City reserves the right to request any additional pertinent information from any Proposer as pertaining to the qualifications and experience of the that Proposer's company.

6.2 CITY'S FINANCIAL CAPABILITY

6.2.1 The City shall, at the request of the Proposer to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Proposals, furnish to the Proposer Reasonable evidence that financial arrangements have been made to fulfill the City's obligation under the Contract. Unless such reasonable evidence is furnished, the Proposer will not be allowed to execute the Agreement between the City and Contractor.

6.3 SUBMITTALS

6.3.1 **Submit one physical sample of the synthetic turf carpet that is being proposed. Also, submit manufacturer's product data sheets for the synthetic turf system.**

6.3.2 The Proposer shall, as soon as practicable or as stipulated in the Proposal Documents, after notification of selection for the award of a Contract, furnish to the City through the Engineer in writing:

1. A designation of the Work to be performed with the Proposer's own forces and the Work to be performed by subcontractors;
2. Names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and

6.3.3 The Proposer will be required to establish to the satisfaction of the Engineer and City the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Proposal Documents.

6.3.4 Prior to the execution of the Contract, the Engineer will notify the Proposer in writing if either the City or Engineer, after due investigation, has reasonable objection to a person or entity proposed by the Proposer. If the City or Engineer has reasonable objection to a proposed person or entity, the Proposer may, at the Proposer's option, (1) withdraw the proposal or (2) submit an acceptable substitute person or entity with an adjustment in the Base Proposal or Alternate Proposal to cover the difference in cost occasioned by such substitution. The City may accept the adjusted proposal price or disqualify the Proposer. In the event of either withdrawal or disqualification, proposal security will not be forfeited.

6.3.5 Persons and entities proposed by the Proposer and to whom the City and Engineer

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 City and Engineer.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

7.1 BOND REQUIREMENTS

7.1.1 The Proposer shall furnish bonds in accordance with the General and Supplemental General Conditions of this Proposal covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Proposer's usual sources, but surety company must have a Best Key Rating of B+ or better.

7.1.2 The cost of securing such bonds shall be included in the Proposal.

7.2 TIME OF DELIVERY AND FORM OF BONDS

7.2.1 The Proposer shall deliver the required bonds to the City not later than fifteen days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Proposer shall, prior to commencement of the work, submit evidence satisfactory to the City that such bonds will be furnished and delivered in accordance with this Subparagraph 7.2.1.

7.2.2 Performance Bond and Payment Bonds shall be written in the amount of the Contract Sum. Bonds shall be written on forms in accordance with applicable State of Texas laws.

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

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

ARTICLE 8 FORM OF AGREEMENT BETWEEN CITY AND CONTRACTOR

8.1 Unless otherwise required in the Proposal Documents, the Agreement for the Work will be written the Form of Agreement Between City and Contractor Where the Basis of Payment Is a Stipulated Sum as contained in the Proposal Documents.

ARTICLE 9 SUPPLEMENTARY INSTRUCTIONS

9.1 Pre-Proposal Conference

9.1.1 A non-mandatory pre-proposal meeting will be held at the City of Brenham Texas city offices located at 200 W. Vulcan, Brenham, TX 77833 at 10:00 a.m. local time on August 15th, 2023. Representatives of City and Engineer will be present to discuss Project. Proposers are encouraged to attend conference. Engineer will transmit to Proposers of record such addenda as Engineer considers necessary in response to questions arising during the conference. Oral statements may not be relied upon and will not be binding or legally effective.

9.2 Non-Collusion Certification

9.2.1 By signing this proposal, the proposer certifies that, to the best of his/her knowledge: neither the proposer nor any business entity represented by the proposer has received compensation for participation in the preparation of the item specifications related to this Proposal Invitation, this proposal has been arrived at independently and is submitted without collusion with any other proposer, with any competitor or potential competitor, or with any other person or entity to obtain any information or gain any special treatment or favoritism that would in any way limit competition or give any proposer an unfair advantage over any other proposer with respect to this proposal, the proposer has not accepted, offered, conferred, or agreed to confer, and will not in the future accept, offer, accepted, offered, conferred, or agreed to confer, and will not in future accept, offer, confer, or agree to confer, any benefit or anything of value to any person or entity related to the City in connection with any information or submission related to this proposal, any recommendation, decision, vote, or award related to this proposal, or the exercise of any influence or discretion concerning the sale, delivery, or performance of any product or service related to this proposal, no attempt has been or will be made to induce any other person or entity to submit a proposal.

9.2.2 The person signing this proposal certifies that he/she has fully informed himself/herself regarding the accuracy of the statements contained in this certification.

9.3 Equal Employment Opportunity (EEO) Disclosures

9.3.1 By submission of a proposal, the proposer agrees that in the performance of any contract resulting from award under this proposal, the proposer will comply for the period of the contract with all applicable equal employment opportunity laws and regulations, including, but not limited to an agreement not to deny any benefit to, exclude from any opportunity, or discriminate in any way against, any applicant, employee, or any other person because of age, color, creed, gender, handicapping condition, marital status, national origin, political affiliation or belief, race religion or veteran status.

9.3.2 The occurrence of any prohibited discrimination will constitute proposer's breach

of contract due to a substantial failure by the vendor to fulfill its obligations, whereupon the City may terminate the proposer's contract for cause.

PROPOSAL FORM

PROJECT: CITY OF BRENHAM TEXAS, HOHLT PARK SYNTHETIC TURF IMPROVEMENTS PROJECT

NAME OF PROPOSER: _____

The undersigned, in compliance with Invitation to make Proposal for Construction Work, has received and examined the Proposal Documents and conditions regarding this project and, having examined the project site, propose to:

- 1. Hold Proposal valid for at least 60 days after Proposal date.
- 2. Enter into and execute a contract, if awarded, on the basis of this proposal and to furnish required bonds.
- 3. Accomplish Work in accordance with the Proposal Documents.
- 4. Accept provisions of Instructions to Proposers regarding disposition of Proposal Security.
- 5. The following dates shall apply for:

Base Proposal:

Work shall be substantially completed by no later than February 2nd, 2024 and completed and ready for final payment by February 9th, 2024. It is anticipated that Work will commence as of October 9th, 2023.

Acknowledgment of receipt of the following Addenda: _____

BASE PROPOSAL:

- 1. Proposer agrees to accept as full compensation for the Lump Sum Work proposed in the Proposal Documents (INCLUDING the Contingency Allowance) based upon the Undersigned's own estimate of quantities and costs, including sales, consumer, use and other taxes and overhead and profit the following sum of:

Numeric Dollars: (\$) _____

Written Words _____

Unit Cost: Proposer agrees to accept as full compensation on a unit cost basis for each liner foot of new buried concrete curbing that may be required for anchoring new synthetic turf around the existing backstops and dugouts, the rate of

\$ _____ per liner foot
For each foot actually constructed

ALTERNATE PROPOSAL NO.1:

- 1. Proposer agrees to accept as full compensation for the Lump Sum Work proposed on the drawings as Alternate Proposal No.1, being all work related to the southwest field, following sum of:

Numeric Dollars: (\$) _____

Written Words _____

ALTERNATE PROPOSAL NO.2:

- 1. Proposer agrees to accept as full compensation for the Lump Sum Work proposed on the drawings as Alternate Proposal No.1, being all work related to the southeast field with the exception of the new synthetic turf surfacing in the bull pen areas (which shall be included as part of the Base Proposal), following sum of:

Numeric Dollars: (\$) _____

Written Words _____

ACCEPTANCE: Upon notification of the acceptance of proposal, Undersigned agrees to execute a contract for above work, for stated compensation. Undersigned further agrees, if awarded Contract, to execute and deliver to the Engineer within three days of the execution of the Agreement, Performance Bond and labor and Material Payment Bond equal to 100 % of the contract sum in accordance with the General and Supplementary Conditions.

Respectfully submitted,

Name of Contracting Firm Address

BY: _____

Seal – If Proposal is by Corporation

CONTRACTOR'S QUALIFICATION STATEMENT AND EXPERIENCE RECORD

Name of Contractor: _____

Address: _____

Contact Name: _____

Phone: _____

E-mail: _____

Number of years company has been in Business under its current name: _____

Names that your company has previously operated under (if any): _____

Current Bonding Capacity (\$) _____

Name and Best Key Rating of Bonding Company: _____

List which portions (if any) of this project will be Substituted out to other Contractors including the name of each subcontractor? (Attach additional sheets if required)

Personnel:

List all key personnel that your company currently employs that will be assigned to perform work for this project including job title, related experience and time.

Employee Name: _____

Job Assignment for this Project: _____

Related Experience: _____

Duration of Related Experience: _____

Employee Name: _____

Job Assignment for this Project: _____

Related Experience: _____

Duration of Related Experience: _____

Employee Name: _____

Job Assignment for this Project: _____

Related Experience: _____

Duration of Related Experience: _____

Employee Name: _____

Job Assignment for this Project: _____

Related Experience: _____

Duration of Related Experience: _____

(Add additional sheets as needed to complete this category)

Synthetic Turf Project Experience:

Provide details and contact information for clients for whom your company has performed work for within the last three years that are best related to the scope of this project. Contractor shall provide the following information based on his/her own company's experience or that of a company with whom he/she has agreed to sub-contract with for the completion of the Work. (Attach additional sheets if required)

Project Name: _____

Owner's Contact Name Phone # of Contact Description of Work: _____

Was Work Completed on Time? _____

If no, describe circumstances: _____

Were Change Orders greater than 5% of the Contract Price necessary? _____

If Yes, explain why: _____

Has the Owner asked your Company to respond to any items covered under the warranty(s) of the Project? _____

If Yes, explain what problem occurred, the timeliness with which your company responded to the problem, and the measures your company took to resolve the problem. _____

Project Name: _____

Owner's Contact Name Phone # of Contact Description of Work: _____

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If Yes, explain why: _____

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If Yes, explain why: _____

Has the Owner asked your Company to respond to any items covered under the warranty(s) of the Project? _____

If Yes, explain what problem occurred, the timeliness with which your company responded to the problem, and the measures your company took to resolve the problem. _____

FELONY CONVICTION NOTICE

State of Texas Legislative Senate Bill No. 1, Section 44.034, Notification of Criminal History, Subsection (a), states "a person or business entity that enters into a contract with a school district must give advance notice to the district if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony."

Subsection (b) states "a school district may terminate a contract with a person or a business entity if the district determines that the person or business entity failed to give notice as required by subsection (a) or misrepresented the conduct resulting in the conviction. The district must compensate the person or business entity for services performed before the termination of the contract."

This Notice is not Required of a Publicly Held Corporation

I, the undersigned agent for the firm named below, certify that the information concerning notification of felony convictions has been reviewed by me and the following information furnished is true to the best of my knowledge.

Vendor's Name:

Authorized Company Official's Name (Printed)

A. My firm is a publicly held corporation; therefore, this reporting requirement is not applicable.

Signature of Company Official:

B. My firm is not owned or operated by anyone who has been convicted of a felony:

Signature of Company Official:

C. My firm is owned or operated by the following individual(s) who has/have been convicted of a felony:

Name of Felon(s):

Details of Conviction(s):

Signature of Company Official:

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

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

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

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

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

OFFICE USE ONLY

Date Received

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

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

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

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

Name of Officer

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

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

Yes No

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

Yes No

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

Yes No

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

4

Signature of person doing business with the governmental entity

Date

Texas Administrative Code

TITLE 34 PUBLIC FINANCE

PART 1 COMPTROLLER OF PUBLIC ACCOUNTS

CHAPTER 3 TAX ADMINISTRATION

SUBCHAPTER O STATE SALES AND USE TAX

RULE §3.291 **Contractors**

(c) Tax responsibilities of contractors who perform lump-sum and separated contracts for exempt organizations.

(1) Exemption certificates and other required proof of exemption. A contractor must obtain properly completed exemption certificates to document exempt contracts. Written contracts or written purchase orders that are issued by governmental entities exempted under Tax Code, §151.309, are acceptable documentation of exempt contracts.

(2) Contractor liability.

(A) A contractor may claim an exemption under Tax Code, §151.311, on a purchase of a taxable item for use under a contract to improve realty for an organization that is exempt under Tax Code, §151.309 or §151.310. If the comptroller subsequently determines that the organization is not exempt, then the contractor is liable for all taxes, penalties, and interest that accrue upon such purchase. If the validity of a claimed exemption or the exempt status of the customer is unclear, then the contractor may not accept the exemption certificate in good faith and should request additional evidence of the exempt status of the contract. If the customer claims to be an exempt organization, then a letter of sales and use tax exemption from the comptroller that is addressed to the customer relieves the contractor from further inquiry regarding the exempt status of the customer. See §3.287 of this title (relating to Exemption Certificates).

(B) A contract with a private party to improve real property owned by an exempt entity, other than a governmental entity described in Tax Code, §151.309, is not an exempt contract if the improvement to real property is for the primary use and benefit of the private party. However, a contractor in a non-exempt contract may purchase tax free tangible personal property that is used to improve real property owned by a governmental entity described in Tax Code, §151.309, if that tangible personal property is donated to the governmental entity and if the following conditions are satisfied:

(i) the contract between the contractor and the private party is a separated contract. See subsection (b) of this section for a discussion of lump-sum and separated contracts;

(ii) the contract provides that title to the materials used to perform the contract passes to the private party when the materials are delivered to the job site but before they are incorporated into the realty or used by either the contractor or the private party; and

(iii) the contract provides that the private party intends to donate the materials to the governmental entity before the materials are incorporated into the realty or used by the contractor. The private party must provide the contractor with a letter of intent or other document from the governmental entity that states its intent to accept the property.

(3) Materials that exempt customers provide. A contract may specify that the exempt customer will provide the materials and the contractor will provide the skill and labor that are necessary to

perform the contract. Under this type of contract, the contractor will not incur tax liability on the materials. The exempt customer may issue exemption certificates to suppliers in lieu of tax when purchasing the materials. Materials that are incorporated into real property improvements that are not related to the exempt purpose of the customer exempt under Tax Code, §151.310(a)(1) or (2), are taxable. In this situation, the exempt customer must pay tax to suppliers when purchasing the materials. See also §3.322 of this title (relating to Exempt Organizations).

(4) Exempt items. The following items are exempt from sales and use tax when purchased for use in the performance of an exempt contract:

(A) tangible personal property that is incorporated into the realty;

(B) consumable items that are necessary and essential to the contract and are completely consumed at the job site; and

(C) taxable services that are performed at the job site and are:

(i) expressly required by the exempt contract to be provided or purchased by the contractor; or

(ii) integral to the performance of the exempt contract.

(5) Contractor's exemption or resale certificate. A contractor who performs a lump-sum or separated contract may issue a properly completed exemption certificate to a supplier for the purchase of exempt items that are identified in paragraph (4) of this subsection. The certificate must be properly completed and identify the contractor as the purchaser, the exempt entity for whom the improvements are made, and the project for which the items are being purchased. See §3.287 of this title (relating to Exemption Certificates). A contractor may choose to issue a properly completed resale certificate when purchasing materials that will be incorporated into the customer's realty under a separated contract.

(6) Equipment. All machinery and equipment, including repair and replacement parts and accessories, that a contractor uses to perform contracts for any exempt entity are taxable. A contractor who purchases, rents, or leases equipment for use on a contract to improve realty for an exempt entity must pay tax on that purchase, rental, or lease.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

OFFICE USE ONLY

Complete Nos. 1 - 4 and 6 if there are interested parties.
 Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party.

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20____.
(month) (year)

 Signature of authorized agent of contracting business entity
 (Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

PART 2

PROPOSAL FORMS

**STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE**

THIS AGREEMENT is by and between City of Benham, Brenham, Texas

(hereinafter called OWNER) and _____(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

This project consists of demolition work, earthwork, concrete work, synthetic turf system installation work, storm drain improvement work, minor grass and irrigation repair work, and all appurtenant work.

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Hohlt Park Synthetic Turf Improvements

ARTICLE 3 -ENGINEER

3.01 The Project has been designed by CEI Engineering Associates, Inc. who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Date to Achieve Substantial Completion and Final Payment*

- A. The Work will be substantially completed with all materials scheduled for salvage, salvaged and stored in safe condition by no later than February 2nd, 2024 and completed and ready for final payment by no later than: February 9th, 2024, all in accordance with the General Conditions and Supplementary Conditions of the Contract.

4.03 *Liquidated Damages*

A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER \$600.00 for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER \$300.00 for each day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 - CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for the Work actually completed in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 5.01.A below, with the following exceptions made thereto:

- A. For all Work based on the Lump Sum Costs proposed in the Proposal Form for the Base Proposal and for:

	\$	
(use words)		(figure)

All specific cash allowances are included in the above price and have been computed in accordance with paragraph 11.02 of the General Conditions.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the 25th day of each month during performance of the Work as provided in paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

- 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such

amounts as ENGINEER may determine or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions:

- a. 95% of Work completed (with the balance being retainage).
- b. 95% of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

2. Upon Substantial Completion, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 95% of the Work completed, less such amounts as ENGINEER shall determine in accordance with the General Conditions and less 100% of ENGINEER's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

B. OWNER must retain a minimum of five percent (5%) of each periodic construction payment. If the contract provides for retainage of greater than five percent of the periodic payments, the entire retainage must be deposited into an interest bearing account and paid to the prime contractor upon completion (and acceptance) of the project. The Owner may authorize a partial release of the five percent only after substantial completion of construction. Full payment of retainage may be made only after final project completion and approval.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

ARTICLE 7 - INTEREST

7.01 Interest shall not be accumulated or paid on retainage unless conditions stated above in sub-paragraph 6.02-B apply.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Proposal Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided the General Conditions.

E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of

construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto

F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 6, inclusive);
2. Performance Bond (pages 1 to 2, inclusive);
3. Payment Bond (pages 1 to 2, inclusive);
4. General Conditions (pages 1 to 31, inclusive);
5. Specifications as listed in the table of contents of the Project Manual;
6. Drawings consisting of 8 sheets
7. Addenda (number 1);
8. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Award
 - b. Notice to Proceed
9. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Written Amendments;
 - b. Work Change Directives;
 - c. Change Order(s).

B. The documents listed in paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 Terms

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

10.02 Assignment of Contract

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 Felony Conviction

A. Contractor and all subcontractors and suppliers shall insure that all entities with which it contracts or employs shall supply information regarding criminal records history of any full-time employee, agent or consultant and subcontractor who shall be present on City of Waxahachie Sports Complex property at any time. Under no circumstances shall any entity be allowed to use employees, agents or consultants who have been convicted involving violent behavior and/or sexual misconduct.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in three (3) copies. One counterpart each (minimum) has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER: CITY OF BRENHAM, TX

CONTRACTOR:

By: _____

By: _____

[CORPORATE SEAL]

Attest _____

Attest _____

Date: _____

Date: _____

Address for giving notices:

Address for giving notices:

License No. _____
(Where applicable)

Agent for service of process: _____

(If CONTRACTOR is a corporation or a partnership,
attach evidence of authority to sign.)

Designated Representative:

Designated Representative:

Name: _____

Name: _____

Title: _____

Title: _____

Address: _____

Address: _____

Phone: _____

Phone: _____

Facsimile: _____

Facsimile: _____

Performance Bond

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

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place
of Business):

OWNER (Name and Address):

CITY OF BRENHAM, TX
200 W. Vulcan, Brenham, TX 77833

CONTRACT

Date:

Amount:

Description (Name and Location): Hohlt Park Synthetic Turf Improvements

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____
Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____
Name and Title:
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____
Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____
Name and Title:

EJCDC No. 1910-28-A (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied

liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

Payment Bond

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

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place
of Business):

OWNER (Name and Address):

CITY OF BRENHAM, TX
200 W. Vulcan, Brenham, TX 77833

CONTRACT

Date:

Amount:

Description (Name and Location): Hohlt Park Synthetic Turf Improvements

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-B (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

- 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
- 2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with the CONTRACTOR:

1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

- 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
- 6.2. Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.

9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

NOTICE OF AWARD

Dated _____, 2023

TO: _____
(PROPOSER)

ADDRESS _____

OWNER'S PROJECT NO. RFP NO. 23-006

PROJECT Hohlt Pak Synthetic Turf Improvements

PROPOSAL NO. _____

CONTRACT FOR Hohlt Pak Synthetic Turf Improvements
(Insert name of Contract as it appears in Proposal Documents)

You are notified that your Proposal dated _____, 2023 for the above Contract has been considered. You are the apparent successful Proposer and have been awarded a contract for

(Indicate total Work, alternates or sections of Work awarded)

The Contract Price of your contract is _____

You must comply with the following conditions precedent within ten (10) days of the date of this Notice of Award, that is by _____, 2023.

1. You must deliver to the OWNER three (3) fully executed counterparts of the Agreement including all the Contract Documents.
2. You must deliver with the executed Agreement the Contract Security (Bonds) as specified in the Instructions to Proposers (paragraph 17) and General Conditions (paragraph 5.1).

3. (List other conditions precedent).

Failure to comply with these conditions within the time specified will entitle OWNER to consider your Proposal abandoned, to annul this Notice of Award and to declare your Proposal Security forfeited. Within ten days after you comply with those conditions, OWNER will return to you two fully signed counterpart of the Agreement with the Contract Documents attached.

CITY OF BRENHAM
(OWNER)

By: _____

(SIGNATURE)

(TITLE)

Copy to ENGINEER
(Use Certified Mail,
Return Receipt Requested)

NOTICE TO PROCEED

Dated: _____

TO: _____
(Proposer)

ADDRESS: _____

CONTRACT FOR Holt Park Synthetic Turf Improvements
(Insert name of Contract as it appears in Proposal Documents)

PROJECT Holt Park Synthetic Turf Improvements

OWNER's Contract No. RFP 23-006

You are notified that the Contract Times under the above contract will commence to run on _____, 2023. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement the date of Substantial Completion is February 2, 2024.

Before you may start any Work at the Site, the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must
(add other requirements)

CITY OF BRENHAM

(OWNER)

By: _____

(AUTHORIZED SIGNATURE)

(TITLE)

Copy to ENGINEER
(Use Certified Mail,
Return Receipt Requested)

PART 3

CONDITIONS OF THE CONTRACT

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GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT**

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Proposals which clarify, correct, or change the Proposal Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Proposal*--The offer or proposal of a Proposer submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Proposal Documents*--The Proposal Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Proposals).

7. *Proposal Requirements*--The Advertisement or Invitation to Proposal, Instructions to Proposers, Proposal security form, if any, and the Proposal form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the

Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Proposal (including documentation accompanying the Proposal and any post Proposal documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for

definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *ENGINEER*--The individual or entity named as such in the Agreement.

20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the

Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful Proposer stating that upon timely compliance by the apparent successful Proposer with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *Project Manual*--The bound documentary information prepared for the Proposal and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some

portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or

chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

49. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

1.02 Terminology

A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of

paragraph 9.10 or any other provision of the Contract Documents.

B. *Day*

1. The word “day” shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. *Defective*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, “provide” is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds*

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to

OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02 *Copies of Documents*

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Proposal opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *CONTRACTOR’s Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary schedule of Shop Drawing and

Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

2.06 *Preconstruction Conference*

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

3.02 *Reference Standards*

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Proposals (or on the Effective Date of the Agreement if there were no Proposals), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any

duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: (i) a Field Order; (ii) ENGINEER's approval of a Shop

Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

3.05 *Reuse of Documents*

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary

Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from

conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *ENGINEER's Review:* After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a Proposal or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Proposal Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written

4.05 *Reference Points*

A. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the

Supplementary Conditions. Except for such reliance on such “technical data,” CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER’s Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
3. any CONTRACTOR interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as

provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER’s own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER’s Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER’s Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the

Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.

5.04 *CONTRACTOR's Liability Insurance*

A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners,

employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

5.05 *OWNER's Liability Insurance*

A. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full

replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;

5. allow for partial utilization of the Work by OWNER;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

5.07 *Waiver of Rights*

A. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as

insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the

occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be

necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

6.02 *Labor; Working Hours*

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required

tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. *"Or-Equal" Items:* If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items*

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject

to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. *Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. *CONTRACTOR's Expense:* CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Proposal Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract

with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 *Patent Fees and Royalties*

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but

not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Proposals, or, if there are no Proposals, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 *Laws and Regulations*

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Proposals (or, on the Effective Date of the Agreement if there were no Proposals) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

6.10 *Taxes*

A. CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

6.13 Safety and Protection

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any

of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR is obligated to act to prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to

show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

D. *Submittal Procedures*

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such

variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. *ENGINEER's Review*

1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. *Resubmittal Procedures*

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 *Continuing the Work*

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 *CONTRACTOR's General Warranty and Guarantee*

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or
2. normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;
2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by OWNER.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants,

and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and

2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

ARTICLE 7 - OTHER WORK

7.01 *Related Work at Site*

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority

and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 *Replacement of ENGINEER*

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 *Furnish Data*

A. OWNER shall promptly furnish the data required of OWNER under the Contract Documents.

8.04 *Pay Promptly When Due*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

8.06 *Insurance*

A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are

set forth in Article 5.

8.07 *Change Orders*

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 *Limitations on OWNER's Responsibilities*

A. The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *OWNER'S Representative*

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

9.02 *Visits to Site*

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as

ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Clarifications and Interpretations*

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a

result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.

9.05 *Authorized Variations in Work*

A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.

9.06 *Rejecting Defective Work*

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 *Determinations for Unit Price Work*

A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

9.09 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 *Limitations on ENGINEER's Authority and Responsibilities*

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any

of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by

OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive Proposals from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such Proposals to OWNER, who will then determine, with the advice of ENGINEER, which Proposals, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be

determined as set forth in paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

11.02 *Cash Allowances*

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Proposals and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
2. there is no corresponding adjustment with respect any other item of Work; and
3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or
2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or
3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee*: The CONTRACTOR's fee

for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;
 - b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Times (or Milestones)

covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this Article 12.

12.03 *Delays Beyond CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 *Delays Within CONTRACTOR's Control*

A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 *Delays Beyond OWNER's and CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or
2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate

CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

13.05 *OWNER May Stop the Work*

A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by

CONTRACTOR.

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.09 *OWNER May Correct Defective Work*

A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER

may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments*

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to pro-gress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss

because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Written Amendment or Change Orders;
- c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or
- d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.

D. *Reduction in Payment*

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

- a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling OWNER to a set-off against the amount recommended; or
- d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to

OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 *CONTRACTOR's Warranty of Title*

A. CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform

ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will promptly make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. Review of Application and Acceptance

1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for

Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.08 *Final Completion Delayed*

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from

CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *OWNER May Suspend Work*

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.

15.02 *OWNER May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for

which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.03 *OWNER May Terminate For Convenience*

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. for reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *CONTRACTOR May Stop Work or Terminate*

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Agreement.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

PART 4

SPECIFICATIONS OF THE CONTRACT

SECTION 01 01 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Description of Work: (Note, Base Proposal includes the work related to the northern two fields. Alternate Proposal No.1 includes all work related to the southwest field and Alternate Proposal No.2 includes all work related to the southeast field).
1. Demolition of existing improved clay infield areas on each field.
 2. Chemical injection, soil stabilization over the areas where new synthetic turf is to be installed.
 3. Earthwork including grading and compaction
 4. Storm drain improvements including under-drain systems for the synthetic turf of each field.
 5. Installation of new granular-infill synthetic turf over the infield area of each field.
 6. Installation of new bases and plates as indicated on the drawings.
- B. Contractor shall be responsible for providing all materials, labor, and equipment needed for the completion of the Work in accordance with the Proposal Documents.

1.02 CONTRACTOR USE OF SITE:

- A. Limit use of Owner's property as follows:
1. Protect from harm all existing structure's and/or features of the properties that are not specified for modification or removal.
 2. Stockpile materials and store equipment in areas designated by the Owner. Do not stockpile materials or store equipment in any manner that will prevent Owner from performing routine maintenance or gaining access to any critical areas of the stadium facility.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 01 90

CONTRACT CONSIDERATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Construction Times
- B. Materials Testing

1.02 CONSTRUCTION TIMES:

- A. Regular construction hours shall be during daylight hours, Monday through Friday.
- B. If Contractor feels that it is necessary to work outside of regular construction hours for any reason, Contractor shall notify Engineer in writing a minimum of 24 hours prior to said extended work. Extended hours shall not include nighttime work or work outside of City of Brenham permitted working hours.

1.03 TESTING:

- A. Unless directed otherwise, all testing requirements will be at the directive of the Engineer and as specified in Section 01400, "Quality Control".
- B. The Engineer may, at his direction, waive any tests required by the Specification or Drawing. Unless stated otherwise, the Contractor may not deviate from the tests required by the Specifications and Drawings.
- C. Cost of initial testing shall be the responsibility of the Owner. However, if work fails testing, cost of re-testing shall be the responsibility of Contractor.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01039

COORDINATION AND MEETINGS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Coordination.
- B. Field Engineering.
- C. Preconstruction Meeting.

1.02 COORDINATION:

- A. Coordinate scheduling, submittal, and Work of the various sections of the Project Manual to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.
- C. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.03 FIELD ENGINEERING:

- A. Contractor shall be responsible for layout of ball fields and other improvements indicated on the drawings, by means of actual ground conditions.
- B. Contractor to provide field engineering services as required to support his work. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- C. Contractor shall not rely upon the drawings for dimensions and/or measures but shall physically measure and otherwise verify all dimensions in the field.

1.04 PRECONSTRUCTION MEETING:

- A. Engineer will schedule a meeting after Notice of Award.
- B. Attendance Required: Owner, Engineer and Contractor.
- C. Agenda:
 - 1. Distribution of Owner-Contractor Agreement.
 - 2. Distribution of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.

5. Designation of personnel representing the parties in Contract, and the Engineer.
6. Procedures and processing of field decisions, submittal, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
7. Scheduling.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01210

ALLOWANCES

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specifications apply to this section.

1.02 SUMMARY:

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of Allowances may include the following
 - 1. Betterment and contingency allowances.

1.03 SELECTION AND PURCHASE:

- A. After the earliest practical date after the award of the Contract, advise the Engineer of the date when the final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the work.
- B. At the Engineer's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the work.
- C. Purchase products and systems selected by the Engineer from the designated supplier.

1.04 SUBMITTALS:

- A. Submit proposals for purchase of products or systems included in allowances in accordance with Section 01300, Submittals.

1.05 BETTERMENT AND CONTINGENCY ALLOWANCES:

- A. Use betterment and contingency allowance only as directed for the Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- C. At Project closeout, credit 100% of the unused amount remaining in the betterment and contingency allowance to the Owner by Change Order.

1.06 STIPULATED SUM ALLOWANCES:

- A. Use the stipulated sum allowance for the purchase of materials, labor, installation, overhead and profit to be included in the Base Proposal price.

1.07 VALUE OF ALLOWANCE:

- A. **Include a betterment and contingency allowance of \$30,000.00**, to be used at the Owner's discretion.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 30 00

SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Submittal Procedures.
- B. Construction Progress Schedules.
- C. Shop Drawings.
- D. Product Data.
- E. Manufacturer's Installation Instructions.
- F. Manufacturers' Certificates.

1.02 SUBMITTAL PROCEDURES:

- A. Transmit each submittal with Engineer accepted form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing and detail number, and Specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Engineer at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 5 days excluding delivery time to and from the contractor.
- G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Engineer review stamps.
- I. Revise and resubmit, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.
- K. Submittals not requested will not be recognized or processed.

1.03 CONSTRUCTION PROGRESS SCHEDULES:

- A. Submit initial progress schedule within 10 days after date established in Notice to Proceed.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a horizontal bar chart with separate line for each major section of Work or operation, identifying first work day of each week.
- E. Indicate estimated percentage of completion for each item of Work on each Application for Payment submission.

1.04 SHOP DRAWINGS:

- A. Submit the number of reproductions which Contractor requires, plus three copies which will be retained by Engineer.
- B. Shop Drawings: Submit for review. After review, produce copies and distribute in accordance with the SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700--CONTRACT CLOSEOUT.

1.05 PRODUCT DATA:

- A. Submit the number of copies which the Contractor requires, plus three copies which will be retained by the Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. After review, distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - CONTRACT CLOSEOUT.

1.06 MANUFACTURER INSTALLATION INSTRUCTIONS:

- A. When specified in individual Specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and operating, to Engineer in quantities specified for Product Data.

1.07 MANUFACTURER CERTIFICATES:

- A. When specified in individual Specification sections, submit certification by manufacturer to Engineer, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 40 00

QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Quality Assurance--Control of Installation.
- B. Tolerances.
- C. References.
- D. Testing Laboratory Services.

1.02 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' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES:

- A. Monitor tolerance control of installed Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.04 REFERENCES:

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.

- C. Obtain copies of standards where required by product Specification sections.
- D. The contractual relationship, duties, and responsibilities of the parties in Contract and of the Engineer, shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 TESTING LABORATORY SERVICES:

- A. An independent material testing firm will be employed by the Owner to perform materials tests and other services specified in individual Specification sections and as required by the Engineer or the Owner.
- B. Inspecting, testing, and source quality control may occur on or off the project site.
- C. Contractor shall cooperate with the independent firm employed by the Engineer; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
 - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
- D. Testing or inspecting does not relieve the Contractor of his responsibility to perform Work to contract requirements.
- E. Retesting required because of non-conformance to specified shall be paid for by the Contractor.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 50 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Water and sanitary facilities.
- B. Temporary Controls: Barriers, protection of the Work, and water control.
- C. Construction Facilities: Access roads, parking, progress cleaning, and material storage areas.

1.02 TEMPORARY WATER SERVICE:

- A. Contractor shall arrange for temporary water source through the City of Brenham. Contractor shall not be charged for water and shall not include the cost of such as part of the proposal price.

1.03 TEMPORARY SANITARY FACILITIES:

- A. Provide and maintain required facilities and enclosures.

1.04 BARRIERS:

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 WATER CONTROL:

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment if required.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion in accordance with Section 01 56 30, Temporary Erosion Control.

1.06 PROTECTION OF INSTALLED WORK:

- A. Protect installed Work and provide special protection where specified in individual Specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate Work area to prevent damage.

1.07 ACCESS ROADS:

- A. Contractor shall limit all traffic to the areas indicated on the drawings as access

route and staging area. Any damage done to the Owners property outside of the access rout and staging area shall be repaired at the Contractor's expense.

- B. Inside of the access route and staging areas, Contractor shall minimize traffic and perform best practices to minimize damage as a result of required construction traffic.
- C. Provide detours necessary for unimpeded traffic flow.
- D. Provide and maintain access to fire hydrants, free of obstructions.
- E. Provide means of removing mud from vehicle wheels before entering streets.
- F. The City will provide Contractor with asphalt millings that can if the contractor choses, be utilized as material for constructing access roads. The cost of moving said materials from the City's stock-piles location to the project site and all other associated costs of construction access roads including removing and properly disposing of said road materials upon completion of the work shall be the responsibility of the Contractor.

1.08 PARKING:

- A. Arrange for temporary surface parking areas to accommodate construction personnel.
- B. When site space is not adequate, provide additional off-site parking.

1.09 PROGRESS CLEANING AND WASTE REMOVAL:

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.

1.10 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS:

- A. Remove temporary utilities, equipment, facilities, materials, prior to Final Inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities, driveways, curb and gutter, landscaping and right-of-way used during construction to original condition or better. Restore permanent facilities used during construction to original condition or better.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 56 30

TEMPORARY EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Temporary measures required to control erosion and sediment during construction at both the Project site and the Earthen Fill Excavation Site. This includes measures to meet the requirements of the National Pollution Discharge Elimination System (NPDES) administered by the Environmental Protection Agency (EPA).
- B. Storm Water Pollution Prevention Plan (SWPPP) creation.

1.02 SUBMITTALS:

- A. Procedures for Submittals: Section 01300.
- B. SWPPP Plan
 - 1. Submit plans prepared and sealed by engineer licensed in the State of Texas, one plan for each high school location
- C. Inspection Reports and Certificates:
 - 1. Submit periodic inspection reports and certificates required for SWPPP.
 - 2. Submit Contractor/Subcontractor certifications required for SWPPP.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

- A. Contractor's Responsibility
 - 1. Prepare a site and Project specific Storm Water Pollution Prevention Plan for both the Project site and the Earthen Fill excavation site.
 - 2. Apply for permit coverage by completing a Notice of Intent for Permit Coverage, as applicable.
 - 3. Pay for Plan creation and all applicable permit fees.
 - 4. Furnish and install all required storm water temporary and permanent structural and erosion control measures, as well as temporary and final stabilization measures.

5. Maintain all installed storm water control measures.
 6. Be responsible for all applicable SWPPP requirements such as Project description, sequence of activities, site inspections, site maps showing in-place and proposed controls, best management practices, list of on-site storm water pollutants, non-storm water discharge assessments, revisions of SWPPP, record keeping requirements, on-site posting requirements, Notice of Termination, and all other storm water requirements listed in the TPDES Construction General Permit.
- B. The Owner delegates all storm water requirements to the Contractor. The Owner is not responsible for changes to plans and specifications related to storm water controls.
- C. The Contractor may modify appropriate drawings and specifications by hand, as required in the TPDES Construction General Permit, to show proposed and in-place storm water measures, direction of storm water flow, equipment storage areas, as well as other documentation requirements, for inclusion into Contractor's SWPPP. Any drawing of specification changes or modifications related to storm water controls are strictly for use in the SWPPP and are not to be considered as system design changes. Contractor shall remove Engineer's seal from any documents used.

3.02 NOTICE OF INTENT (NOI), NOTICE OF TERMINATION (NOT):

- A. Contractor shall submit a Notice of Intent (NOI) at least 48 hours prior to the start of construction.
- B. Contractor shall submit a Notice of Termination (NOT) as required by the NPDES regulations.

END OF SECTION

SECTION 01 60 00

MATERIALS AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Transportation and Handling.
- B. Storage and Protection.
- C. Product Options.
- D. Substitutions.

1.02 TRANSPORTATION AND HANDLING:

- A. Transport and handle Products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.
- C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.03 STORAGE AND PROTECTION:

- A. Store and protect Products in accordance with manufacturers' instructions, with seals and labels intact and legible.
- B. Store sensitive Products in weather tight, climate controlled enclosures.
- C. For exterior storage of fabricated Products, place on sloped supports, above ground.
- D. Provide off-site storage and protection when site does not permit on-site storage or protection.
- E. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of Product.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

1.04 PRODUCT OPTIONS:

- A. Products Specified by Reference Standards or by Description Only: Any Product

meeting those standards or description.

- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting Specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

1.05 SUBSTITUTIONS:

- A. Engineer will consider requests for Substitutions only within 20 days after date established in Notice to Proceed. Thereafter, substitutions will not be considered.
- B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 - 2. Will provide the same warranty for the Substitution as for the specified Product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or Product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit shop drawings, Product data, and certified test results attesting to the proposed Product equivalence. Burden of proof is on proposer.
 - 3. The Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 70 00

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Project Cleaning
- B. Operation and Maintenance
- C. Closeout Procedures.
- D. Project Record Documents.
- E. Project Warranty
- F. Turf Surface Warranty

1.02 PROJECT CLEANING:

- A. Upon completion of work Contractor shall thoroughly clean project site and any staging areas used of all construction materials, soils and other debris. Contractor shall remove project signs, temporary construction facilities and other equipment from project site. In every way contractor shall leave project site and staging areas in a clean and in a finished state. Existing asphalt or concrete surfaces damaged during construction due to Contractor's neglect shall be removed and replaced in accordance with the Proposal Documents at the Contractor's expense.

1.03 CLOSEOUT PROCEDURES:

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
- B. Provide submittals to Engineer that are required for close-out including operation and maintenance manuals and signed warranties.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Submit executed Affidavit of Bills Paid with final Application for Payment. Affidavit shall state all bills for labor, materials, and incidentals incurred in the construction of the project have been paid in full, and that there are no claims pending of which the Contractor has been notified. Affidavit shall be signed by the President of the contracting company or an authorized agent.
- E. Submit all other forms and information required by the City of Waxahachie.

1.04 PROJECT RECORD DOCUMENTS:

- A. Maintain on site, one set of the following record documents; record actual revisions

to the Work:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.

- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product Substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
- F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 3. Field changes of dimension and detail.
 4. Details not on original Contract drawings.
- G. Remove Engineer title block and seal from all documents.
- H. Submit documents to Engineer with claim for final Application for Payment.

1.05 PROJECT WARRANTY:

- A. All materials and work shall be warrantied against defect and/or malfunction under normal use and maintenance procedures for a period of two (2) years. This period shall initiate upon the completion of all work including the requirements of this section.

1.06 SYNTHETIC TURF WARRANTY:

- A. In accordance with Section 32 00 90.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 31 0010

EARTHWORK & GRADING

PART 1 GENERAL

1.01 CONSIDERATIONS:

- A. Earthwork consists of operations required for the soil stabilization of subgrades soils and the excavation and/or fill of subgrade materials; stock piling materials; scarifying and compaction of sub-grades; finish grading; and other required operations

1.02 REFERENCES:

- A. ASTM D 2487--Classification of Soils for Engineering Purposes.
- B. ASTM D 1557--Density of Soil and Soil Aggregate In-place by Nuclear Methods (Modified).

1.03 DEFINITIONS:

- A. Classification: Earthwork materials are classified in accordance with definitions in this Article.
- B. Subgrade: Natural soil at the established lines and grades.
- C. Earthen Fill: Suitable, clean material excavated on-site or imported borrow material meeting specified characteristics.
- D. Finish Grading: Operations required for smoothing disturbed areas that are not overlaid with pavement.
- E. Excavation: Excavation of every description and of whatever substances encountered within the limits of the project to the lines and grades indicated.
- F. Compaction: Compaction of soil materials shall be measured as a percent of Standard Proctor density as determined by ASTM D1557.

1.04 EXISTING UTILITIES:

- A. Where pipes, ducts and structures are encountered in the excavation but are not shown or specified on the drawings to be abandoned, immediately notify the Engineer.

PART 2 PRODUCTS

2.01 EARTH FILL:

- A. Fill material shall be clean insitu soil free from degris, organics and rocks larger than 3 inches in diameter or clean imported Select Fill having a PI between 7-15.

2.02 SOURCE QUALITY CONTROL:

- A. Where imported materials are required, provide materials from same source throughout the project.
- B. A change in source requires sampling, testing, and approval by Engineer.

2.02 SUBGRADE SOIL STABILIZATION:

- A. The entire area whereon new synthetic turf systems are to be installed shall have existing subgrade soils stabilized by means of chemical injection to a minimum depth of 6-feet. Chemical injection shall be provided by ESSL, Haywood Baker, Eco Soils or approved equal.

PART 3 EXECUTION

3.01 SITE PREPARATION:

- A. The project site shall be stripped of all vegetation and shall be rough graded and otherwise prepared, as detailed on the drawings.

3.02 CHEMICAL INJECTION SOIL STABILIZATION:

- A. Chemical injection soil stabilization shall be performed to a minimum depth of 6-feet being measured from the surface of the subgrade after over excavation procedures have been completed. Area to be stabilized shall be as indicated in the drawings.
- B. Chemical injection shall be conducted in accordance with the recommendations made in the Geotechnical Report and per Injection Company's standard procedures for chemical injection soil treatment.

3.03 TREATMENT OF SUBGRADES:

- A. In cut areas, excavate and removal soils as needed to meet finished elevations and grades indicated on the drawings while allowing room for layers of new materials such that apply. Excess soils shall be properly disposed of.
- B. Upon completion of cut, subgrade shall be lime treated for soil stabilization to a minimum depth of 8 inches to a minimum mixture ration of 6% by volume. Lime stabilization may be quicklime or lime slurry. Subgrade shall be compacted to a minimum density of 95 percent of maximum density per ASTM D 1557 at a moisture content of ± 2 percent of optimum. Subgrade surface shall be proof roll tested in the presence of the Geotechnical Engineer prior to placing new layers.
- C. Examination of Subgrade: Do not place materials on prepared subgrade until the subgrade preparation has been accepted by the Engineer. Do not place fill over frozen or saturated ground.

3.04 PLACING FILL:

- A. In fill areas, place and compact fill material in lifts not to exceed 6-inches, to a minimum density of 95 percent of maximum density per ASTM D 1557 at a moisture content of ± 2 percent of optimum.
- B. Attaining Proper Bond: If the compacted surface of a layer is too smooth to bond with succeeding layers, loosen the surface before continuing the work.
- C. Place materials to lines and grades shown allowing for depth of base and concrete/asphalt.
- D. Maintain aggregate drainage throughout construction.
- E. The material shall be blended sufficiently to secure the best degree of compaction.

3.05 FINAL GRADING:

- A. Upon completion of the excavation, grading and compaction process, fine grade all surfaced by means of laser grading (or grade using equivalent means) as needed to meet the meet the elevations, lines and grades indicated on the drawings.

3.06 TESTING:

- A. One Dimensional Swell Testing: Soils treated with chemical injection shall be tested after the injection process is complete and time has elapsed to allow for complete reaction of the chemical with the soil (minimum 48 hours) in order to document the effectiveness and thoroughness of the injection process. One-dimensional swell tests shall be conducted at a minimum rate of one test per each 10,000 square feet of subgrade treated. Test results shall be less than 1%. Portions of the subgrade found to test above 1% shall be re-injected and re-tested until test results indicate less than 1%, as needed to ensure full treatment of the subgrade.
- B. Compaction Testing: Conduct compaction testing for subgrade soils. Minimum spacing for compaction testing shall be one test per each ten thousand square feet of area compacted. Material shall be compacted to a density of 95 percent of maximum density per ASTM 1557 at a moisture content of ± 2 percent of optimum. Areas of the field found not to meet compaction criteria shall be re-worked and/or re-compacted at the Contractors expense until compaction criteria are met. Contractor shall also be responsible for the costs of additional compaction testing.
- C. Grading Test: For synthetic turf field area, conduct in the presence of the Engineer, a string line test on the final grades of the field prior to installation of geotextile fabric. String line test shall be conducted by pulling a string along the direction of the grade to verify positive drainage. Strings shall be pulled at a minimum interval of 15 feet. Acceptable tolerance for this test shall be 0.06 foot. Areas found to be outside of stated tolerances shall be re-graded at the Contractor's expense and re-tested until entire field meets grading tolerance.

END OF SECTION

SECTION 31 5025

EXCAVATION, BACKFILLING, & COMPACTING FOR UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Excavating, trenching, backfilling and compacting for storm drain, water and electrical utility systems and appurtenances, and trenching for field perimeter drainage systems and appurtenances.

1.02 REFERENCES:

- A. ASTM C33--Coarse Aggregates.
- B. ASTM D 1557--Test for Moisture-Density Relations of Soils (Modified).
- C. ASTM D2487--Classification of Soils for Engineering Purposes.

1.03 PROTECTION OR REMOVAL OF UTILITY LINE:

- A. The Contractor shall anticipate all underground obstructions such as, but not limited to, water mains, gas lines, storm and sanitary sewers, telephone or electric light or power ducts, concrete, and debris. Any such lines or obstructions indicated on the Drawings show only the approximate locations and shall be verified in the field by the Contractor. The Owner and Engineer will endeavor to familiarize the Contractor with all known utilities and obstructions, but this shall not relieve the Contractor from full responsibility in anticipating all underground obstructions whether or not shown on the Drawings.
- B. The Contractor shall, at his own expense, maintain in proper working order and without interruption of service all existing utilities and services which may be encountered in the Work. With the consent of the Engineer and utility owner such service connections may be temporarily interrupted to permit the Contractor to remove designated lines or to make temporary changes in the locations of services. The cost of making any temporary changes shall be at the Contractor's expense.
- C. The Contractor shall notify all utility companies which may have buried utilities in the vicinity of the Work to have their utilities located and marked in the field. All underground utilities shall then be uncovered to verify location and elevation before construction begins.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Use General Site Fill for properly meeting grading and compaction criteria specified herein.

- B. Sand: Sand shall be free from clay lumps, organic and other deleterious material, and have a plasticity index no greater than 12, as determined by ASTM D4318.
- C. Coarse-Grained Soils: Coarse-grained soils for pipe bedding shall be ASTM D2487, Class II or III.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION:

- A. Examine utility routes and coordinate excavation work to eliminate installation conflicts.
- B. Allow room for stockpiling excavated material and utility construction material during utility construction

3.02 TRENCH EXCAVATION:

- A. Procedure: Excavated to indicated or specified depths.
 - 1. Excavate by open cut method.
 - 2. Dispose of unacceptable material obtained by trench excavation and provide suitable materials for backfill as specified in the Contract Documents and as approved by the Engineer.
 - 3. During excavation, stockpile material suitable for backfilling in an orderly manner far enough from the bank of the trench to avoid overloading, slides, or cave-ins.
 - 4. Grade as necessary to prevent surface water from flowing into trenches or other excavations.
 - 5. Cut banks of trench as nearly vertical as practical. Remove stones as necessary to avoid point-bearing. Over-excavate wet or unstable soil from the trench bottom to permit construction of a more stable bed for pipe. Over excavation shall be filled and tamped with crushed rock or other approved material to the required grade.
 - 6. Excavate the trench the proper width as shown. If the trench width below the top of pipe is wider than specified in this Section or shown, install additional backfill. No additional payment will be made for additional material or work required for installation.
 - 7. Accurately grade the trench bottom to provide proper bedding as required for pipe installation.
 - 8. If any excavation is carried beyond the lines and grades required or authorized, the Contractor shall, at his own expense, fill such space with appropriate backfill material as specified in the Contract Documents and as directed by the Engineer.
- B. Sheeting and Bracing: Install sheeting and bracing necessary to support the sides of trenches and other excavations with vertical sides, as required by current OSHA regulations.
- C. Water In Excavation: Keep Work free from ground or surface water at all times. Provide pumps of adequate capacity or other approved method to remove water from the excavation in such a manner that it will not interfere with the progress of the Work or the proper placing of other Work.

3.03 PIPE BEDDING:

- A. Pipe Zone: The pipe zone is defined as including the pipe bedding, backfill to one-half the pipe diameter (the springline) and the initial backfill to the depth specified above the top of the pipe.
1. Accurately grade the bottom of the trench 4 inches below the bottom of the pipe and to the limits of the clear space on either side of the pipe.
 2. Place a minimum of 4 inches of compacted granular embedment material below the pipe and 6 inches above the top of the pipe.
 3. The initial layer of embedment material placed to receive the pipe shall be brought up to a grade slightly higher than that required for the bottom of the pipe and the pipe shall be placed thereon and brought to grade by tamping, or by removal of the slight excess amount of embedment under the pipe.
 4. Adjustment to grade line shall be made by scraping away or filling with embedment materials. Wedging or blocking up of pipe will not be permitted.
 5. Each pipe section shall have a uniform bearing on the embedment for the full length of the pipe, except immediately at the joint.
 6. After each pipe has been graded, aligned, placed in final position on the bedding material and joint made, sufficient embedment material shall be deposited and compacted under and around each side of the pipe and back of the bell or end thereof to hold the pipe in proper position and alignment during subsequent pipe jointing and embedment operations.
 7. Embedment material shall be deposited simultaneously on each side of pipe and compacted uniformly to the elevation shown on the plans. Class I crushed aggregate may be dumped and Class II GW or GP soils may be dumped and compacted to 40 percent relative density per ASTM D4254. Embedment material shall be shovel sliced, tamped or vibrated to obtain a good bearing surface under the pipe haunch.
 8. Sheeting and shoring will not be allowed in the pipe zone during or after installation of the pipe or embedment material, unless special provisions are made to ensure the specified compaction of bedding and pipe alignment is maintained after removal of sheeting and shoring.

3.04 UTILITY INSTALLATION:

- A. Provide a minimum cover over the top of the pipe as indicated. Provide class of bedding as shown. Install piping and appurtenances as specified.
- B. Excavation for Appurtenances: Excavate sufficiently for valves and similar structures to leave at least 2 feet clear between the outer surfaces and the embankment or timber that may be used to hold and protect the banks. Any over-depth excavation below such appurtenances not directed will be considered unauthorized and will be refilled with concrete, as directed by the Engineer, at no additional cost to the Owner.

3.05 BACKFILLING:

- A. Criteria: Backfill trenches to ground surface or bottom of subbase in paved areas with material as specified. Reopen trenches improperly backfilled to depth required for proper compaction. Refill and compact as specified, or otherwise correct the condition in an approved manner.

B. Open Areas:

1. Above the pipe zone, deposit Earthen Backfill material per Section 3100 10 of the specifications in 8-inch lifts. Mound excess material over trench. Earthen Backfill material shall be compacted to a minimum of 95 percent of maximum relative density according to ASTM D 1557.
2. All forms, lumber, trash and debris shall be removed from trenches, and other utility structures. Backfill for utility pull boxes and other utility structures shall be placed in accordance with applicable Specification Sections.

3.06 DISPOSAL OF EXCESS MATERIAL:

- A. Remove waste and excess excavated material from the construction site before final inspection. Legally dispose of material at a licensed site or with written and notarized permission from the property owner for a private disposal site. All cost associated with waste material removal and disposal shall be paid for by the Contractor.

END OF SECTION

SECTION 32 3005

AGGREGATE BASE COURSE

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Aggregate base material, consisting of crushed or uncrushed coarse and fine aggregate material, as necessary to meet the requirements and in conformity with lines, grades, compacted thickness and typical sections shown. To be use beneath all new concrete as indicated on the drawings.

1.02 REFERENCES:

- A. TxDOT Item 247--Flexible Base.
- B. ASTM D 1557--Test Methods for Moisture-Density Relations of Soils (Modified).

1.03 SUBMITTALS:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Samples: Aggregate samples of material as required by the testing laboratory.

1.04 DELIVERY, STORAGE AND HANDLING:

- A. Aggregate Base Course shall be hauled in tight trucks previously cleaned of all dirt and foreign material.
- B. Place aggregate base course the same day as delivered to the job site unless otherwise approved by the Engineer.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Aggregate Base Course shall meet the requirements TxDOT Item 247--Flexible Base, Type A Grade I or II, with material larger than 2 inches removed.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Place material only after the subgrade has been properly constructed and inspected.

3.02 PREPARATION:

- A. Do not place aggregate base material on soft, muddy, or frozen surfaces.
- B. Place and compact 6-inch layer of Aggregate Base material everywhere beneath new synthetic turf field areas and all new concrete construction.

3.03 AGGREGATE PLACEMENT:

- A. Place aggregate and compact to a minimum of 95 percent maximum density at ± 2 percent of optimum moisture.
- B. Upon completion, the material shall be smooth and in conformity with the typical sections as shown.
- C. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.04 TOLERANCES:

- A. Correct any deviation in grade by loosening, adding or removing material, reshaping and re-compacting at the Contractor's expense.

3.05 FIELD QUALITY CONTROL:

- A. Conduct compaction testing for Aggregate Base material placed and compacted. Material shall be compacted to a density of 95 percent of maximum density per ASTM D 1557 at a moisture content of ± 2 percent of optimum. Areas of the field found not to meet compaction criteria shall be re-worked and/or re-compacted at the contractor's expense until compaction criteria are met. Contractor shall also be responsible for the costs of additional compaction testing.
- B. If the aggregate base material should lose the required density or finish before foundation is complete, it shall be reworked, re-compacted, refinished and retested at the Contractor's expense.

END OF SECTION

SECTION 32 3035

CRUSHED STONE

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Crushed angular stone material to be placed over entire surface of turf fields where new synthetic turf is to be installed as a grading and leveling course, as needed to meet new elevations, grades and edge connection details, all as indicated on the drawings.

1.02 REFERENCES:

- A. ASTM D 6155 - Standard specification for crushed aggregate for Macadam Pavements.
- B. ASTM C 136 - Test method for sieve analysis for fine and coarse aggregate.

1.03 SUBMITTALS FOR REVIEW:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Sieve Analysis: Provide copies of analysis results for stone.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Stone shall be crushed with angular faces on all sides in accordance with the following gradation criteria:
 - 1. Stone type:
 - a. Limestone
 - b. Granite
 - 2. Base Stone - Gradation shall meet the requirements of standard gradation mixture 570 (57 stone) or 670 (67 stone).
 - 3. Finish Stone – 3/8-inch minus crushed stone material.
- B. Crushed stone materials shall be a uniform well graded mixture and shall be stored and placed taking care to protect material as such.

PART 3 EXECUTION

3.01 PREPARATION:

- A. Ensure geomembrane is properly installed across entire surface of field and through field perimeter drain trenches prior to placing stone or in the case of the interceptor drain, ensure fabric is wrapped around stone material. Care shall be taken to protect fabric from puncture and/or tear during placement of rock.
- B. Ensure drainage piping is properly installed prior to backfilling trenches with rock. Protect pipes from movement and damage during placement so as to leave pipe in the line and to the grades and elevations specified on the drawings upon completion of crushed stone placement.

3.02 PLACING CRUSHED STONE:

- A. Placement shall be completed so as to protect the geomembrane and drainage piping from displacement, puncture or damage during work. Any tears, punctures or other damage to the piping or geomembrane or geomembrane during work shall be repaired at the contractor's expense. Contractor shall also be responsible to re-align, reposition piping if movement occurs during rock placement at Contractor's expense.
- B. Place stone so as to entirely fill field perimeter drain trench and interceptor drain trench including around piping, taking special care to ensure rock placement beneath the haunches of the pipe.
- C. For trenches, place base stone to fill trench. Over turf field areas, place Base Stone to a uniform depth of 3-½ inches over the entire surface of field. Thereafter, place ½-inches of Finish Stone as needed to meet gradation requirements and to lock up the surface of the rock so as to create a non-yielding finished stone surface.

3.03 TESTING:

- A. Gradation Test: Upon completion of grading work, Contractor shall conduct (in the presence of the Engineer) a string line test by pulling a string in a multi-direction pattern everywhere across the field surfaces, as deemed necessary by the Engineer. Strings shall be pulled at a minimum interval of 15 feet. Acceptable tolerance for this test shall be 0.04 foot. Areas found to be outside of stated tolerances shall be re-graded at the Contractor's expense and re-tested until entire field meets grading tolerance.

END OF SECTION

SECTION 32 3041

GEOMEMBRANE

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Install impermeable geomembrane across the surfaces of the new turf areas including material extended through the perimeter trench, as indicated and detailed in the drawings.

1.02 SUBMITTALS FOR REVIEW:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Product Data: Manufacture's product data sheets on all materials incorporated into work.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Geomembrane:
 - 1. 30 mil, minimum thickness, impermeable geomembrane, welded liner. Product shall be HPDE or PVC.
 - 2. Seams shall be welded to ensure 100% impermeable cover over the entire surface of each field.

PART 3 EXECUTION

3.01 INSTALLATION:

- A. Install geomembrane liner across entire field surfaces in a tight manner so as to leave no wrinkles or ripples. Joints between liner rolls shall be installed with overlaps of at least 12-inches and welded so as to insure 100% ground cover with 100% impermeability.
- B. Liner shall be anchored to nailer board around entire perimeter of field and shall be extended through the storm drain trenches, all prior to the placement of any crushed stone material. Turf Contractor shall place stone while protecting liner from movement, tear and puncture.

END OF SECTION

SECTION 33 4050

DRAINAGE SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Drainage systems including perforated and non-perforated polyethylene pipe as storm drain.

1.02 REFERENCES:

- A. ASTM F405 - Standard Specification for Corrugated Polyethylene Pipe and Fittings.
- B. AASHTO M 252 - Standard Specification for Polyethylene Corrugated Drainage Pipe.

1.03 SUBMITTALS:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Product Data: Manufacture's product data sheets on all materials incorporated into the work.
- C. Certificates: Manufacture's certificates attesting compliance with applicable specifications, grades, types, classes, and other properties.

1.04 QUALITY INSURANCE:

- A. Pipeline installation shall be in accordance with manufacturer's recommendations and as supplemented by these Specifications.
- B. Pipe shall be kept clean of all foreign matter.
 - 1. At temporary termination of pipe laying, provide suitable cover to close open end of pipe until burying operations are resumed.
- C. Jointing shall be by trained employees.

1.05 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver, store, and handle products to protect pipe and fitting from harm and from dirt and debris.

PART 2 PRODUCTS

2.01 PIPE:

- A. Polyethylene Drain Pipe: ASTM F 405; AASHTO M 252
 - 1. Corrugated exterior, smooth interior polyethylene pipe with perforated wall or non-perforated wall in accordance with the drawings.
 - 2. Manufacturer:
 - a. Advanced Drainage Systems, Inc, N-12 drainage pipe.
 - b. Approved equal.

2.02 COUPLINGS:

- A. Buried couplings for use with polyethylene pipe and field drain pipe:
 - 1. Manufacturer's standard polyethylene coupling.

PART 3 EXECUTION

3.01 PREPARATION:

- A. In the case of the perforated field perimeter drain lines, ensure that pipe trenching has taken place in accordance with Section 31 5025 prior to placing pipe. Also, ensure that impermeable membrane is properly in place.
- B. In the case of non-perforated storm drain lines, ensure that pipe trenching and bedding have taken place in accordance with Section 31 5025 prior to placing pipe.

3.02 PIPE INSTALLATION:

- A. Preparation
 - 1. Keep inside of pipe free from foreign matter during operations by plugging pipe end or other approved method.
 - 2. Place pipe so that full length of each section rests solidly upon pipe bedding, with recesses excavated to accommodate joints. Take up and re-lay pipe when grade or joint is disturbed after laying.
 - 3. Handle pipe and accessories so that pipe placed in trench is sound and undamaged. Take particular care not to injure pipe.
 - 4. Cut pipe neatly when needed, using approved type mechanical cutter without damaging pipe. Use wheel cutters when practicable.
- B. Field Perimeter Drain Pipe Bedding:
 - 1. Crushed stone in accordance with Section 32 3035 "Crushed Stone" which shall be brought up evenly to the spring-line of the pipe. Careful consideration to ensure pipe bedding material is fully placed beneath the haunches of the pipe.
- C. Field Perimeter Drain Pipe Backfill:

1. Backfill pipe with crushed stone in accordance with Section 32 3035, "Crushed Stone" as shown in detail on the contract drawings and in accordance with the specifications. Stone shall be placed, tamped and leveled to create a smooth unyielding surface that forms a uniform slope with the adjacent sub-grade in accordance with the specified grade of the field.
- D. Joints:
1. Install joints in accordance with manufacturer's recommendations.

END OF SECTION

SECTION 32 1000

CONCRETE FORMWORK

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Design, construction, erection and removal of concrete formwork.
- B. Openings in formwork for other affected work.
- C. Form accessories.
- D. Installation of embedded items.

1.02 REFERENCES:

- A. ACI 301-89--Specifications for Structural Concrete for Buildings.
- B. ACI 347R-88--Recommended Practice for Concrete Formwork.
- C. ASTM A120-84--Pipe, Steel, Black and Hot-Dipped Zinc - Coated (Galvanized) Welded and Seamless.
- D. ASTM D226--Asphalt-Saturated Roofing Felt.
- E. ASTM D1751--Preformed Expansion Joint Fillers (Bituminous Types).
- F. PS 1-74--Construction and Industrial Plywood.
- G. PS 20-70--American Softwood Lumber Standard.

1.03 SYSTEM DESCRIPTION:

- A. Conventional Concrete Formwork:
 - 1. Conventional formwork as specified in this Section for surfaces of cast-in-place concrete.
 - 2. Extent of formwork is indicated by cast-in-place concrete elements shown on Drawings.

1.04 SUBMITTALS:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Product Data: Manufacturer's product data sheets for accessories.

1.05 QUALITY ASSURANCE:

- A. Design Criteria: Conform to ACI 347, Chapter 1, and ACI 301.
- B. Design Responsibility: Contractor is responsible for design, engineering and construction of formwork, including shoring and bracing.
 - 1. Design formwork for loads, lateral pressures and allowable stresses in accordance with ACI 347.
 - 2. Allow for other applicable requirements of authorities having jurisdiction.
 - 3. Design camber into formwork to compensate for anticipated deflection during concrete placement where necessary to maintain specified tolerances.
 - 4. Design formwork to allow removal without damage to concrete surfaces.
 - 5. Contractor is responsible for determining when temporary supports, shores, backshores and other bracing may be safely removed.
- C. Forming Methods:
 - 1. Unless otherwise scheduled or specified, formwork as specified in this Section shall be used or form cast-in-place concrete elements.
 - 2. Where soil is in stable enough condition that it can be shaped to a true and straight surface without caving or sloughing, the following members may be cast against neat cut excavations:
 - a. Unexposed sides of grade beams cast monolithically with slabs.
 - b. Sides of footings.
 - c. Pier caps.

1.06 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver, store, and handle materials to avoid damage. Store materials in accordance with manufacturer's instructions with seals and labels intact and legible.
- B. Deliver form materials in manufacture's packaging with installation instructions.
- C. Store off ground in ventilated and protected area to prevent deterioration from moisture or damage.

1.07 COORDINATION:

- A. Notify Engineer at least 48 hours prior to completion of formwork so that the formwork may be observed. Do not place reinforcing steel or concrete until the forms have been observed.
- B. Coordinate block-out sizes for rough openings for other work. Coordinate location and extent of items built-in to concrete formwork.

PART 2 PRODUCTS

2.01 FORM MATERIAL:

- A. Framing: Kiln dried softwood lumber, PS20.
- B. Smooth Forms:
 - 1. Construct formwork with plywood; tempered, concrete-form hard board; dressed lumber with plywood or fiberboard lining; metal; plastic; or metal-framed plywood-faced panel material to provide continuous, straight smooth surfaces. Form material shall be free of raised grain, torn surfaces, worn edges, patches, dents or other defect. Furnish material in largest practical sizes to minimize the number of joints. Form material shall have sufficient strength and thickness to withstand the pressure of newly place concrete without bow or deflection.
 - 2. Use smooth forms on interior and exterior concrete surfaces exposed to view in the completed structure, including exterior face of grade beams.
 - 3. Unless otherwise shown or specified, as a minimum use plywood complying with U.S Product Standards PS-1, "B-B (Concrete Form) Plywood" Class 1, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing legible trademark of an approved inspection agency.
- C. Rough Forms:
 - 1. Construct forms of dressed or undressed lumber free of knots, splits or other defects; plywood; metal; or other acceptable material. Material shall have sufficient strength and thickness to withstand pressure of newly placed concrete without bow or deflection.
 - 2. Rough forms may be used on concrete surfaces that will not be exposed to view in complete structures unless noted otherwise.
- D. Shores:
 - 1. Wood or adjustable metal type with bearing plates and with 2 wedges at bottom.
- E. Carton Forms:
 - 1. Corrugated fiberboard box forms fabricated of natural Kraft with liners, completely impregnated with a polyethylene wax blend, and laminated with a waterproof adhesive. Boxes assembled with steel strappings.
 - 2. Forms shaped to design and dimensions as indicated for formed voids.
 - 3. Forms capable of supporting weight of concrete plus a live load of 20 psf on area supported by void form.

2.02 FORM ACCESSORIES:

- A. Form Ties: Factory fabricated, adjustable length, removable or snap-off metal ties, designed to prevent form deflection and to prevent spalling concrete surfaces upon removal. Provide ties so that portion remaining within concrete is at least 1½- inch from outer surfaces. Provide water seal feature on ties used to form water bearing structures.

- B. Form Coating: Commercial formulation of form oil or form-release agent having proven satisfactory performance. Coating shall not bond with, stain or adversely affect concrete surfaces nor impair subsequent treatment of concrete surfaces, including bonding agents, curing compounds and waterproofing.
- C. Rustications, Bevels, Chamfers: Mill from Northern White Pine, smooth and free of irregularities. Preformed PVC strips may be used for corner chamfers.
- D. Sleeves: Standard weight galvanized pipe, ASTM A120.

2.03 JOINTING ACCESSORIES:

- A. Joint Fillers: Premolded mastic strips, asphaltic impregnated, ASTM D1751.
- B. Bond Breaker: No. 30 asphalt saturated felt, ASTM D226.

PART 3 EXECUTION

3.01 FORMWORK CONSTRUCTION:

- A. General:
 - 1. Construct and maintain formwork, in accordance with ACI 347 and these Specifications, to maintain correct sizes of members, shape, alignment, elevation and position during concrete placement and until concrete has gained sufficient strength.
 - 2. Provide for openings, offsets, keyways, recesses, moldings, anchorages and inserts, as required to accommodate other work including mechanical and electrical. Seal such openings to prevent leakage and loss of concrete matrix.
 - 3. Construct forms for easy removal without damage to concrete surfaces.
 - 4. Construct formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints and provide backup material at joints to prevent leakage and fins.
 - 5. Place chamfer strips in forms to bevel exposed edges and corners of members. Edges of formed joints and interior corners shall not be beveled unless shown or specified otherwise. Provide equipment bases with formed beveled edges on vertical and horizontal corners.
 - 6. Provide temporary openings where areas of formwork are inaccessible for cleanout, inspection or concrete placement. Brace openings and set tightly to forms. Locate in as inconspicuous locations as possible.
 - 7. If runways are required for moving equipment, provide for support of runways with struts or legs resting directly on formwork or structural member. Do not allow runways or supports to rest on reinforcing steel.
- B. Forms for Surfaces Exposed to View:
 - 1. Drill forms to suit ties used and to prevent leakage of concrete mortar around tie holes. Uniformly space form ties and align in horizontal and vertical rows.
 - 2. Provide sharp, clean corners at intersecting planes, without visible edges or offsets. Back joints with extra studs or girts to maintain true, square intersections.
 - 3. Form molding shapes, recesses and projections with smooth-finish materials and install in forms with sealed joints to prevent displacement.

4. Form exposed corners to produce square, smooth, solid corners with unbroken lines. Provide exterior exposed corners with 3/4-inch chamfer.
 5. Arrange facing material in an orderly and symmetrical fashion. Keep number of form joints to a practical minimum. Support facing material adequately to prevent deflection in excess of allowable tolerances.
 6. For flush surfaces exposed to view in the completed structure, overlap previously placed, hardened concrete with form sheathing by approximately one inch. Hold forms against hardened concrete to maintain true surfaces, preventing offsets or loss of mortar.
- C. Edge Forms and Screed Strips (Rails) for Slabs: Set edge forms or bulkheads and intermediate screed strips for slabs to obtain required elevations and contours in finish slab surfaces. Provide and secure units to support types of screeds required.
- D. Formed Voids:
1. Level subgrade material to minimize protrusions on surface and set void boxes in accord with manufacturer's recommendations for purpose intended.
 2. Where multiple units are required to cover an area, cover void boxes with cover sheets of material similar to material boxes are made of and staple down to boxes.
 3. Top surface shall be plane and at design concrete soffit elevation.
 4. Protect carton forms from moisture before concrete placing and form crushing during concrete placing. Remove and replace damaged carton forms prior to placing concrete.

3.02 TOLERANCES:

- A. Construct formwork to maintain concrete surface tolerances in accordance with ACI 347, 3.3.1.
- B. Establish sufficient control points and bench marks as references for tolerance checks. Maintain these references in undisturbed conditions until final completion and acceptance of project.

3.03 ADJUSTMENTS OF FORMWORK:

- A. Use wedges or jacks to provide positive adjustment of shores and struts. Fasten wedges used for final adjustment of forms in position after final inspection and before concrete placement.
- B. Securely brace forms against lateral deflections. Prepare to compensate for settling during concrete placement.
- C. For openings, construct wood forms that facilitate any necessary loosening to counteract swelling of forms.

3.04 PREPARATION OF FORM SURFACES:

- A. Before placing concrete, clean surfaces of forms and embedded materials. Remove accumulated mortar, grout, rust and other foreign matter.

- B. Coat forms with form oil or form-release agent before placing reinforcement. Cover form surfaces with coating material used in strict accordance with the manufacturer's instructions. Do not allow excess coating material to accumulate in forms or to contact hardened concrete against which fresh concrete will be placed. Remove coating material from reinforcement before placing concrete.

3.05 INSERTS, EMBEDDED ITEMS, OPENINGS AND ACCESSORIES:

- A. Make provisions for required installation of accessories, bolts, hangers, sleeves, anchor slots and inserts cast in concrete.
- B. Obtain templates or instructions for installation of embedded items and anchor bolts.
- C. Locate and set in place items which will be cast directly into concrete.
- D. Install sleeves or formed openings for pipes, and other work passing through concrete members. Temporarily fill voids to prevent concrete intrusion.
- E. Coat aluminum conduits, pipes and inserts embedded in structural concrete with heavy bituminous coating to prevent material-concrete reaction or electrolytic action between material and steel.
- F. Coordinate work of other sections involved in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- G. Install concrete accessories in accordance with manufacturer's recommendations; straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- H. Place joint filler in expansion joints. Place building felt bond breaker in control joints where scheduled.

3.06 REMOVAL OF FORMS:

- A. Forms on vertical surfaces, when repair of surface defects or finishing is required before concrete is aged, may be removed in 24 hours provided concrete has hardened sufficiently to resist damage from removal operations.
- B. Remove top forms on sloping surfaces of concrete as soon as concrete has attained sufficient stiffness to prevent sagging.
- C. Loosen wood forms for openings as soon as this can be accomplished without damage to concrete.
- D. Formwork for walls, sides of beams, and other parts not supporting weight of concrete may be removed after 24 hours provided that concrete has hardened sufficiently to resist damage from removal operations and provided the removal of these forms will not disturb members supporting weight of concrete.
- E. Forms and shoring used to support weight of concrete or construction loads shall remain in place until concrete has reached the minimum design strength specified for removal of forms and shoring. In no case shall forms be removed in less than 7 days.
- F. Contractor, at his option and risk, may remove formwork after 7 full days have elapsed after completion of concrete placement, provided that in-place concrete has attained 75 percent of its specified 28 days ultimate compressive strength. At Contractor's expense, provide testing and verification of required specified concrete compressive strengths. In addition, when forms are removed there shall not be excessive deflection or distortion and no evidence of damage to concrete either due to removal of supports or to stripping operations. If such deficiencies are observed, the forms and supports shall remain in-place as specified above.

3.07 REMOVAL STRENGTH:

- A. Control Tests: Suitable strength control tests shall be used as evidence that concrete has attained specified strength for removal of formwork or shoring supporting weight of concrete in beams, slabs and other structural members.
 - 1. Field-Cured Test Cylinders. When field-cured test cylinders reach specified removal strength, formwork or shoring may be removed from respective concrete placements. Strength data from field-cured test cylinders shall be furnished by the Contractor.
 - 2. Laboratory-Cured Test Cylinders: When concrete has been cured as specified for cast-in-place concrete for same time period required by laboratory-cured cylinders to reach specified strength, formwork or shoring may be removed from respective concrete placements. Determine length of time that the concrete placement has been cured by totaling number of days or fraction of days, not necessarily consecutive, during which air temperature surrounding concrete is above 50 degrees F and the concrete has been damp or thoroughly sealed against evaporation and loss of moisture.
- B. Compressive Strengths: Minimum concrete compressive strengths for removal of formwork supporting weight of concrete shall be 100 percent of specified minimum 28-day strength of class of concrete involved.

3.08 RESHORING:

- A. Reshoring is not permitted.

3.09 FORM REUSE:

- A. Do not reuse forms that are worn or damaged beyond repair.
- B. Thoroughly clean and recoat forms before reuse.
- C. For wood and plywood forms to be used for exposed smooth finish, sand or otherwise dress concrete contact surface to original condition or provide form liner facing material. For metal forms, straighten, remove dents and clean to return to original condition.

END OF SECTION

SECTION 32 2000

CONCRETE REINFORCEMENT

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Reinforcing steel for concrete reinforcement except prestressing tendons.
- B. Grouting of reinforcement dowel bars.

1.02 REFERENCES:

- A. American Society for Testing and Materials (ASTM).
 - 1. ASTM A82--Steel Wire, Plain, for Concrete Reinforcement.
 - 2. ASTM A185--Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement.
 - 3. ASTM A615--Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- B. ACI 347R-88--Recommended Practice for Concrete Formwork.
 - 1. ACI 315-80--Detailing Reinforced Concrete Structures.
 - 2. ACI 318-89--Building Code Requirements for Reinforced Concrete.
- C. Concrete Reinforcing Steel Institute (CRSI): CRSI Manual of Standard Practice.

1.03 SUBMITTALS:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Shop Drawings:
 - 1. Indicate reinforcement fabrication, bar placement location, splices, spacing and bar designation, bar type, length, size, bending, number of bars, bar support type, and other pertinent information, including dimensions. Information shall correspond directly to data listed on bill of materials.
 - 2. Provide sufficient detail to permit placement of reinforcement without use of design drawings.
 - 3. Detail Shop Drawings in accordance with ACI 315.
 - 4. Include bills of materials to be reviewed with Shop Drawings.

1.04 DELIVERY, STORAGE AND HANDLING:

- A. Store steel reinforcement above ground on platforms, skids or other supports.
- B. Protect reinforcing, as far as practicable, from mechanical injury, surface deterioration and rusting caused by exposure to weather.

1.05 COORDINATION:

- A. Notify Engineer at least 48 hours prior to completion of reinforcement for observation.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Deformed Steel Bars: ASTM A615 Grade 60 including Supplementary Requirements S1, for bars except those shown on Drawings as smooth bars.
- B. Smooth Steel Bars: ASTM A615, Grade 60, for bars shown on the Drawings as smooth bars.
- C. Welded Wire Fabric: ASTM A185, furnished in flat sheets only.
- D. Tie Wire: 18-gage annealed steel.
- E. Bar Supports: Provide sufficient numbers of supports of strength required to carry reinforcement. Bar supports and accessories shall be of sizes required to provide specified concrete cover. Bar supports and other metal accessories shall meet requirements of CRSI Manual of Standard Practice. Use the following type legs for surfaces listed:
 - 1. Slabs, Walls and Beams: Solid plastic.
 - 2. Slabs on Grade: Precast concrete bar supports (as an alternate for solid plastic) 3-inch-wide, 6-inch-long, and thick enough to allow required cover. Embed tie wires in 3-inch sides.
- F. Epoxy Grout: High-strength rigid epoxy adhesive for dowels with hardened concrete.

2.02 FABRICATION:

- A. Marking: Clearly mark bars with waterproof tags showing number of bars, size, mark, length and yield strength. Mark steel with same designation as member in which it occurs. Key marks to concrete placement number as designated on concrete placement sequence Shop Drawings.
- B. Bending: Fabricate bars to the spaces shown on Drawings by cold bending. Bends shall conform to minimum bend diameters specified in ACI 318. Do not straighten or rebend bars without specific approval.
- C. Splices: Locate splices as shown. Where it is necessary to splice reinforcement at locations other than shown, splices shall be approved by Engineer. Use a minimum number of splices and locate them at points of minimum stress. Stagger splices in adjacent bars. Length of lap splices shall be in accordance with ACI 318 unless shown otherwise.
- D. Construction Joints: Reinforcing shall be continuous through construction joints unless detailed otherwise.
- E. Fabrication Tolerances: In accordance with fabrication tolerances of CRSI Standard.

PART 3 EXECUTION

3.01 PREPARATION:

- A. Clean reinforcement free of scale, loose or flaky rust or other foreign material, including oil, mud or coating that will reduce bond to concrete.

3.02 INSTALLATION:

- A. Install reinforcing steel in accordance with applicable codes, reviewed Shop Drawings and CRSI Standard for details and methods of reinforcement placement and supports.
- B. Installation Tolerances: Maintain tolerances in accordance with CRSI Standard.
- C. Interferences: If reinforcing interferes with location of other reinforcing steel, conduits or embedded items, bars may be moved within specified tolerances or one bar diameter, whichever is greater. If greater movement of bars is required to avoid interferences, notify Engineer. Do not cut reinforcement to install inserts, conduits, mechanical openings or other items without approval of Engineer.
- D. Concrete Cover: Except as otherwise shown, provide a clear cover measured from reinforcement to face of concrete as follows.

Surfaces	Minimum Cover in Inches
Interior not exposed to weather	
Slabs and walls	3/4
Beams and girders	1-1/2
Exterior formed surfaces not in contact with earth or fresh water	
Slabs and walls, #5 and smaller bars	1
Slabs and walls, #6 thru #11 bars	
Formed surfaces	1-1/2
Beams and girders	2
Exterior formed surfaces in contact with earth or water	
Slabs and walls, #5 and smaller bars	1-1/2
Slabs and walls, #6 thru #11 bars	2
Beams and girders	2-1/2
Footings and Curbs	
Top	2
Bottom and sides	3
Surfaces cast against and permanently exposed to earth	
	3

E. Placement in Forms:

1. Use spacers, chairs, wire ties and other accessory items necessary to properly assemble, space and support reinforcing.
2. Provide accessories of sufficient number, size and strength to adequately prevent deflection or displacement of reinforcement due to construction loads or concrete placement.
3. Use appropriate accessories to position and support bolts, anchors and other embedded items.
4. Tie reinforcing bars at intersections and to accessories. Tie alternate intersections when spacing is less than 12 inches each way. When spacing is 12 inches each way or greater, tie at each intersection. Blocking reinforcement with concrete or masonry is prohibited.

F. Placement for Concrete on Ground:

1. Support reinforcement on chairs with sheet metal bases spaced at approximately 3 feet o.c. each way. Use a minimum of one support for each 9 sq. ft. Tie supports to reinforcing bars.
2. As an alternate, reinforcement may be supported on precast concrete blocks spaced at approximately 3 feet o.c. each way. Use a minimum of one block for each 9 sq. ft. Tie blocks to at least one reinforcing bar using tie wires embedded in block.

G. Splices:

1. Do not splice bars, except at location shown on Drawings or reviewed Shop Drawings, without approval of Engineer.
2. Lap Splices: Tie securely with wire to prevent displacement of splices during placement of concrete.

H. Construction Joints: Place reinforcing continuous through construction joints.

I. Expansion Joint:

1. Do not extend reinforcement through expansion joint.
2. Where shown or scheduled, install smooth steel bar dowels in expansion joints. Apply oil or grease to one end of dowels.

J. Welded Wire Fabric:

1. Install wire fabric in as long lengths as practicable. Lap adjoining pieces at least one (1) full mesh plus 2-inch or 6-inch, whichever is larger, and lace splices with wire.
2. Do not make end laps midway between supporting beams, or directly over beams of continuous structures.
3. Offset end laps in adjacent widths to prevent continuous laps.

K. Welded Wire Fabric:

1. Shape reinforcing bent during construction operations to meet requirements of the Drawings. Bars shall be cold-bent; do not heat bars.
2. Closely examine reinforcing for breaks. If reinforcing is damaged, replace, Cadweld or otherwise repair as directed by Engineer.
3. Do not bend reinforcement after it is embedded in concrete.

L. Welding: Welding of reinforcing bars is prohibited.

3.03 GROUTING OF REINFORCING BARS:

- A. When required and approved by the Engineer, use approved epoxy grout for anchoring reinforcing steel to hardened concrete in accordance with grout manufacturer's instructions.
- B. Drill hole in existing concrete that is 1/4 inch larger than diameter of reinforcing bar. Immediately prior to installation of the reinforcing bar, clean hole free of debris using compressed air.
- C. Partially fill hole with epoxy. Use enough epoxy so that when bar is inserted, epoxy grout will completely fill hole around dowel.
- D. Dip end of reinforcing bar in epoxy and install into partially filled hole.

3.04 FIELD QUALITY CONTROL:

- A. Observation of reinforcing steel installation to be conducted by the Engineer.

END OF SECTION

SECTION 32 3000

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Cast-in-place concrete consisting of Portland cement, aggregate, water, and admixtures.
- B. Mix design requirements.
- C. Formwork, reinforcement, joints, and placing requirements.

1.02 REFERENCES:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A. ASTM A615--Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
- B. ASTM C31--Making and Curing Concrete Test Specimens in the Field.
- C. ASTM C33--Concrete Aggregates.
- D. ASTM C39--Compressive Strength of Cylindrical Concrete Specimens.
- E. ASTM C94--(1986; Rev. b) Ready-Mixed Concrete.
- F. ASTM C143--Slump of Portland Cement Concrete.
- G. ASTM C172--Sampling Freshly Mixed Concrete.
- H. ASTM C173--Air Content of Freshly Mixed Concrete by the Volumetric Method.

1.03 SUBMITTALS:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Certificates: Mill certificates for bulk cement.
- C. Product Data: Manufacturer's data sheets for Engineer approved additives and bonding agents.
- D. Submit test data on proposed design mixes for each type of concrete to be used in the project to verify that the Specification requirements are met or exceeded.

1.04 QUALITY ASSURANCE:

- A. Project Controls: Provide necessary controls during evaluation of material, mix designs, production and delivery of concrete, placement, compaction, finishing and curing necessary to assure that Work will be accomplished in such a manner to produce the Work in accordance with Contract Documents.

1.05 DELIVERY, STORAGE, AND HANDLING:

- A. Materials shall be delivered, stored, and handled in a manner to prevent deterioration, contamination, or any other circumstance that would be harmful to cast-in-place concrete.

1.06 PROJECT CONDITIONS:

- A. Do not place concrete during rain, sleet, or snow unless protection is provided and approved by the Engineer.
- B. Coordinate concrete placement schedule with other related work.
- C. Notify Engineer at least 24 hours before placement.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Cement: ASTM C 94, Type I cement, unless approved by the Engineer. Only one brand of any one type of cement shall be used for exposed concrete surfaces of any individual structure.
- B. Fine Aggregate: Aggregate meeting the requirements of ASTM C33.
- C. Coarse Aggregate: Aggregate sizes No. 467 or No. 57 according to ASTM C33 or as approved by the Engineer.
- D. Water: Potable water free from detrimental chemicals and solids that will decrease the strength of the concrete.
- E. Embedded Items: Embedded items shall be of the size and type shown or as needed for the application.
- F. Curing Materials: Curing materials shall be burlap, impervious sheets, or membrane-forming compounds.
- G. Dowels: Plain carbon steel bars, minimum yield point of 40,000 psi for use in slabs on grade.
- H. Expansion Joint Filler Strips: Premolded non-extruding, resilient bituminous or non-bituminous type for use in concrete paving or construction, thickness as shown.
- I. Form Materials: Wood, metal or other Engineer approved materials that will produce the specified finishes without adversely affecting the concrete surfaces.
- J. Form Coating: Non-staining form oil or form-release agent that will not deleteriously affect concrete surfaces nor impair subsequent applications.
- K. Form Ties: Metal, factory-fabricated removable snap-off type, that will not leave holes less than 1/4 inch nor more than 1 inch deep and not more than 1 inch in diameter.
- L. Joint Sealant: As shown or approved by Engineer for sealing joints in concrete against moisture infiltration.
- M. Reinforcement: Bar reinforcement shall be deformed, Grade 60 conforming to ASTM A615. Mesh reinforcement shall be welded wire fabric with wires at right angles to each other.
- N. Bonding Agent: As approved by Engineer.
- O. Admixtures: Air-entraining, retarders, and other admixtures as approved by Engineer.

2.02 MIX DESIGN:

- A. Use Class "A" concrete as specified in TXDOT Item 421--Portland Cement Concrete.
- B. Mixing water shall be potable and not detrimental to the concrete.
- C. The concrete shall contain 4 to 6 percent entrained air and shall meet the requirements of ASTM C260.
- D. Do not use chemical admixtures such as water reducing, retarding and accelerating agents unless approved by the Engineer. The admixtures shall meet the requirements of ASTM C494.

2.03 STORAGE:

- A. Materials shall be stored so as not to deteriorate or become contaminated.

PART 3 EXECUTION

3.01 FORMWORK:

- A. Formwork shall be made mortar tight, properly aligned and adequately supported to produce concrete conforming accurately to the indicated shapes, lines, dimensions, and with surfaces free of offsets, waviness, or bulges.
- B. Unless otherwise shown exposed external corners shall be chamfered, beveled, or rounded by moldings placed in the forms. Chamfer shall be 1" nominal.
- C. Surfaces shall be thoroughly cleaned and coated before each use.
- D. Forms shall be removed at a time and in a manner, that will not damage the concrete.

3.02 REINFORCEMENT:

- A. Reinforcement shall be fabricated to the shapes required.
- B. Reinforcement shall be interrupted 2 inches clear on each side of expansion joints.
- C. Reinforcement shall be continuous through contraction and construction joints.
- D. Supports fabricated of plastic, or other Engineer approved material, shall be used to support reinforcement during placing operations.
- E. Dowels and tie bars shall be installed at right angles to joints, accurately aligned parallel to the finished surface, and rigidly held in place and supported during concrete placement.
- F. One end of dowels shall be oiled or greased.

3.03 INSTALLATION OF ANCHORAGE ITEMS:

- A. Installation of anchorage items shall be as shown or required to ensure sufficient anchorage for purpose intended.

3.04 JOINTS:

- A. Contraction Joints: Joints shall be installed as specified or shown.
- B. Expansion Joints: Joints shall be installed as specified or shown.
- C. Construction Joints: Construction joints shall be located as shown or approved by the Engineer.

3.05 PLACING:

- A. Surfaces to receive concrete shall be clean and free from frost, ice, mud, and water.
- B. Concrete may be placed directly on impervious surfaces that are thoroughly moistened but not muddy.
- C. During cold weather, in-place concrete shall be protected from freezing weather, throughout the curing period.
- D. During hot weather, a retarder may be used if approved by the Engineer.
- E. Concrete to receive other construction shall be struck to the proper level leaving a textured surface to receive the additional construction.

3.06 CONSOLIDATION OF CONCRETE:

- A. Except for slabs 4 inches or less, each layer of concrete shall be consolidated with internal concrete vibrators supplemented by hand spading, rodding, and tamping.
- B. Vibrating equipment shall be adequate to thoroughly consolidate the concrete.
- C. Concrete in slabs 4 inches and less shall be consolidated by compacting and screening.

3.07 FINISHING CONCRETE:

- A. Formed Surfaces:
 - 1. Fins and loose material shall be removed.
 - 2. Unsound concrete, voids over 1/2 inch in diameter, and tie-rod and bolt holes shall be cut back to solid concrete, reamed, brush-coated with cement grout, and filled solid with a stiff Portland-cement-sand mortar mix.
 - 3. Patchwork shall finish flush with adjoining concrete surfaces and, where exposed, shall match adjoining surfaces in texture and color.
- B. Unformed Surfaces:
 - 1. Surfaces shall finish to a true plane with no deviation exceeding 5/16 inch when tested with a 10-foot straightedge.
 - 2. Surfaces shall be screed and floated to the required finish level with no coarse aggregate visible before finishing as specified below.
- C. Monolithic Finish:
 - 1. Monolithic finish shall be given to flatwork unless otherwise specified.
 - 2. After the surface moisture has disappeared, floated surfaces shall be steel-trowled to a smooth, even, dense finish, free from blemish including trowel marks.

3.08 CURING:

- A. Curing shall start as soon as free water has disappeared from concrete surfaces after placing and finishing.
- B. Curing materials shall be applied and maintained so as to protect the concrete from moisture loss for 7 days.
- C. Curing shall be accomplished by impervious sheet or membrane-forming curing compound.
- D. Concrete surfaces shall be thoroughly wetted before covering with impervious sheet materials.
- E. Membrane-forming curing compound shall be applied with mechanical spraying equipment at a coverage rate as recommended by manufacturer
- F. Curing compound shall not be used on surfaces receiving applications depending on adhesion or bonding.

END OF SECTION

SECTION 32 6000

GROUT

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Grout for leveling column base plates, steel beams bearing on masonry, machinery and other equipment and/or accessories.

1.02 REFERENCES:

- A. ASTM C33--Concrete Aggregates.
- B. ASTM C109--Compressive Strength of Hydraulic Cement Mortars.
- C. ASTM C230--Flow Table for Use in Test of Hydraulic Cement.
- D. CRD-C-611--Methods of Test for Flow of Grout Mixtures (Flow-Cone Method).
- E. CRD-C-621--Specification for Non-Shrink Grout.

1.03 SUBMITTALS:

- A. Submittals: Procedures for Submittals per conditions set forth in the Contract.
- B. Product Data: Manufacturers product data sheets.
- C. Quality Control Submittals: For information only.
 - 1. Certification: Manufacturer's certification, or certified laboratory test reports, confirming that materials meet specification requirements.
 - 2. Installation instructions.

1.04 DELIVERY, STORAGE AND HANDLING:

- A. Deliver non-shrink grout to project site in unopened containers with manufacturer's labels intact.
- B. Store non-shrink grout material in dry shelter and protect from moisture.
- C. Containers that are torn or damaged such that non-shrink grout material has been exposed to elements shall be discarded.

PART 2 PRODUCTS

2.01 MANUFACTURERS:

- A. Products of following manufacturers are acceptable subject to meeting specification requirements:
 - 1. Cormix Construction Chemicals (Gifford-Hill).
 - 2. Dayton Superior Corp.
 - 3. Euclid Chemical Co.
 - 4. Five Star Products, Inc.
 - 5. L&M Construction Chemicals.
 - 6. Master Builders.
 - 7. Symons.
 - 8. Approved equal

2.02 NON-SHRINK GROUT:

- A. Qualities: Premixed non-metallic non-shrink grout material manufactured under rigid quality control, specially for use in transferring heavy loads.
 - 1. Nonmetallic natural aggregate, non-staining and noncorrosive.
 - 2. Resist attack by oil and water.
 - 3. Minimum initial setting time of approximately one hour at 70 degrees F.
 - 4. Minimum compressive strength of 8500 psi at 28 days when placed at a fluid consistency.
 - 5. Free of gas-producing or gas-releasing agents.
 - 6. Not greater than .04 expansion at 3, 14, and 28 days. Expansion at 28 days not less than expansion at 3 and 14 days.
- B. Standards
 - 1. Overall Product: CRD-C-621.
 - 2. Compressive Strength: ASTM C109, 2-inch cubes.
 - 3. Bleed Performance: CRD-C-611.
 - 4. Flow Factor: ASTM C230.

2.03 RELATED MATERIALS:

- A. Water: Potable.
- B. Pea Gravel: Clean pea gravel, ASTM C 33, coarse aggregate graded so that at least 90 percent passes a 3/8-inch sieve and 90 percent is retained by a No. 4 sieve.

2.04 MIXING:

- A. Mix materials in accordance with manufacturer's instructions.
- B. Mix as close to area to be grouted as possible. Provide adequate means to transport mixed grout as quickly as possible, and in manner to prevent segregation.
- C. No more grout shall be mixed at one time than can be placed in a period of 15 minutes. After grout has been mixed, do not re-temper by adding additional water.
- D. For less than a 4-inch clearance, or where size or shape of space makes grouting difficult, grout mix shall consist of grout material and water.
- E. For greater than 4-inch clearances where coarse aggregate will not obstruct free passage of grout, grout may be extended by adding clean pea gravel if allowed or recommended by the grout manufacturer. Follow manufacturer's recommendation for maximum amount of pea gravel that may be added to mixture.
- F. Use minimum amount of water necessary to produce a flowable grout without causing either segregation or bleeding.

PART 3 EXECUTION

3.01 PROCEDURES:

- A. Installation methods and procedures shall conform to the printed instructions of the grout manufacturer and these specifications. Where there is a conflict between these specifications and the printed instructions of the grout manufacturer, the printed instructions of the grout manufacturer shall take precedence.

3.02 PREPARATION:

- A. Remove defective concrete, laitance, dirt, oil, grease, and other foreign material from concrete surfaces by bush-hammering, chipping or other similar means, until a sound clean concrete surface is achieved.
- B. Lightly roughen concrete, but not enough to interfere with proper placement of grout.
- C. Remove foreign materials from surfaces in contact with grout.
- D. Align, level and maintain final positioning of components to be grouted. Coat shim with a thin film of grease or wax to facilitate removal.
- E. Provide relief holes to avoid trapping air beneath base plate.
- F. Take special precautions during extreme weather conditions according to the manufacturer's written instructions.
- G. Saturate concrete surfaces with clean water for period of time specified by manufacturer. Remove excess water just prior to grouting.
- H. Immediately prior to grouting, clean surfaces free of contaminates.

3.03 FORMWORK:

- A. Build leak proof forms that are strong and securely anchored and shored to withstand grout pressures. Build forms high enough to provide a "head" of grout where it is required to force grout into difficult locations.
- B. Provide enough clearance between formwork and areas to be grouted to permit proper placement of grout.

3.04 PLACING:

- A. Place grout in accordance with manufacturer's instructions.
- B. Place non-shrink grouting material quickly and continuously by most practical means permissible; pouring, pumping or under gravity pressure. Do not use either pneumatic-pressure or dry packing methods without authorization of Engineer.
- C. When practical, apply grout from one side only to avoid entrapping air.
- D. Final installation shall be thoroughly compacted and free from air pockets. To facilitate placement, a ½ to 1-inch chain or metal strap may be pulled back and forth under the equipment during grouting. Remove chain or strap before initial set takes place.
- E. Do not vibrate place grout mixture or allow it to be placed if area is being vibrated by nearby equipment, except when approved by grout manufacturer.
- F. Do not remove leveling shims for at least 48 hours after grout has been placed. After shims have been removed, fill voids with non-shrink grout.

3.05 CURING:

- A. Cure grout for three (3) days at a temperature of not less than 50 degrees F. after placing by keeping wet and covering with curing paper, by coating with a concrete membrane-forming curing compound, or by other approved methods.

END OF SECTION

SECTION 32 00 90

SYNTHETIC TURF

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Synthetic turf system comprised of 100% polyethylene fibers that is specifically designed for baseball and softball infield areas, with granular infill media designed to replicate the foot and ball play of an improved clay infield.

1.02 REFERENCES:

- A. ASTM F 1936 - Shock Absorbing Properties of Playing Surfaces and Materials
- B. ASTM D 5034 & 5035 -Breaking Load and Elongation of Textile Fabrics
- C. ASTM D 1577 - Linear Density of Textile Fiber
- D. ASTM D 2256 - Tensile Properties of Yarns, Single Strand

1.03 SUBMITTALS FOR REVIEW:

- A. Product Data:
 - 1. Manufacturer's product data sheets on all materials incorporated with synthetic turf system.
 - 2. Sample Warranty
- B. Samples & Material Testing Results:
 - 1. One sample of turf product to be utilized for each type of turf, accompanied by Manufacturer's Product Data Sheets. Sample shall be carpet only, minimum size 12"x12".
 - 2. Finished turf sample box infilled with it's corresponding infill system for each type of turf. Minimum sample size shall be 12"x12".
 - 3. One sample of infill materials accompanied by Manufacturer's Product Data Sheets.
 - 4. Turf Infill Mixtures Designs for baseball and softball infield areas including sand to rubber ratios by weight.

1.04 SUBGRADE PREPARATION:

- A. Do not install turf system until the surface whereon such is to be lain has been proven to be within grading tolerances specified in this Contract. Contractor shall hand work said surface if needed to ensure that no part of the field is outside of tolerances when tested with a string line.

PART 2 PRODUCTS

2.01 MATERIALS:

A. Synthetic Turf System

1. The synthetic turf pile yarn shall consist of 100% polyethylene fibers. In every way, fibers shall be designed and manufactured to look like, feel like and play like improved clay infield surface infield upon installation for the infield area and like natural grass for the grass portion of the fields.
2. The synthetic turf shall be manufactured to be resistant to ultra-violet degradation, weather, insects, rot, mildew, fungus growth, heat, foot traffic wear under the use of athletic cleats up to ½-inch in length, and air borne pollutants.
3. Synthetic turf system shall of the following manufacture:
 - a. Design: Synthetic turf carpets used for grass areas and dirt areas shall be designed to represent real grass and real improved clay in both appearance and play. Infill used in each area of the field (grass/infield) shall be designed to reflect the feel, footing and ball play of the respective real surface that it represents. Infill for warning track areas shall be designed to be notably firmer than the adjacent grass areas as needed to feel under-foot the distinction between surfaces.
 - b. The polyethylene pile yarn fibers system shall meet the following criteria;
 - i. Minimum Pile Face Weight: 50 oz. per sq. yd. Lab Tested
 - ii. Pile Length Range 1-3/4 to 2 inches Field Measure
 - iii. Minimum Pile Thickness 300 microns for Monofilament
100 microns for slit-film Per Micrometer
 - c. The synthetic turf carpet backing shall meet the following criteria:
 - i. Minimum Stitch Gauge 3/8-inch Field Measured
 - ii. Maximum Stitch Gauge 3/4-inch Field Measured
 - iii. Minimum Urethane Binder 22 oz. per sq. yd. Lab Tested
 - iv. Minimum total carpet weight 80 oz. per sq. yd. Lab Tested
 - iv. Minimum Grab Tear Strength 200 lbs. ASTM D 5034/5035
 - v. Minimum Tuft Bind without infill 8 lbs. ASTM D 2256
4. The synthetic turf system shall be permeable and meet the following drainage criteria:
 - a. Synthetic turf system including under drain system shall be capable of draining a minimum of 4-inches of precipitation per hour when tested at a 1.0% slope. System shall be designed to prevent infill movement or washing due to surface drain circumstances.
5. The synthetic turf system shall meet the following shock absorption criteria:
 - a. Maximum G-Max Rating (upon installation) 120 ASTM F 1936
 - b. Maximum G-Max Rating (Ultimate) 200 ASTM F 1936
 - c. Field surface shall maintain a G-Max rating below the limit of the Ultimate G-max ranges listed throughout the life of the 8-year synthetic turf system warranty and shall do so over the entire surface of the field (averaging of G-max readings will not be accepted. All points tested shall fall beneath the stated maximums during the life of the turf warranty).

6. The synthetic turf shall be manufactured and installed in widths of 15-feet. Joints shall be joined in accordance with manufacture's specifications by either gluing or sewing. In any case, the seams shall have a Grab Tear Strength greater than or equal to that of the synthetic turf system.
7. No joint shall be visible upon completion of field and throughout the life of the turf. Joints shall have a grab tear strength greater than or equal to that of the synthetic turf backing.

2.02 WARRANTY:

- A. The synthetic turf system shall be warranted against ultraviolet degradation, manufacturing defects of any kind, faulty installation including defective seams, premature wear and tear and/or turf thinning and/or fiber break down, and G-max rating exceeding stated maximum values, under proper maintenance of the field. Duration of warranty shall be for a minimum period of eight (8) years.
- B. Warranty shall be non-prorated.

2.03 FEATURES:

- A. The synthetic turf surfaces shall have all markings indicated on the drawings inlain in 4-inch wide white lines.
- B. Ballfield lines shall be per National Federation of High Schools standards, where applicable.

2.04 ADDITIONAL CONSIDERATIONS:

- A. In order to compensate for settling and compaction of infill material, Contractor shall be responsible to return to project 4 to 6 months after substantial completion to top dress the field with additional infill material. Contractor shall be responsible to furnish, place, and grade infill as needed to bring the infill material back to its original depth which shall be 3/4" less than the nominal synthetic turf system pile length.

PART 3 EXECUTION

3.01 INSTALLATION:

- A. All installation operations shall be performed in accordance with manufacturer's guidelines and by personnel trained and authorized by manufacturer to install their synthetic turf system so as to meet all specifications of this Contract.
- B. Care shall also be taken so as not to disturb the graded crushed stone material. Any ruts, depressions, mound or other imperfections to the crushed stone surface shall be re-leveled immediately prior to continuing the turf installation process.
- C. Synthetic turf seams shall be made so as to ensure that seam, when finished, has a grab tear strength greater than or equal to that of the synthetic turf system backing.
- D. The synthetic turf system shall be installed so as to yield a smooth uniform field surface upon completion with no depressions, heaves, wrinkles, ripples, warps, visible seams, or bubbles. All seams shall be hand worked as needed to make seams invisible.
- E. All inlain lines shall be straight such that they do not deviate more than 1/2 inch from a true line over their entire length.
- F. Synthetic turf shall be uniformly fastened around the entire perimeter of the field. Turf shall be attached in accordance with manufacturers recommendations and as specified in

a manner that shall ensure that at no point along any edge shall the turf pull up or away or in any way break free throughout the duration of the turf warranty.

- G. Granular infill shall be placed to a uniform depth and in a manner so as to create a smooth surface with no mounds or low areas in the infill upon completion. Infill shall be applied up to a depth necessary to leave only the top 3/4" of grass fibers visible when the turf pile yarn is fully extended to its ultimate length. However, at no point shall infill material bury any of the turf piles. If in the case turf piles become buried by infill, Contractor shall groom or rake the field as needed so as to leave no buried turf piles.
- H. Upon completion of the installation of the synthetic turf and infill material, Contractor shall be responsible to trim all turf piles that are noticeably longer than adjacent turf piles so as to leave a finished synthetic turf surface with no long fibers visible.

3.02 CLEAN UP:

- A. Contractor shall keep the field area clean throughout the process of the work. Contractor shall take special care to collect and remove all tools, loose turf materials, loose turf fibers, fasteners and/or other debris generated during turf installation process so as to guarantee that no foreign matter will be buried within the infill material. Contractor shall also clean the surface of the field of all debris and foreign matter upon completion of the work.

3.03 FINAL INSPECTION:

- A. Synthetic turf found not to comply with the Contract Documents shall be reworked or replaced at the Contractors expense until specifications are met.

END OF SECTION

SECTION 32 8450

ATHLETIC EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES:

- A. Manufactured equipment and systems for the construction of athletic facilities.

1.2 SUBMITTALS

- A. Submit data sheets for each item included in this specification to be used as part of the project.
- B. All items shall be compliant with National Federation of High Schools baseball and softball regulations.
- C. Submit samples of outfield wall padding and chain link fence padding. Samples shall be in the color indicated for the project to show material composition and color.

PART 2 PRODUCTS

2.1 BASE PLATE:

- A. Manufacturer and Model:
 - 1. SportsField Specialties, Base Plate
 - 2. SportsEdge, Major League Base Plate, Mdl BSMLBP
 - 3. Approved equal

2.2 HOME PLATE:

- A. Manufacturer and Model:
 - 1. SportsField Specialties, Home Plate
 - 2. SportsEdge, Major League Home Plate, Mdl BSMLHP
 - 3. Approved equal

2.3 PITCHER'S PLATE:

- A. Manufacturer and Model:
 - 1. SportsField Specialties, Pitchers Plate
 - 2. SportsEdge, Major League Pitches Plate, Mdl BSIGPPSR
 - 3. Approved equal

2.4 TURF/GRASS DIVIDER:

- A. Manufacturer and Model:
 - 1. SportsEdge, FlexEdge Baseball Divider, Mdl BBDIV-1

PART 3 EXECUTION

3.1 INSTALLATION:

- A. Installation of all athletic forms and divider curbs, materials and equipment shall be installed in strict adherence to manufacturer's installation instructions and guidelines and in accordance with National Association of High Schools standards and guidelines.
- B. Ensure all concrete forms are set in the exact locations and elevations indicated on the drawings and as needed to render base and plates at their proper finished elevations relative to the finished turf surface and with respect to the turf/grass divider, render the transition between turf and grass uniform with recess, lip or mound that will effect the rool of the ball across the joint or result in a safety hazard.

END OF SECTION

PART 5

ATTACHMENTS



GEOTECHNICAL INVESTIGATION REPORT

**Proposed "Subsurface Investigation"
2425 N Park Street
Brenham, Texas**

PROJECT NO. 23-DG3761

Prepared for:

**CEI ENGINEERING ASSOCIATES, INC.
Dallas, Texas**

Prepared by:

**GEOSCIENCE ENGINEERS, LLC.
Dallas, Texas**

June 2023



GeoScience

Project No. 23-DG3761

June 15, 2023

CEI Engineering Associates, Inc.
3030 Lyndon B Johnson Freeway, #100
Dallas, Texas 75234

**Geotechnical Investigation
Proposed "Subsurface Investigation"
2425 N Park Street
Brenham, Texas**

Geoscience Engineers, LLC. is pleased to submit this geotechnical investigation for the above referenced project located in Brenham, Texas. This report briefly describes the procedures employed in our subsurface exploration and presents the results of our investigation.

Our Construction Materials Testing Division can provide the materials testing services that will be required during the construction phase of this project. We will be pleased to discuss the scope of work and submit a proposal for these services upon request.

We appreciate the opportunity to be of assistance on this project. Please feel free to contact us if you have any questions or if we can be of further service.

Respectfully,

Geoscience Engineers, LLC.
Firm Reg # F-11285

Amir Shahed
Project Manager

Syed S. Afsar, P.E.
Project Engineer



SCOPE OF SERVICES

Geoscience Engineers, LLC. was contracted to perform a subsurface field investigation and soil laboratory testing program at the referenced location. This investigation was performed to determine the soil stratigraphy and some of the physical and engineering characteristics of the subsurface soils at the location of the test borings drilled. We were directed to:

1. Drill four (4) test borings to a depth of 20 feet below existing surface.
2. Determine moisture content, dry unit weight determinations, unconfined compressive strength tests, the percentage passing the number 200 sieve tests and Atterberg Limits.
3. Determine the potential vertical rise (PVR) of the soils.
4. Provide earthwork recommendations to reduce the soil swell movement based on the information of soils samples retrieved from the test borings.

The results of our sampling are presented on the boring logs included in this report. Engineering recommendations were beyond the scope of this service.

FIELD INVESTIGATION

The field portion of this study consisted of advancing four (4) test borings to a depth of 20 feet from existing ground surface elevation. The location and number of borings and their depths were determined by client. The approximate locations of the borings are shown on the Location Plan - Plate A.

The borings were advanced with the truck mounted drill rig. Undisturbed cohesive soil samples were obtained using a 3-inch diameter thin-walled tube sampler pushed into the soil. The undrained compressive strength of cohesive soils was estimated in the field using a calibrated pocket penetrometer. All soil samples were removed or extruded from the samplers in the field, visually classified, and placed in appropriate containers to prevent loss of moisture or disturbance during transfer to the laboratory. The borings were advanced using dry auger procedures to observe the water level at the time of the exploration. These water level observations are recorded on the boring logs.

GENERAL SUBSURFACE CONDITIONS

Stratigraphy

Based on our interpretation of the borings drilled for this investigation, the subsurface stratigraphy encountered at the location of test borings consisted of brown followed by reddish tan and gray SANDY CLAY (CL) soils with silty sand seams encountered from existing ground surface elevation to a depth of 8 to 13 feet in test borings B-2 and B-4 drilled, below which, dark brown to tannish brown, gray deeper followed by tan CLAYEY SAND (SC) soils were encountered and remained visible to the completion depth of test borings B-2 and B-4 drilled.

In test boring B-1, brown followed by gray CLAYEY SAND (SC) soils with silty clay seams were encountered from existing ground surface elevation and remained visible to the completion depth of the test boring B-1 drilled.

In test boring B-3, brown followed by dark brown, gray SANDY CLAY/CLAYEY SAND (CL/SC) soils with silty sand seams were encountered from existing ground surface elevation and remained visible to a depth of 8 feet, below which, tannish brown, gray deeper followed by tan CLAYEY SAND (SC) soils were encountered and remained visible to the completion depth of test boring B-3 drilled.

Detailed descriptions of the subsurface stratigraphy encountered at the locations of the test borings drilled for this study are included on Plates 1 to 8 in the **Illustrations** section of this report.

Subsurface Water Conditions

At the time of this investigation, groundwater seepage was encountered at a depth of **7 to 17** feet during drilling and upon completion at the location of the test borings drilled. It should be noted that the depth to subsurface water will be affected by changes in atmospheric conditions and site drainage. With regard to the aforementioned, we recommend the depth to groundwater be verified during construction. Any noticeable variations in the conditions reported herein should be conveyed to this office immediately so that a thorough review of the current design recommendations can be made. Based upon short-term observations, it is not possible to accurately predict the magnitude of subsurface water fluctuations that might occur.

LABORATORY TESTING

Laboratory tests were performed on the retrieved soil samples to determine general classification and to evaluate some of the physical and engineering properties of the subsurface soils. A series of moisture contents were performed to develop soil moisture profiles at the boring locations and to aid in evaluating the uniformity of soil conditions. Plastic and liquid limit (Atterberg limits); percentage passing the number 200 sieve tests and swell tests were performed on selected samples from the borings. The results of these tests are presented in the boring logs and in the **ILLUSTRATIONS** section of this report.

VARIATIONS IN SUBSURFACE CONDITIONS

Subsurface conditions have only been obtained from borings location shown on the Location Plan Plate A. It should be noted that variations in the subsurface may exist in other parts of the site. The soil stratigraphy described herein and on the boring logs is based on visual observations and interpretations during sampling and classification of the soil samples obtained from the test borings drilled.

Soil Movement

The near surface soils encountered at this site exhibited Plasticity Index between 12 and 27. These types of soils are considered low to moderately expansive in nature and capable of significant vertical movement as changes occur in moisture conditions. The magnitude of the moisture induced vertical movement was calculated using the Department of Transportation (method 124-E) in conjunction with current moisture content and using the laboratory data from the results of swell tests performed on the selected samples retrieved from the test borings drilled. Based on aforementioned methods the estimated moisture induced Potential Vertical Rise (PVR) of the soils at the time of this investigation is at the location of the test borings drilled is on the order of 2 to 2.5 inches.

It should be noted that more soil movement will occur in areas where water ponding is allowed to occur during and/or after construction -or- in areas where additional fill other than select fill is placed.

Methods to reduce the soil swell movement at the locations of baseball fields.

To reduce the soil potential vertical movement (PVR) to one inch or less, we recommend the subgrade soils should be improved by moisture conditioning or chemical injection methods.

- *Moisture conditioning the subgrade soil:*

Remove the subgrade soils to a depth of 4.5 feet below the finished grade elevation and stockpile (field moisture verification is required). The exposed surface area should be proof rolled with heavy equipment as per TxDOT item 216. After the passing of proof rolling the exposed surface should be scarified to a depth of 6 inches and compacted to:

- 94 to 98 percent of the maximum dry density with a minimum moisture content of 2 points of optimum for soils with proctor PI between 20 and 30
- 95 and 100 percent of maximum dry density with a moisture content between optimum and 3 points above optimum for proctor PI of less than 20

Previously removed soils should be placed back in area in 6 to 8 inches loose lifts and mixed thoroughly to form a homogenous consistent soil below finished grade elevation and each lift should be compacted to the above specifications:

We recommend the improvements extend an additional 10 feet beyond the perimeter of the pads.

Field density tests should be taken at the rate of at least one test per each 2,500 square feet, per lift, in the area of all compacted fill. For areas where hand tamping is required, the testing frequency should be increased to approximately one test per lift, per 100 linear feet of area.

We recommend that during moisture conditioning the swell tests should be performed to ensure that the percentage swell tested on the sample is less than 1%. Also, full-time monitoring of moisture conditioning process will be required and a certification from the testing laboratory should be obtained to ensure that the swell potential of the soils has been adequately reduced.

Moisture loss of the improved soils should not be allowed to occur between the time the improvement procedures are completed and the start of the construction.

In the event the construction is delayed then we recommend covering the re-worked soils with an impermeable moisture barrier and 6 inches of loose soils should be spread on top of impermeable barrier until the time of construction.

-OR-

- *Chemical/water pressure injection method:*

The potential vertical movement can be reduced by chemical/water injection to a depth of 5 feet below existing grade to pre-swell the subsurface soils. For improvement of subgrade soils by chemical injection, we recommend the improvements extend an additional three feet (minimum) beyond the perimeter of the pads and should cover all areas that are sensitive to soil movement. The number of injections required generally depends on the rate at which the soil absorbs chemical, initial moisture condition and hardness of the soils, and the amount of reduction that is desired and can be tolerated. We recommend at least 2 passes of chemical injection should be performed prior to the testing. Upon completion of chemical injection, post-injection testing will be required to ensure that the swell potential of the soils has been adequately reduced for the design of the slab foundation.

A full-time laboratory technician from our Firm should be present throughout the injection operations. Upon completion of chemical injection, post-injection testing will be required to ensure that the percentage swell tested on the sample is less than 1%. Undisturbed samples should be obtained at every one-foot interval to the total injected depth from 1 test hole per 5,000 square feet. Adjustments in the testing program should be at the discretion of the testing engineer. A minimum of two free swell tests should be performed per test hole. Samples will be tested at the approximate overburden pressure of the sample depth. Also, a certification from the testing laboratory should be obtained to ensure that the swell potential of the soils has been adequately reduced for the design of the slab foundation.

Construction should start shortly upon completion of the improvement process. Moisture loss of the improved soils should not be allowed to occur between the time the improvement procedures are completed and the start of the construction.

In the event the construction is delayed then we recommend covering the injected soils with an impermeable moisture barrier and 6 inches of loose soils should be spread on top of

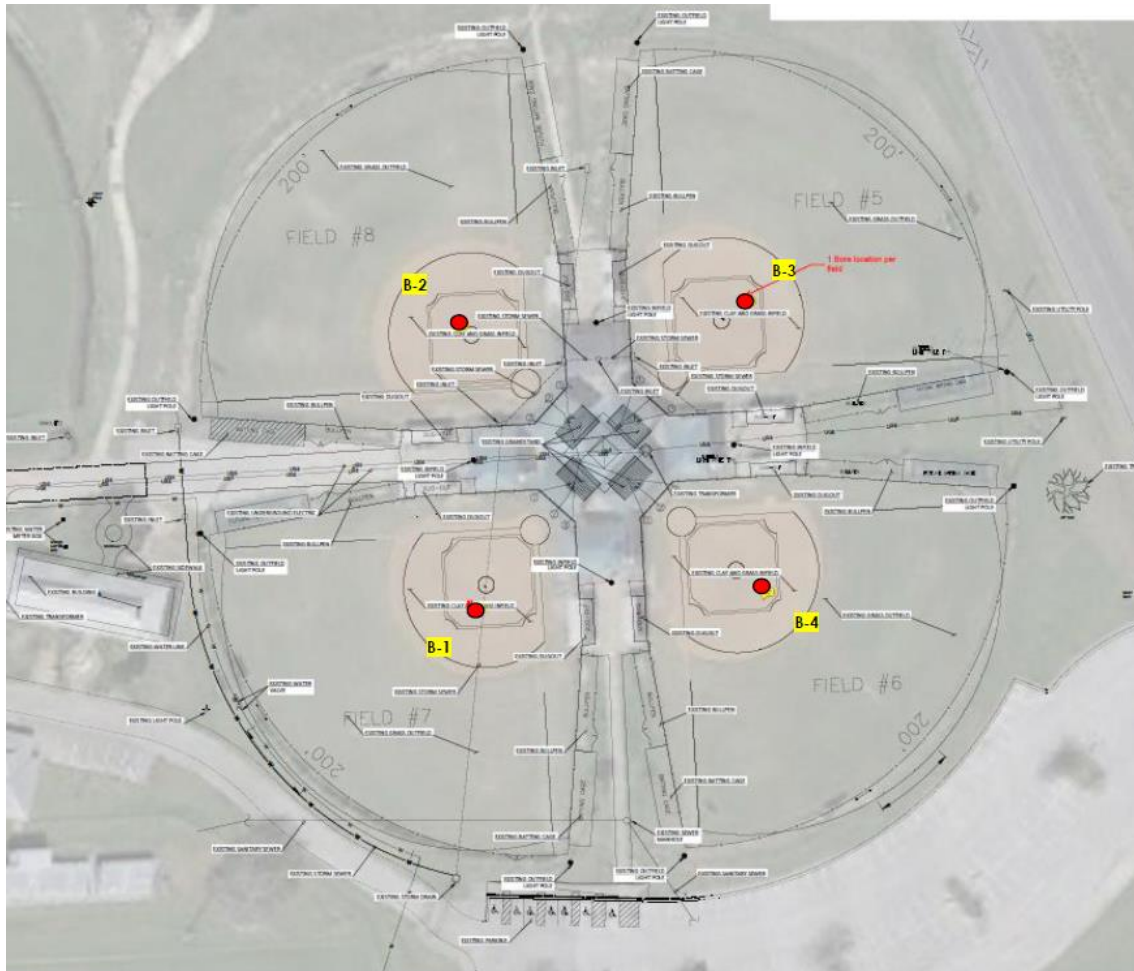
impermeable barrier until the time of construction or the injected soils should be sealed with one foot of select fill soils.

In order to protect the adjacent structures, we recommend that chemical injection should be performed if the adjacent structures are a minimum of 20 feet away from the line of the proposed work area and a temporary cut off trench should be constructed between them .

CLOSURE

Subsurface conditions were obtained only from the boring locations noted. It should be understood that variations in the subsurface conditions were encountered at the boring locations, and as such, further variations may exist between the boring locations. Subsurface conditions varying from those found at the boring locations may be present because of, among other factors, soil moisture variations, fill placement and naturally occurring variations in soil properties. The soil stratigraphy described herein and on the boring logs is based on visual observations and interpretations during sampling and classification of the soil samples. Boring and laboratory data presented was developed solely for the preparation of this report. We are not responsible for the interpretation or use of this data for purposes beyond the stated scope of this report.

ILLUSTRATIONS



 Approximate Boring Location

Project No. 23-DG3761

BORING LOCATION PLAN

Proposed "Subsurface Investigation"
2425 N Park Street
Brenham, Texas

Plate A

Proposed "Subsurface Investigation"
2425 N Park Street
Brenham, Texas

SUMMARY OF SWELL TESTS		
Boring Number	B-2	B-4
Sample Depth (ft.)	4-6	2-4
Initial Moisture Content (%)	19	14
Final Moisture Content (%)	22	20
Applied Surcharge Pressure (psf)	625	375
Vertical Swell (%)	1.3	0.9
<i>Liquid Limit</i>	46	40
Plastic Limit	19	18
Plasticity Index	27	22

PART 6

CONTRACT DRAWINGS

SITE DEVELOPMENT PLANS

CITY OF BRENHAM SPORTS COMPLEX

SYNTHETIC TURF IMPROVEMENTS

2425 N PARK ST
BRENHAM, TX



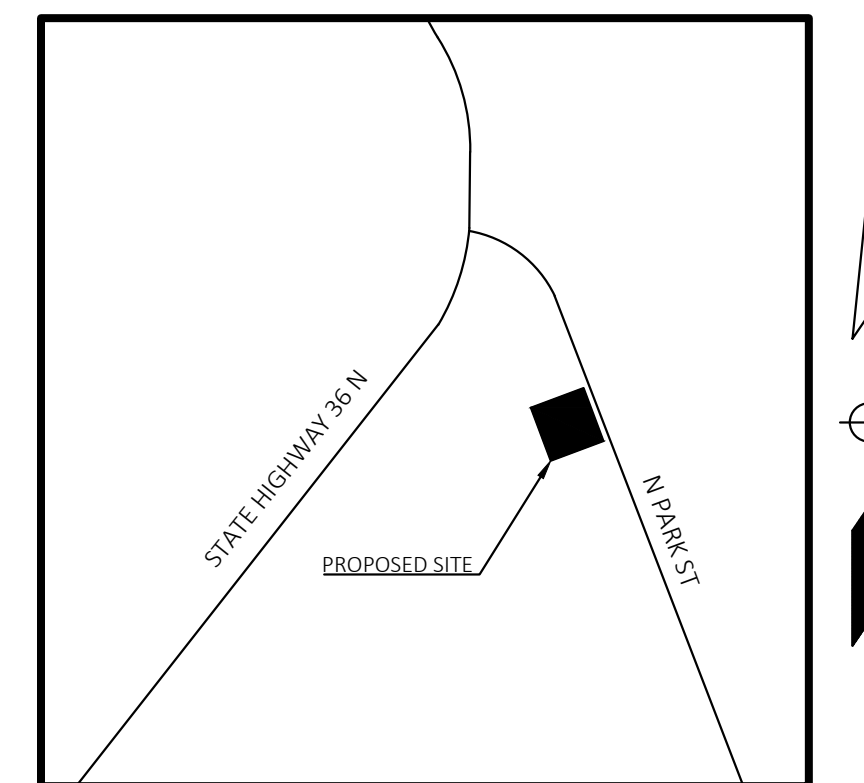
CEI ENGINEERING ASSOCIATES, INC.
3030 IBI FREEWAY, SUITE 920
DALLAS, TX 75234
PHONE: (972) 488-3737
FAX: (972) 488-6732

GENERAL NOTES:

- A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:
- B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.
- C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.
- D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- F. **WARRANTY/DISCLAIMER:** THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.
- G. **SAFETY NOTICE TO CONTRACTOR:** IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.
- H. ALL CONSTRUCTION IN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT ENGINEER.
- I. **RESIDENT ENGINEERING SERVICES:** WHEN REQUESTED BY THE OWNER, RESIDENT ENGINEERING SERVICES SHALL BE PROVIDED BY THE ENGINEERS (ON A TIME AND FREQUENCY BASIS) ACCEPTABLE TO THE CITY ENGINEER FOR IMPROVEMENTS TO PUBLIC WATER MAINS, PUBLIC SEWER, AND CITY STREETS. AT THE COMPLETION OF CONSTRUCTION, THE ENGINEER SHALL CERTIFY THE CONSTRUCTION TO BE IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. THIS WORK WILL BE AT THE OWNER/DEVELOPER'S DIRECT EXPENSE AND SHALL BE COORDINATED WITH CEI ENGINEERING ASSOCIATES, INC. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENT ENGINEER OF ANY PRECONSTRUCTION / CONSTRUCTION CONFERENCES AND ANY PUBLIC CONSTRUCTION 24 HOURS PRIOR TO SAID ACTION.

PLAN INDEX:

- C0 COVER SHEET
- C1 EXISTING SITE PLAN
- C2 DEMOLITION PLAN
- C3 EROSION CONTROL PLAN
- C3.1 EROSION CONTROL NOTES
- C4 GRADING PLAN
- C5 SURFACE PLAN
- C6 UTILITY PLAN
- C7 DETAIL SHEET 1
- C8 DETAIL SHEET 2
- C9 COLOR RENDER



VICINITY MAP
NOT TO SCALE

RESOURCE LIST:

BRANCH MANAGER
JEFF BREESE, P.E.
PHONE: (972) 488-3737
EMAIL: JBREESE@CEIENG.COM

CEI CONTACT:

NAME: CHANCE HAWKINS
EMAIL: CHAWKINS@CEIENG.COM
PHONE: (469) 491-0295

CLIENT CONTACT:

NAME: DANE RAU
EMAIL: DRAU@CITYOFBREHAM.ORG



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CITY OF BRENHAM SPORTS COMPLEX
SYNTHETIC TURF IMPROVEMENTS
2425 N PARK ST
BRENHAM, TX



2023-7-26

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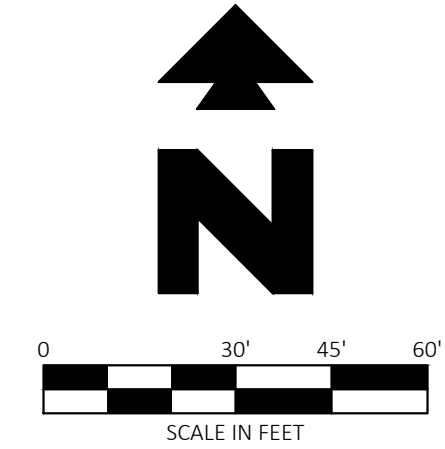
PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
DESIGNER	EGM
CEI PROJECT NUMBER	33198
DATE	7/21/2023
REVISION	REV-1

COVER
SHEET TITLE
SHEET NUMBER

C-0

ALL WORK ON FIELDS #5 AND #8 TO BE A PART OF THE BASE PROPOSAL.
 ALL WORK ON FIELD #7 TO BE A PART OF ALT. PROPOSAL #1.
 ALL WORK ON FIELD #6 TO BE A PART OF ALT. PROPOSAL #2.

SITE BENCHMARK
 TBM ELEV. = 277.61
 LOCATION: TOP OF NE BOLT ON METAL LIGHT POLE



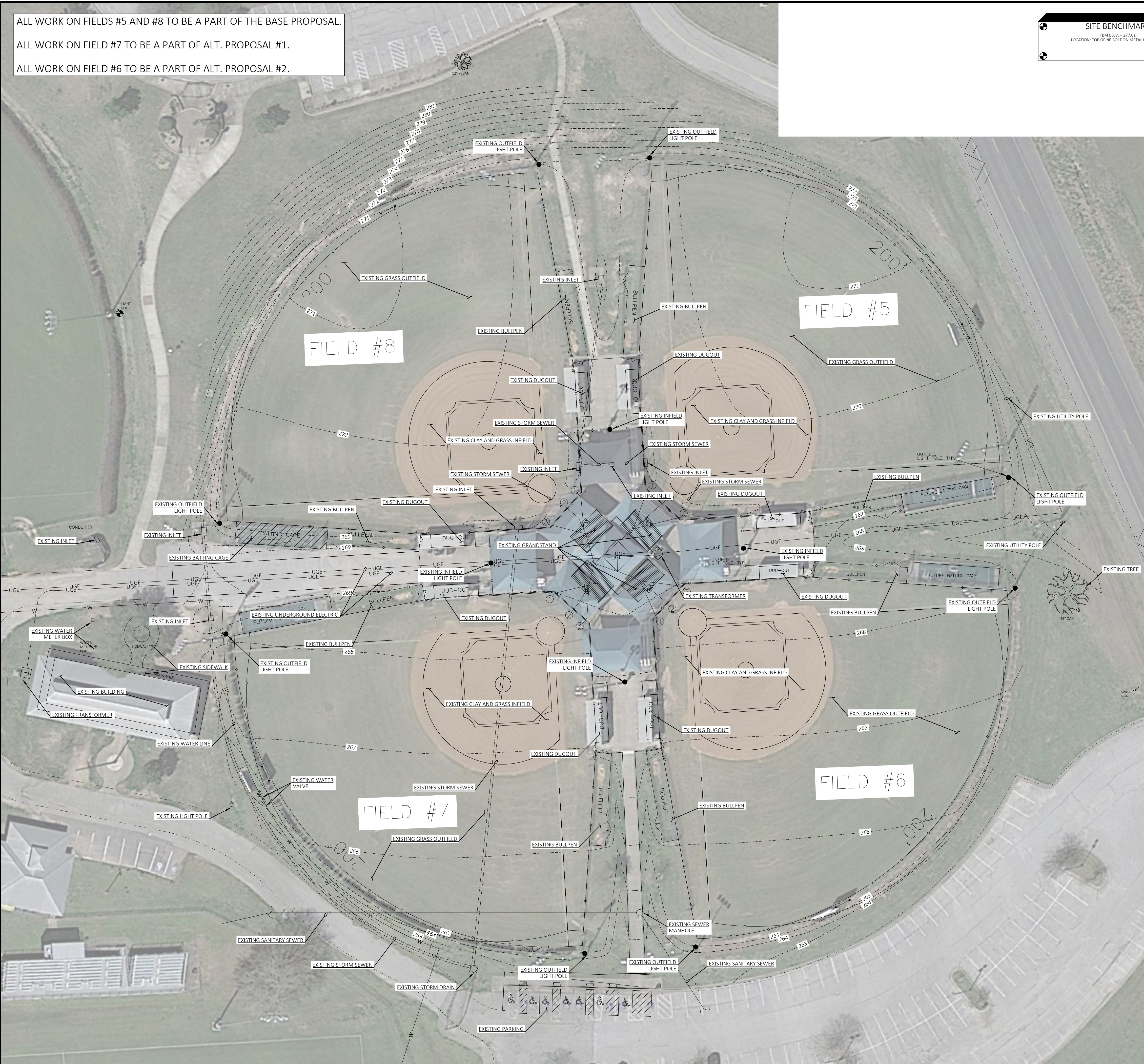
Know what's below.
 Call before you dig.



CEI ENGINEERING ASSOCIATES, INC.
 3030 LBJ FREEWAY, SUITE 920
 DALLAS, TX 75234
 PHONE: (972) 488-3737
 FAX: (972) 488-6732

EXISTING LEGEND

	BENCHMARK (BM)
	DIRT LINE
	BREAK LINE
	CONTROL LINE
	CHAINLINK FENCE LINE
	SPRINKLER CONTROL VALVE
	LIGHT POLE STRAIGHT
	LIMITS OF REMOVAL



DRAWING LOCATION: \\BRNG\BANKSO\CEI\BANKSO\PROJECTS\3000\33188\DRAWINGS\DESIGN\WORKING\33188-SP.DWG - SAVED BY: ZHUJIAO@CEI

CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
 2425 N PARK ST
 BRENHAM, TX



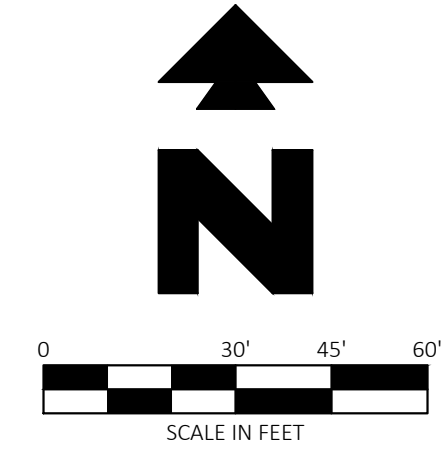
F-7524

PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
DESIGNER	EGM
CEI PROJECT NUMBER	33198
DATE	7/21/2023
REVISION	REV-1

EXISTING SITE PLAN
 SHEET TITLE
 SHEET NUMBER
C-1

ALL WORK ON FIELDS #5 AND #8 TO BE A PART OF THE BASE PROPOSAL.
 ALL WORK ON FIELD #7 TO BE A PART OF ALT. PROPOSAL #1.
 ALL WORK ON FIELD #6 TO BE A PART OF ALT. PROPOSAL #2.

SITE BENCHMARK
 B.M. ELEV. = 277.61
 LOCATION: TOP OF N.E. BOLT ON METAL LIGHT POLE



Know what's below.
 Call before you dig.



CEI ENGINEERING ASSOCIATES, INC.
 3030 I-35 FREEWAY, SUITE 920
 DALLAS, TX 75234
 PHONE: (972) 488-3737
 FAX: (972) 488-6732

EXISTING LEGEND

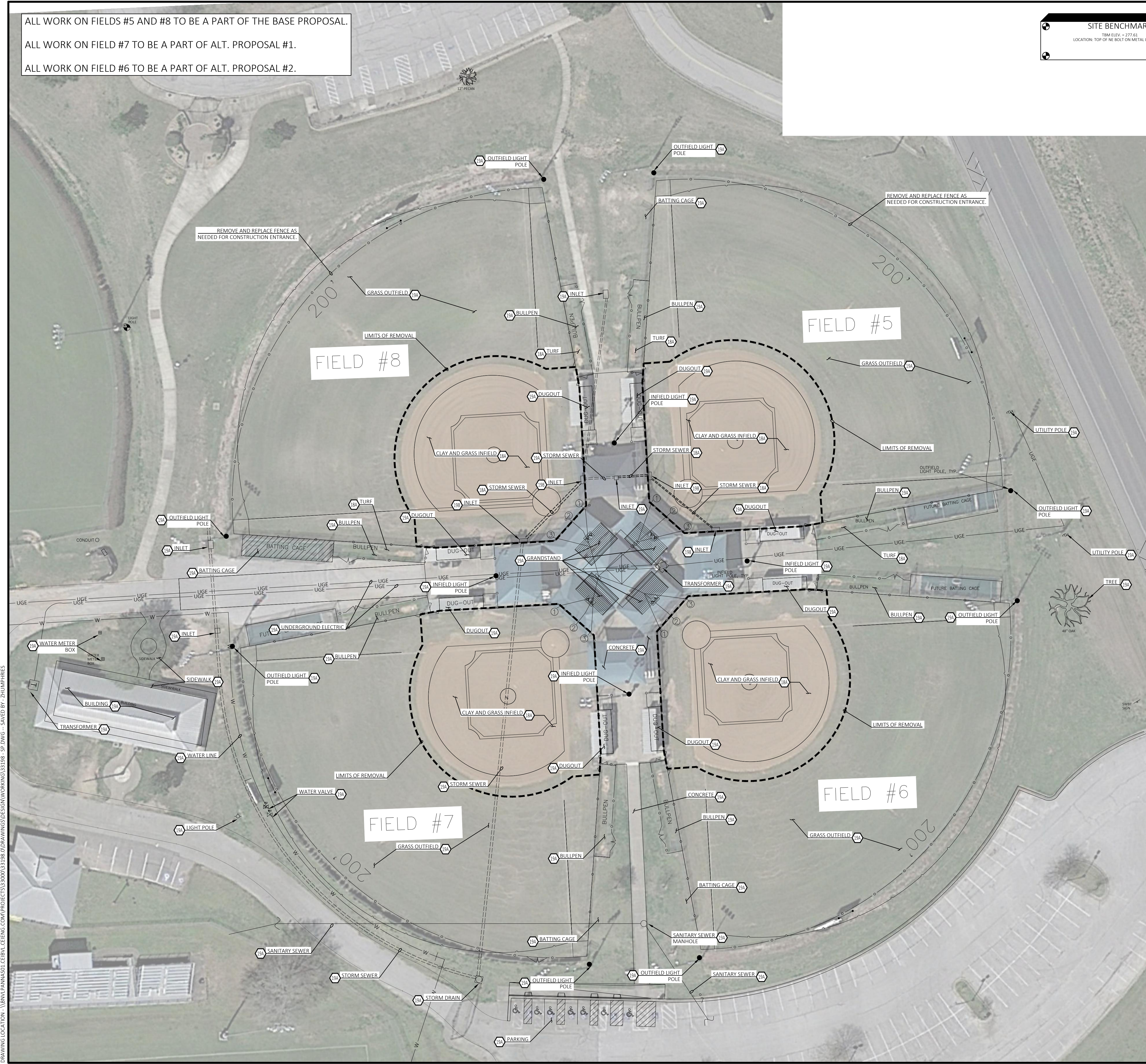
- BENCHMARK (BM)
- DIRT LINE
- BREAK LINE
- CONTROL LINE
- CHAINLINK FENCE LINE
- SPRINKLER CONTROL VALVE
- LIGHT POLE STRAIGHT
- LIMITS OF REMOVAL

GENERAL DEMOLITION NOTES

- A. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE "CITY OF BRENHAM STANDARD SITE WORK SPECIFICATIONS".
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.
- C. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- D. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- E. **ENGINEER'S NOTICE TO CONTRACTOR**
 THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 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.

DEMOLITION NOTES

- 18A EXISTING TO BE REMOVED AND PROPERLY DISPOSED OF.
- 18B REMOVE FENCE FOR SITE ACCESS REPLACE FENCE WITH DOUBLE GATE WHEN CONSTRUCTION IS COMPLETE.
- 19A EXISTING TO REMAIN AND BE PROTECTED.
- 19B PROTECT, GRATE, AND COVER EXISTING INLET BOX.



DRAWING LOCATION: \\\BING\BANKSO\CEI\BRL\CEI\ENG\COM\PROJECTS\3000\33188\DRAWINGS\DESIGN\WORKING\33188-SP.DWG - SAVED BY: ZHUJUNPHIES

CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
 2425 N PARK ST
 BRENHAM, TX



2023-7-26

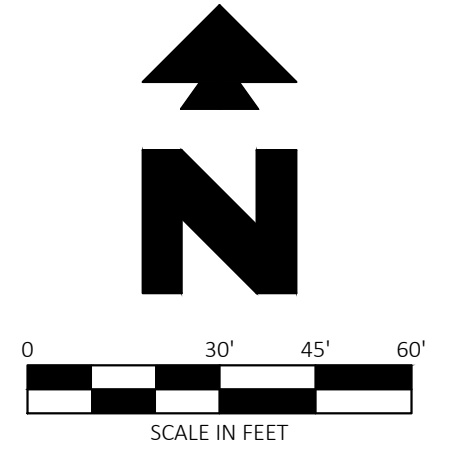
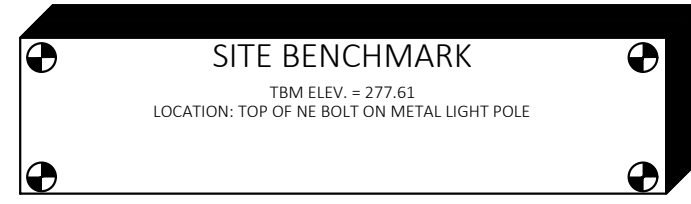
F-7524

PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
DESIGNER	EGM
CEI PROJECT NUMBER	33198
DATE	7/21/2023
REVISION	REV-1

DEMOLITION PLAN
 SHEET TITLE
 SHEET NUMBER

C-2

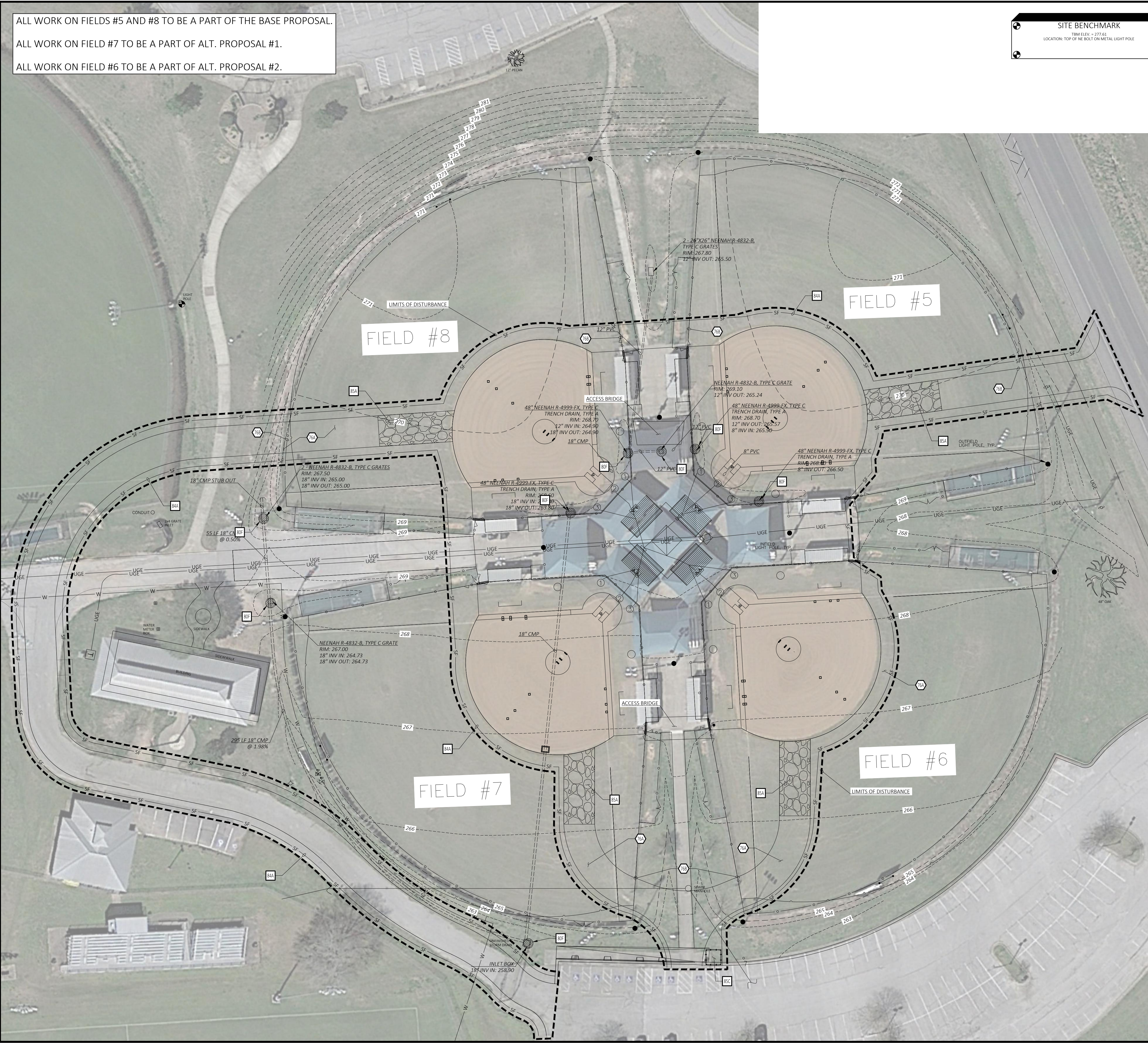
ALL WORK ON FIELDS #5 AND #8 TO BE A PART OF THE BASE PROPOSAL.
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 ALL WORK ON FIELD #6 TO BE A PART OF ALT. PROPOSAL #2.



Know what's below.
 Call before you dig.



CEI ENGINEERING ASSOCIATES, INC.
 3030 LBJ FREEWAY, SUITE 920
 DALLAS, TX 75234
 PHONE: (972) 488-3737
 FAX: (972) 488-6732



PROPOSED LEGEND

	PROPERTY LINE/RIGHT OF WAY LINE		CONCRETE WASHOUT
	LIMITS OF DISTURBANCE		CONSTRUCTION ENTRANCE
	CONTOUR ELEVATIONS		INLET PROTECTION
	STORM DRAIN		
	SILT FENCE		

GENERAL EROSION NOTES

A. SEE SHEET "EROSION CONTROL NOTES" FOR EROSION CONTROL NOTES AND DETAILS.

SITE NOTES

76A CONTRACTOR SHALL BE RESPONSIBLE TO BUILD AND REMOVE TEMPORARY ROADS NEEDED FOR ACCESS. CONTRACTOR SHALL ALSO BE RESPONSIBLE TO RE-ESTABLISH TOPSOIL, GRASS, AND REPAIR IRRIGATION SYSTEM TO PRE-CONSTRUCTION CONDITION OR BETTER.

76B CONTRACTOR TO TAKE DOWN AND RESTORE FENCES AND TRANSPORT MILLING/ASPHALT MATERIAL TO BUILD TEMPORARY ROADS.

EROSION DETAILS

80F	SILT FENCE INLET PROTECTION.
84A	TEMPORARY SILT FENCE.
85A	TEMPORARY STONE CONSTRUCTION ENTRANCE.
85C	TEMPORARY CONCRETE WASHOUT.

AREA OF DISTURBANCE = 2.98 ACRES (129,846 S.F.)

NOTE: THE OWNER SHALL PROVIDE PULVERIZED ASPHALT BASE MATERIAL AS NEEDED FOR CONSTRUCTING TEMPORARY ACCESS ROADWAYS TO THE INFIELD AREAS. UPON COMPLETION, SAID MATERIALS TOGETHER WITH CONSTRUCTION ENTRANCE MATERIALS, CONCRETE WASHOUT WASTE AND OTHER CONSTRUCTION MATERIALS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE TO TRANSPORT SAID MATERIALS FROM THE CITY'S STORAGE FACILITY TO THE PROJECT SITE.

DRAWING LOCATION: \\BANK\BANKS01\CEI\BANKS\PROJECTS\3000\33198\DRAWINGS\DESIGN\WORKING\33198 - GP.DWG - SAIED BY: ZHUMPHRIES

CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
 2425 N PARK ST
 BRENHAM, TX



2023-7-26

F-7524

PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
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EROSION CONTROL PLAN
 SHEET TITLE
 SHEET NUMBER

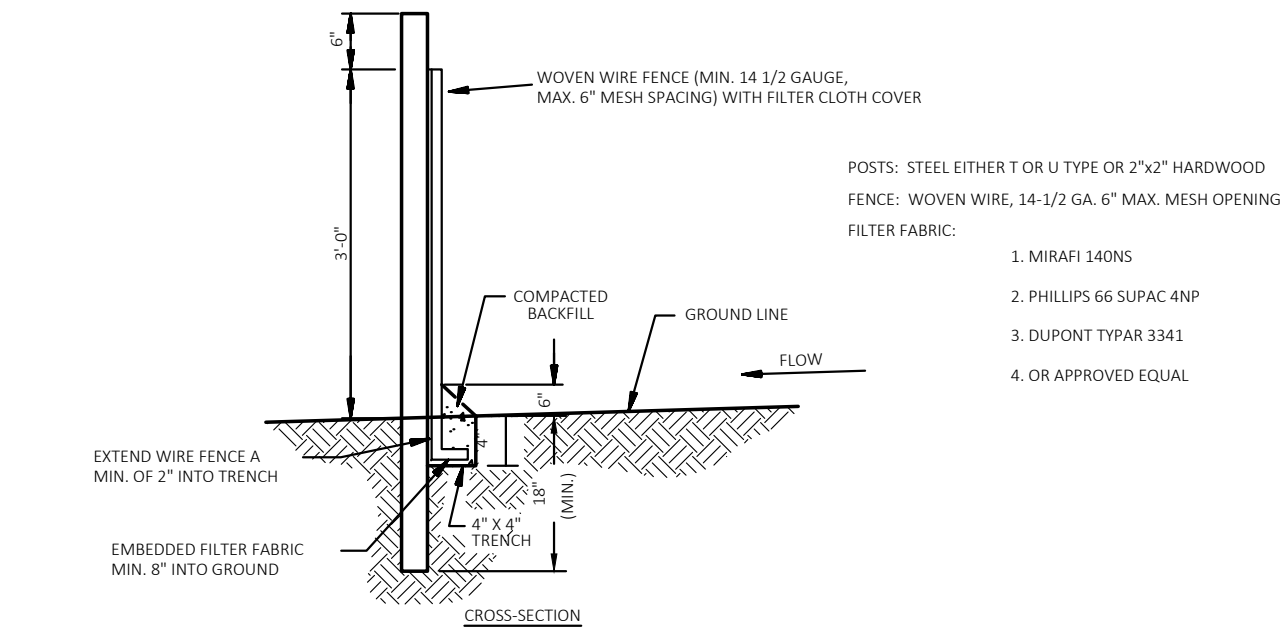
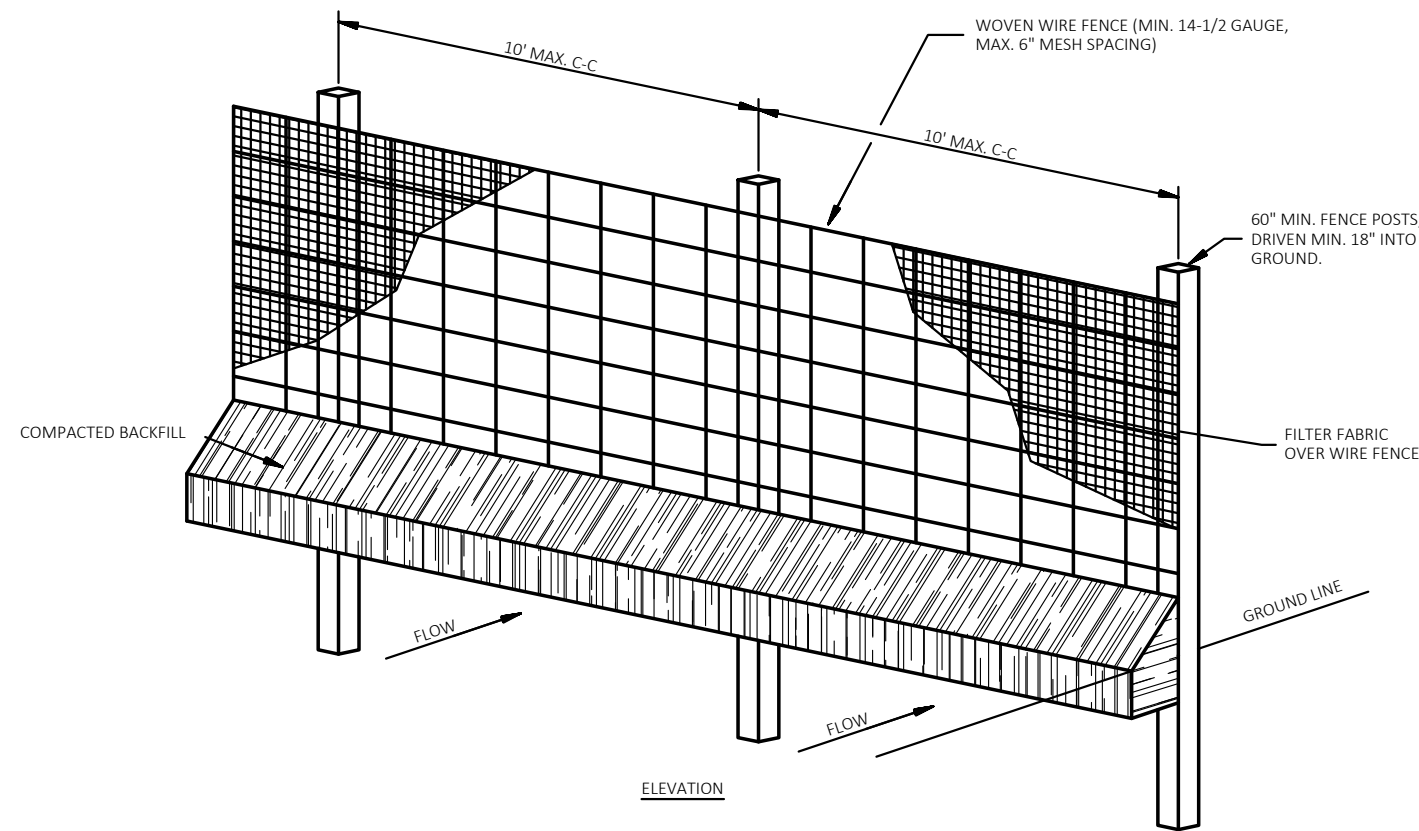
C-3

GENERAL EROSION NOTES

- A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE STATE OF TEXAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- B. A COPY OF THE SWPPP AND EROSION CONTROL PLANS, INCLUDING APPLICABLE DETAIL SHEETS, MUST REMAIN ONSITE THROUGHOUT CONSTRUCTION AND MADE AVAILABLE TO THE PUBLIC UNTIL THE SITE IS TERMINATED AND/OR PERMANENTLY STABILIZED PER THE NPDES PERMIT.
- C. THE CONTRACTOR MUST UPDATE THE SWPPP AND EROSION CONTROL PLANS TO REFLECT THE PROGRESS OF CONSTRUCTION AND GENERAL CHANGES TO THE PROJECT SITE. CHANGES MAY INCLUDE BMP INSTALLATION, MODIFICATION, OR REMOVAL, CONSTRUCTION ACTIVITIES, CLEARING, GRUBBING, OR GRADING, AND TEMPORARY OR PERMANENT STABILIZATION.
- D. THE CONTRACTOR MUST ADHERE TO ANY HOURS OF WORK, NOISE LEVEL, OR OTHER CONSTRUCTION RELATED RESTRICTIONS IN ACCORDANCE WITH LOCAL OR STATE REGULATIONS.
- E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ANY OFFSITE BORROW, SPOIL, OR STORAGE AREAS TO BE UTILIZED, BUT NOT PROVIDED WITHIN THE PROJECT'S LIMITS OF DISTURBANCE, ARE TO BE PROPERLY LICENSED AND PERMITTED.
- F. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER AND DEPICTED ON THE ONSITE EROSION CONTROL PLAN.
- G. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.
- H. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- I. ADEQUATE HOUSEKEEPING MEASURES SHALL BE IMPLEMENTED SO THAT LOOSE TRASH, MATERIALS, TOOLS, AND EQUIPMENT ARE COLLECTED AND PROPERLY STORED AT THE CONSTRUCTION SITE.
- J. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- K. NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES, DRAINAGE STRUCTURES, OR WATERS OF THE STATE.
- L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY STABILIZED IMMEDIATELY.
- N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IMMEDIATELY, BUT NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.
- O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER.
- P. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AFTER THE STABILIZATION OF THE SITE AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS.
- R. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.
- S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- T. SEDIMENT BASINS AND TRAPS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL AND/OR STATE ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.
- U. ALL EXISTING AND PROPOSED STORM SEWER PIPES, DRAINAGE STRUCTURES, AND DRAINAGE DITCHES WITHIN THE PROJECT AREA SHALL BE CLEANED OF ANY TRASH AND ACCUMULATED SEDIMENT PRIOR TO FINAL STABILIZATION.
- V. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, WATTLES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.
- W. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- X. IN AN EMERGENCY SITUATION, THE CONTRACTOR IS RESPONSIBLE FOR MODIFYING OR ADDING BMPs NECESSARY TO STOP POLLUTANT OR SEDIMENT DISCHARGES FROM THE CONSTRUCTION SITE AND PROTECT THE WATER QUALITY OF THE RECEIVING WATERBODY.
- Y. IF AN EXCAVATION NEEDS TO BE DEWATERED DUE TO A RECENT RAINFALL EVENT, THE CONTRACTOR CAN DEWATER THE EXCAVATION VIA A PUMPED FILTER BAG. THE PUMPED FILTER BAG MUST DISCHARGE ONTO A STABILIZED SURFACE AND UPSTREAM OF AN EROSION CONTROL BMP LIKE A SEDIMENT BASIN/TRAP, SILT FENCE, OR OTHER PERIMETER BMP. IT IS STRICTLY PROHIBITED TO DISCHARGE THE PUMPED FILTER BAG INTO A STORM DRAIN OR OTHER CONVEYANCE STRUCTURE WITHOUT THE RUNOFF BEING TREATED VIA AN EROSION CONTROL BMP FIRST.

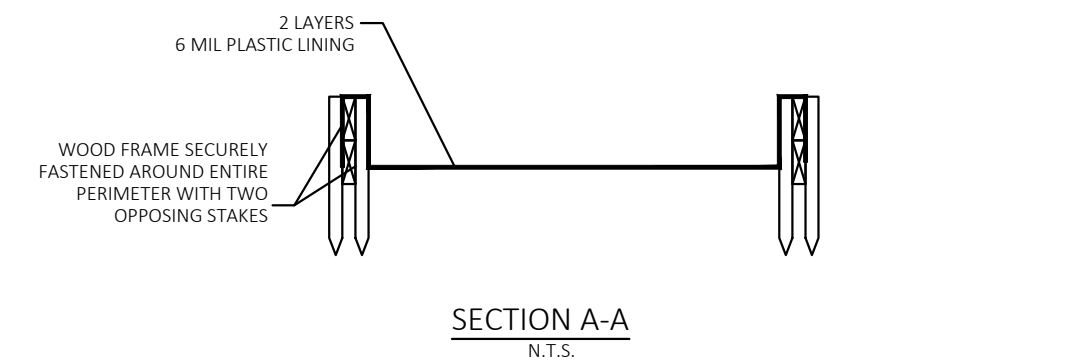
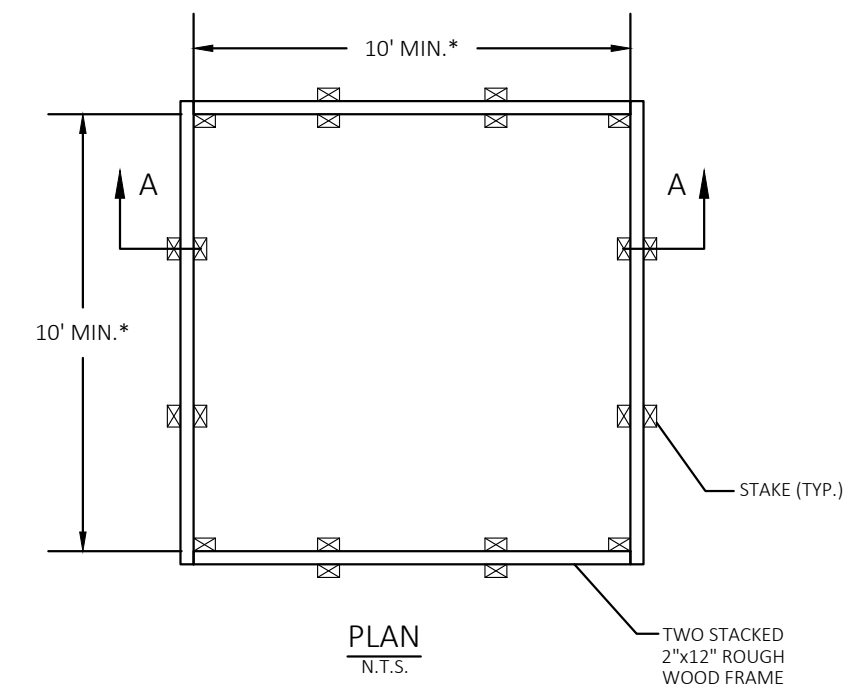
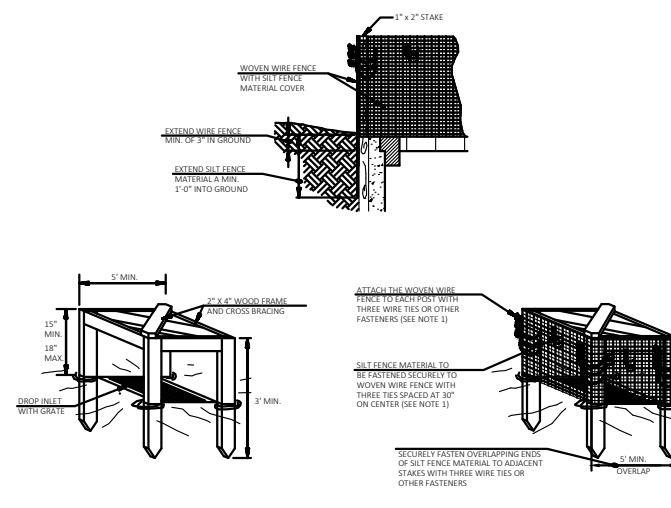
GENERAL EROSION NOTES CONT'D

- MAINTENANCE**
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT GREATER THAN 0.5 INCHES, AND SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETERIORATION.
 2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
 3. SILT FENCES AND WATTLES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES AND WATTLES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE BMP.
 4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
 5. THE TEMPORARY SEDIMENT TRAP AND SEDIMENTATION BASIN STRUCTURES SHALL BE CHECKED REGULARLY TO ENSURE THAT THEY ARE STRUCTURALLY SOUND AND HAVE NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
 6. CONCRETE WASHOUT AREAS SHALL BE CHECKED REGULARLY FOR LEAKS AND CAPACITY. ALL LEAKS MUST BE REPAIRED IMMEDIATELY. WHEN THE WASHOUT VOLUME HAS BEEN REDUCED BY 85%, THE BMP MUST BE REMOVED AND REPLACED.

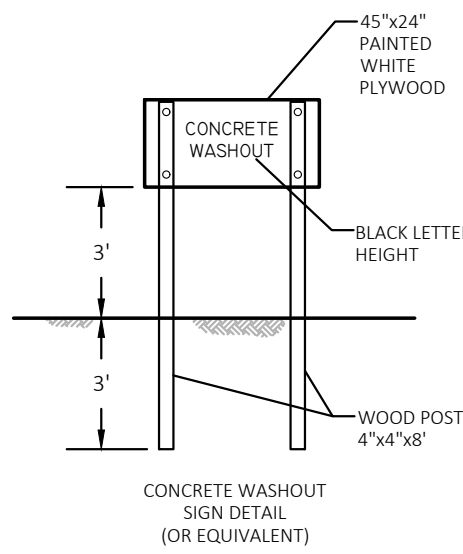


1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGED" DEVELOP IN THE SILT FENCE.

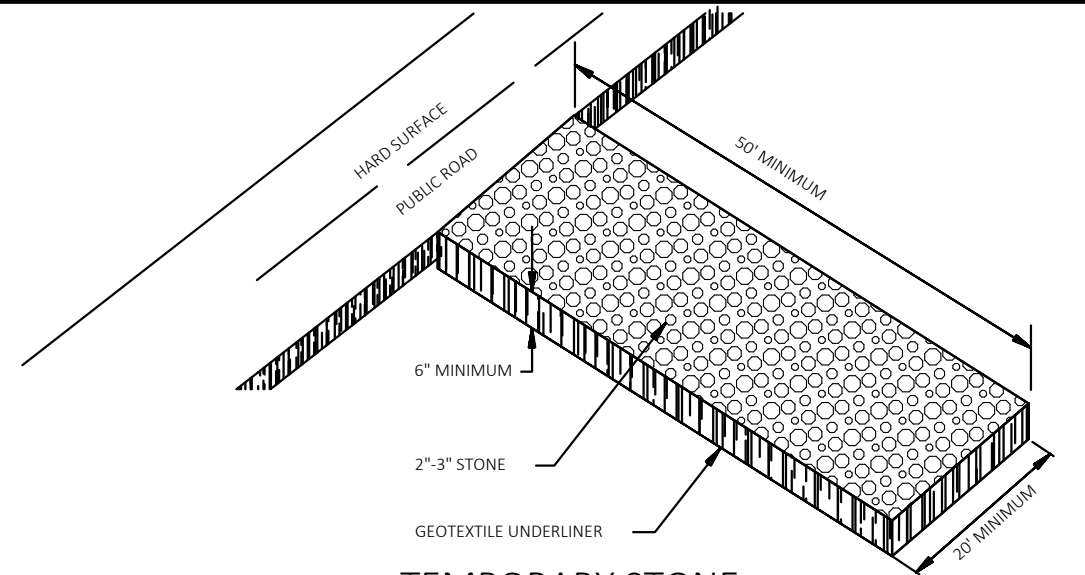
TEMPORARY SILT FENCE
N.T.S. BSA



- NOTES:**
1. *DENOTES THE INTERIOR DIMENSION.
 2. CONCRETE WASHOUT SHALL BE AT LEAST 50 FT. FROM ANY STORM SEWER INLET.
 3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



TEMPORARY CONCRETE WASHOUT (ABOVE GRADE)
N.T.S. BSA



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3030 LBJ FREEWAY, SUITE 920
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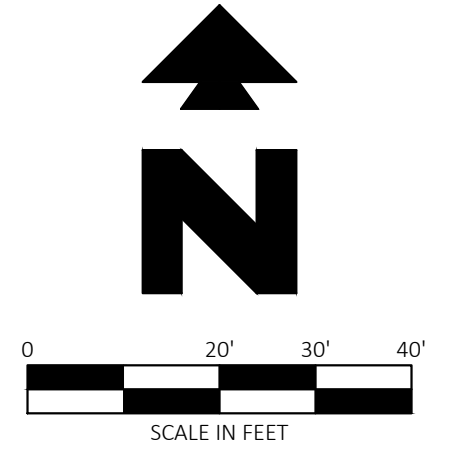
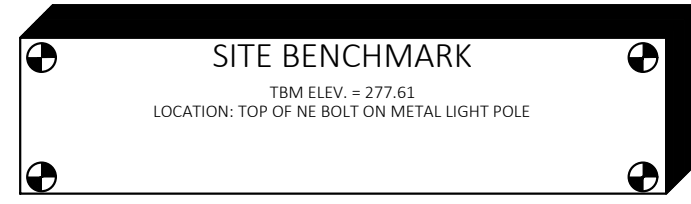
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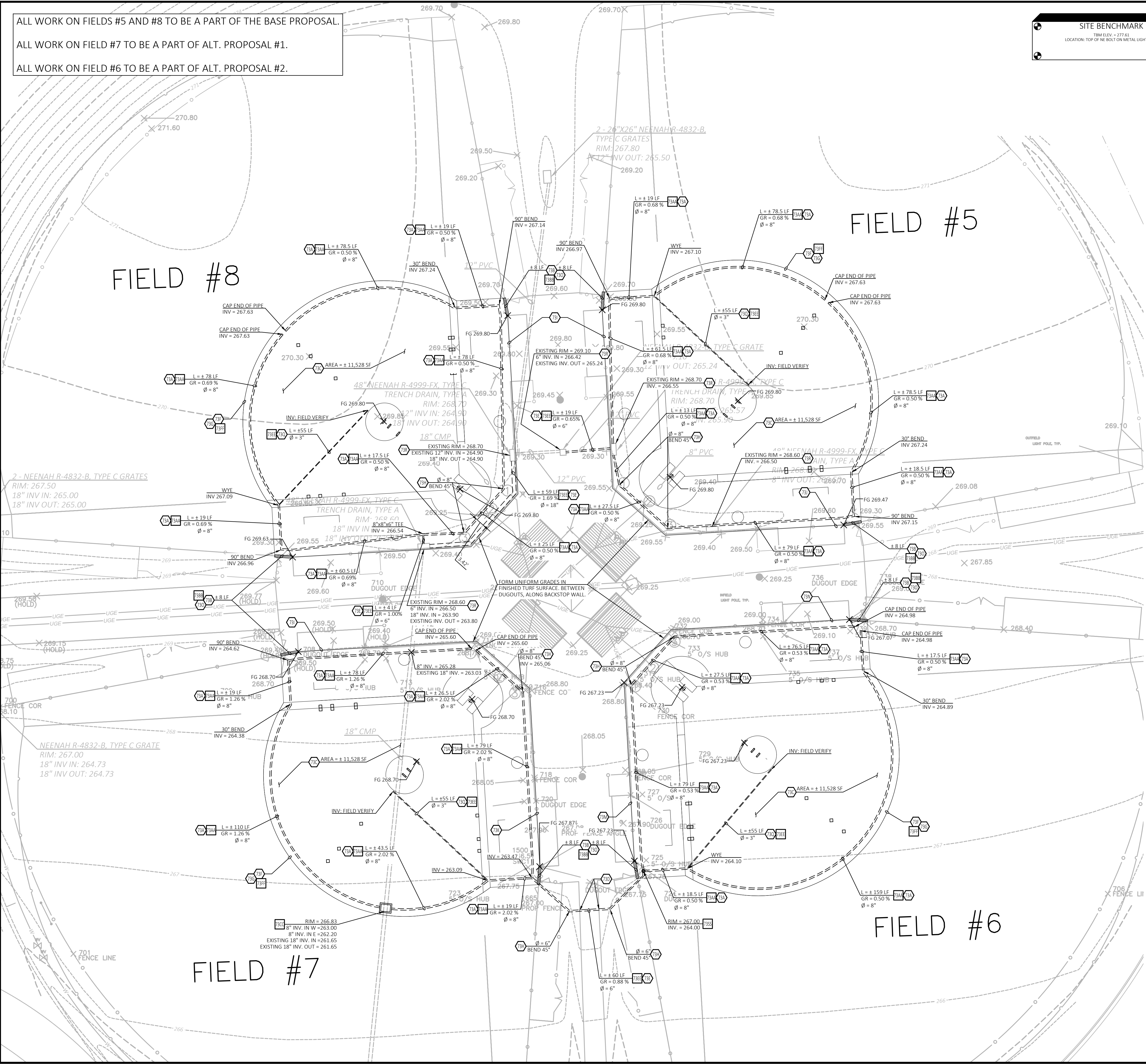
EROSION CONTROL NOTES
SHEET TITLE
SHEET NUMBER

C-3.1

ALL WORK ON FIELDS #5 AND #8 TO BE A PART OF THE BASE PROPOSAL.
 ALL WORK ON FIELD #7 TO BE A PART OF ALT. PROPOSAL #1.
 ALL WORK ON FIELD #6 TO BE A PART OF ALT. PROPOSAL #2.



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 DALLAS, TX 75234
 PHONE: (972) 488-3737
 FAX: (972) 488-6732



PROPOSED LEGEND

---	PROPERTY LINE/RIGHT OF WAY LINE	x XX.XX	SPOT ELEVATIONS:
---	CONTOUR ELEVATIONS		TC = TOP OF CURB
---	GRADE BREAK		G = GUTTER
---	FLOWLINE		FF = FINISH FLOOR ELEVATION
---	STORM DRAIN		FG = FINISH GRADE

- GENERAL GRADING NOTES**
- PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.
 - ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

- SITE NOTES**
- INSTALL HDPE PERFORATED DRAIN PIPE. DIAMETER, LENGTH, AND GRADE AS INDICATED. USE PIPE DEFLECTION AS NEEDED FOR ALIGNMENT.
 - CONSTRUCT NEW CONCRETE FENCE SKIRT.
 - STABILIZE AND COMPACT BY MEANS OF CHEMICAL INJECTION AT A MINIMUM DEPTH OF 6 FEET (PER GEOTECHNICAL REPORT) UNDER ALL NEW AREA OF TURF.
 - CONTRACTOR TO INSTALL PIPE BY METHOD OF BORING.
 - INSTALL HDPE NON-PERFORATED DRAIN PIPE. DIAMETER, LENGTH AND GRADE AS INDICATED. USE PIPE DEFLECTION AS NEEDED FOR ALIGNMENT.
 - CONTRACTOR TO FIELD VERIFY GRADE OF NEW INFIELD TURF AND GRADE AS NEEDED TO MATCH FINISH SURFACE OF TURF WITH EXISTING GRASS EVERYWHERE ALONG THE PERIMETER OF TURF.
 - MATCH EXISTING ELEVATION OF GRASS OUTFIELD.
 - INSTALL BEND. DIAMETER AND DEGREE AS INDICATED.
 - MATCH FINISHED TURF SURFACE TO TOP OF CONCRETE.
 - TAPER FINISHED TURF SURFACE BY 4".
 - FINISHED TURF SURFACE SHALL VARY FROM BEING FLUSH WITH DUGOUT FLOOR TO 4 INCHES BELOW DUGOUT FLOOR. CONSTRUCT BURIED CURB END AS NEEDED ALONG LENGTH OF DUGOUT TO PROVIDE CONTINUAL ANCHORING OF TURF SYSTEM TO CONCRETE.
 - FINISHED TURF SURFACE SHALL VARY FROM 4 INCHES BELOW DUGOUT FLOOR TO 10 INCHES BELOW DUGOUT FLOOR. CONSTRUCT BURIED CURB END AS NEEDED ALONG LENGTH OF DUGOUT TO PROVIDE CONTINUAL ANCHORING OF TURF SYSTEM TO CONCRETE.
 - FINISHED TURF SURFACE SHALL VARY FROM BEING FLUSH WITH DUGOUT FLOOR TO 2 INCHES BELOW DUGOUT FLOOR. CONSTRUCT BURIED CURB END AS NEEDED ALONG LENGTH OF DUGOUT TO PROVIDE CONTINUAL ANCHORING OF TURF SYSTEM TO CONCRETE.
 - FINISHED TURF SURFACE SHALL VARY FROM 4 INCHES BELOW DUGOUT FLOOR TO 8 INCHES BELOW DUGOUT FLOOR. CONSTRUCT BURIED CURB END AS NEEDED ALONG LENGTH OF DUGOUT TO PROVIDE CONTINUAL ANCHORING OF TURF SYSTEM TO CONCRETE.
 - FINISHED TURF SURFACE SHALL VARY FROM 5 INCHES BELOW DUGOUT FLOOR TO 10 INCHES BELOW DUGOUT FLOOR. CONSTRUCT BURIED CURB END AS NEEDED ALONG LENGTH OF DUGOUT TO PROVIDE CONTINUAL ANCHORING OF TURF SYSTEM TO CONCRETE.
 - MATCH EXISTING CONCRETE ELEVATIONS
 - CONTRACTOR TO FIELD GRADE PIPE TO ACHIEVE POSITIVE DRAINAGE
 - MODIFY EXISTING STORM DRAIN BOX AS NEEDED TO ALLOW NEW COVER TO BE FLUSH WITH TOP OF SYNTHETIC TURF CRUSHED STONE LAYER. CAP EXISTING BOXES WITH NEW, SOLID REINFORCED CONCRETE LIDS. CONTRACTOR TO CORE NEW DRAINAGE INLET PIPE INTO EXISTING INLET BOXES AS NEEDED FOR POSITIVE DRAINAGE.

- SITE DETAILS**
- PERFORATED PIPE TRENCH.
 - CONCRETE FENCE SKIRT AS PER DETAIL.
 - STORM DRAIN JUNCTION BOX.
 - NON-PERFORATED PIPE TRENCH.
 - TURF DIVIDER.
 - 12" NYLOPLAST DRAIN BASIN WITH SOLID COVER

NOTE: IF THE EXISTING CONCRETE OF ANY BACKSTOP WALL OR DUGOUT IS FOUND TO HAVE INSUFFICIENT THICKNESS TO ALLOW FOR TURF NAILER BOARD TO BE PROPERLY ANCHORED TO THE CONCRETE, A NEW BURIED CONCRETE CURB (DETAIL 73U) SHALL BE FORMED INSTEAD TO PROVIDE PROPER CONCRETE ANCHOR FOR THE NAILER BOARD. THE COST OF THIS BURIED CURBING SHALL NOT BE INCLUDED IN THE BASE PROPOSAL. INSTEAD, PROVIDE UNIT COST PER LINEAR FOOT OF BURIED CURB AS REQUESTED ON THE PROPOSAL FORM.

CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
 2425 N PARK ST
 BRENHAM, TX



F-7524

PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
DESIGNER	EGM
	33198
	7/21/2023
REVISION	REV-1

GRADING PLAN
 SHEET TITLE
 SHEET NUMBER

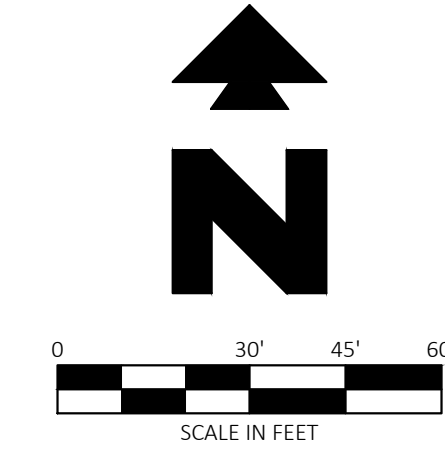
C-4

DRAWING LOCATION: \\B:\PROJECTS\33000\33188\DRAWINGS\DESIGN\WORKING\33188 - GP.DWG - SAVED BY: ZHUMPHRES

ALL WORK ON FIELDS #5 AND #8 TO BE A PART OF THE BASE PROPOSAL.
 ALL WORK ON FIELD #7 TO BE A PART OF ALT. PROPOSAL #1.
 ALL WORK ON FIELD #6 TO BE A PART OF ALT. PROPOSAL #2.



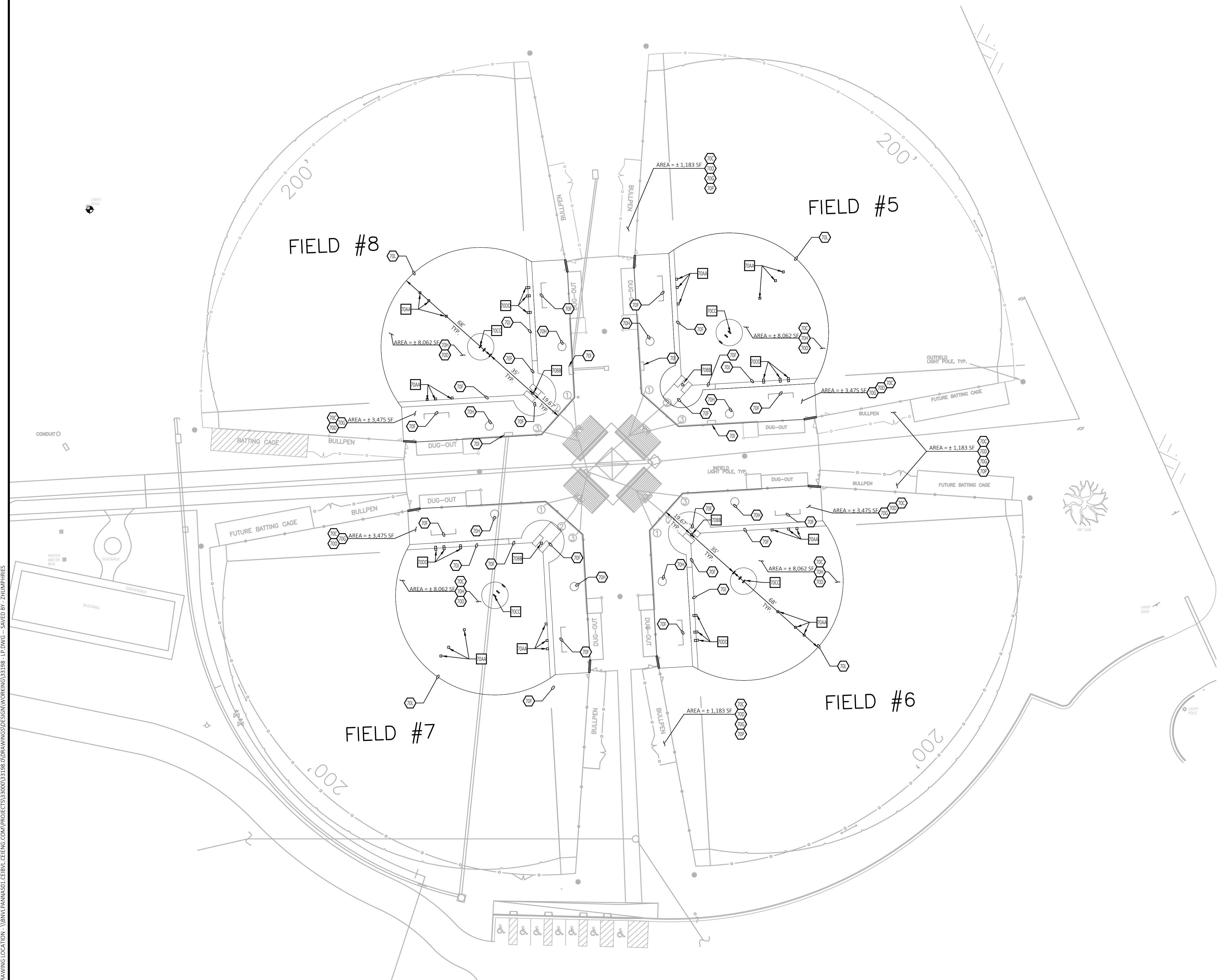
SITE BENCHMARK
 TBM ELEV. = 277.61
 LOCATION: TOP OF NE BOLT ON METAL LIGHT POLE



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 3030 LBJ FREEWAY, SUITE 920
 DALLAS, TX 75234
 PHONE: (972) 488-3737
 FAX: (972) 488-6732



FIELD AND TURF NOTES

- 70C INSTALL GEOMEMBRANE LINER OVER AREA IN WHICH TURF IS TO BE INSTALLED.
- 70D PLACE AND COMPACT 4" LAYER OF CRUSHED STONE MATERIAL (BASE STONE AND FINISHED STONE AS SPECIFIED) OVER ENTIRE SURFACE OF FIELD WHERE SYNTHETIC TURF IS TO BE PLACED.
- 70F ALL BASE LINES SHALL BE 4" WIDE AND WHITE IN COLOR.
- 70G INSTALL DARK GREEN TURF SYSTEM.
- 70H INSTALL TAN TURF SYSTEM.
- 70I CAP WITH SOLID CONCRETE COVER.
- 70J RUNNERS LINE 4" WIDE AND WHITE IN COLOR.
- 70L REESTABLISH GRASS AND ADJUST IRRIGATION AROUND ENTIRE PERIMETER OF TURF.
- 70P ALL BULLPEN WORK IS TO BE UNDER BASE PROPOSAL.

FIELD AND TURF DETAILS (INSTALL PER DETAILS)

- 70AA BASE PLATE.
- 70BB HOME PLATE.
- 70CC PITCHERS PLATE.
- 70DD DOUBLE BASE.

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CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
 2425 N PARK ST
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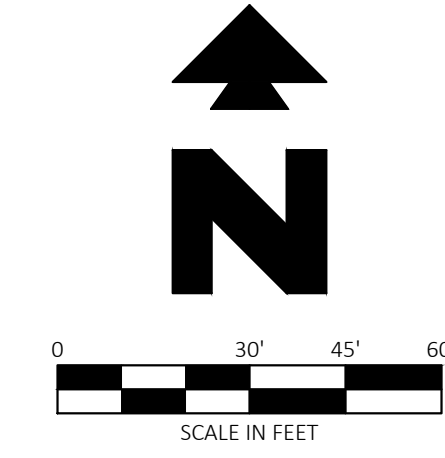
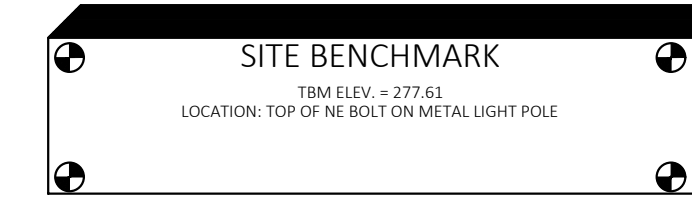
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PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
DESIGNER	EGM
CEI PROJECT NUMBER	33198
DATE	7/21/2023
REVISION	REV-1

SURFACE PLAN
 SHEET TITLE
 SHEET NUMBER

C-5

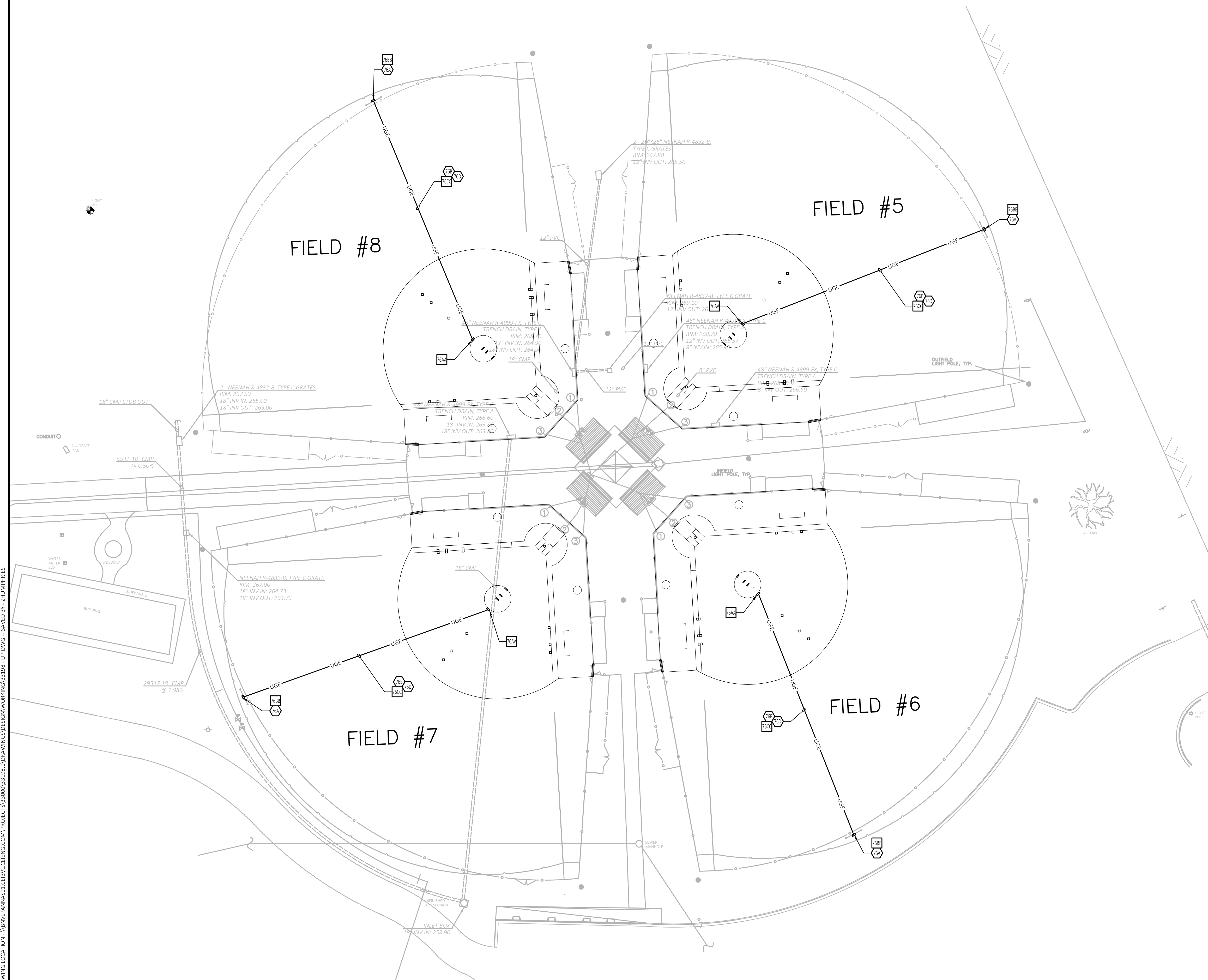
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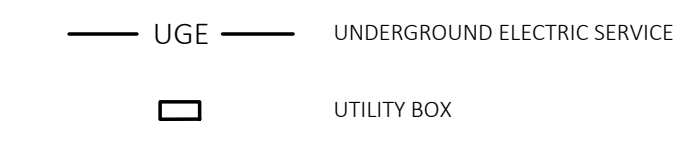
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PROPOSED LEGEND



GENERAL UTILITY NOTES

- A. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
- B. ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
- C. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
- D. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM CEI ENGINEERING AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CEI ENGINEERING AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

UTILITY NOTES

- 76A INSTALL UTILITY BOX AT SCOREBOARD AND CONNECT TO EXISTING POWER.
- 76B INSTALL 1" Ø PVC ELECTRICAL CONDUITS WITH PULL STRINGS.
- 76C CAP WITH SOLID CONCRETE COVER.
- 76D RESTORE GRASS AND IRRIGATION SYSTEM ACROSS OFFFIELD TO EXISTING CONDITION OR BETTER UPON COMPLETION OF NEW CONDUIT INSTALLATION.

UTILITY DETAILS

- 76AA INSTALL SINGLE TURF UTILITY BOX.
- 76BB INSTALL SINGLE GRASS UTILITY BOX.
- 76CC INSTALL CONDUIT TRENCH DETAIL.

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CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
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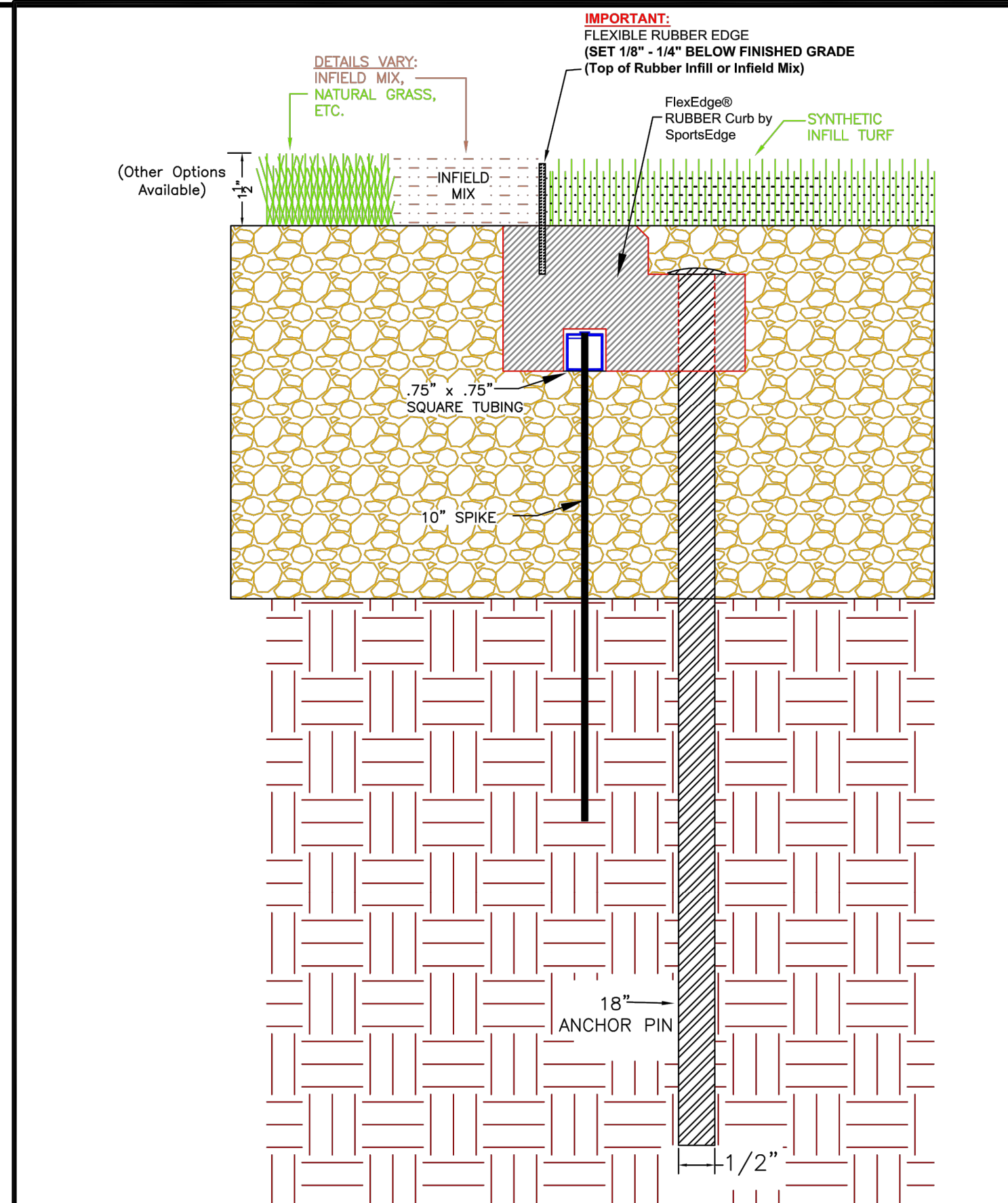
2023-7-26

F-7524

PROFESSIONAL OF RECORD	JIB
PROJECT MANAGER	CTH
DESIGNER	EGM
CEI PROJECT NUMBER	33198
DATE	7/21/2023
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UTILITY PLAN
 SHEET TITLE
 SHEET NUMBER

C-6



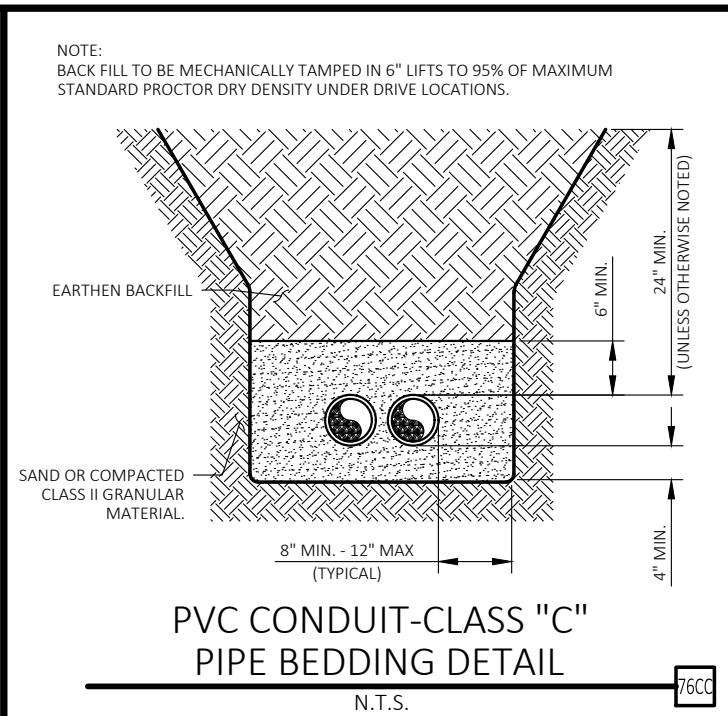
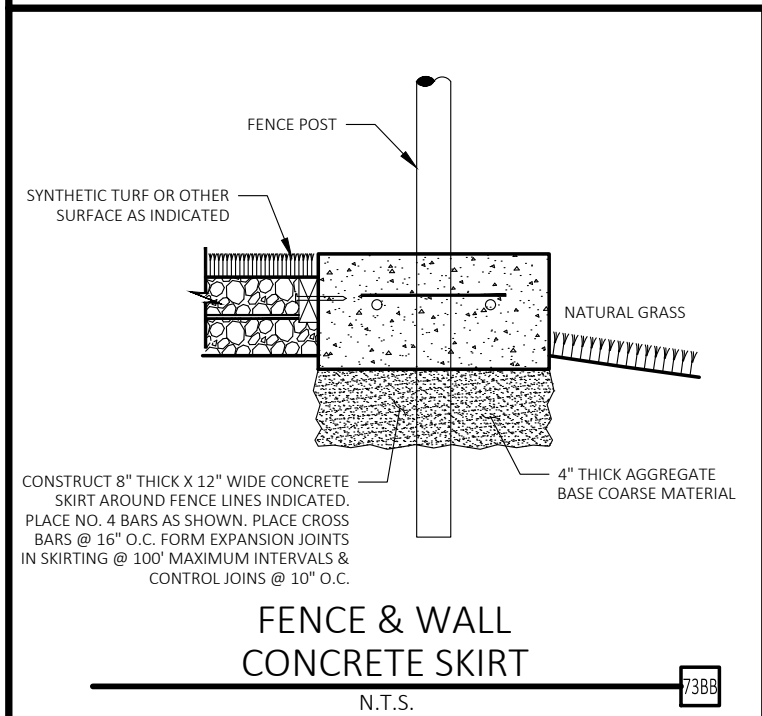
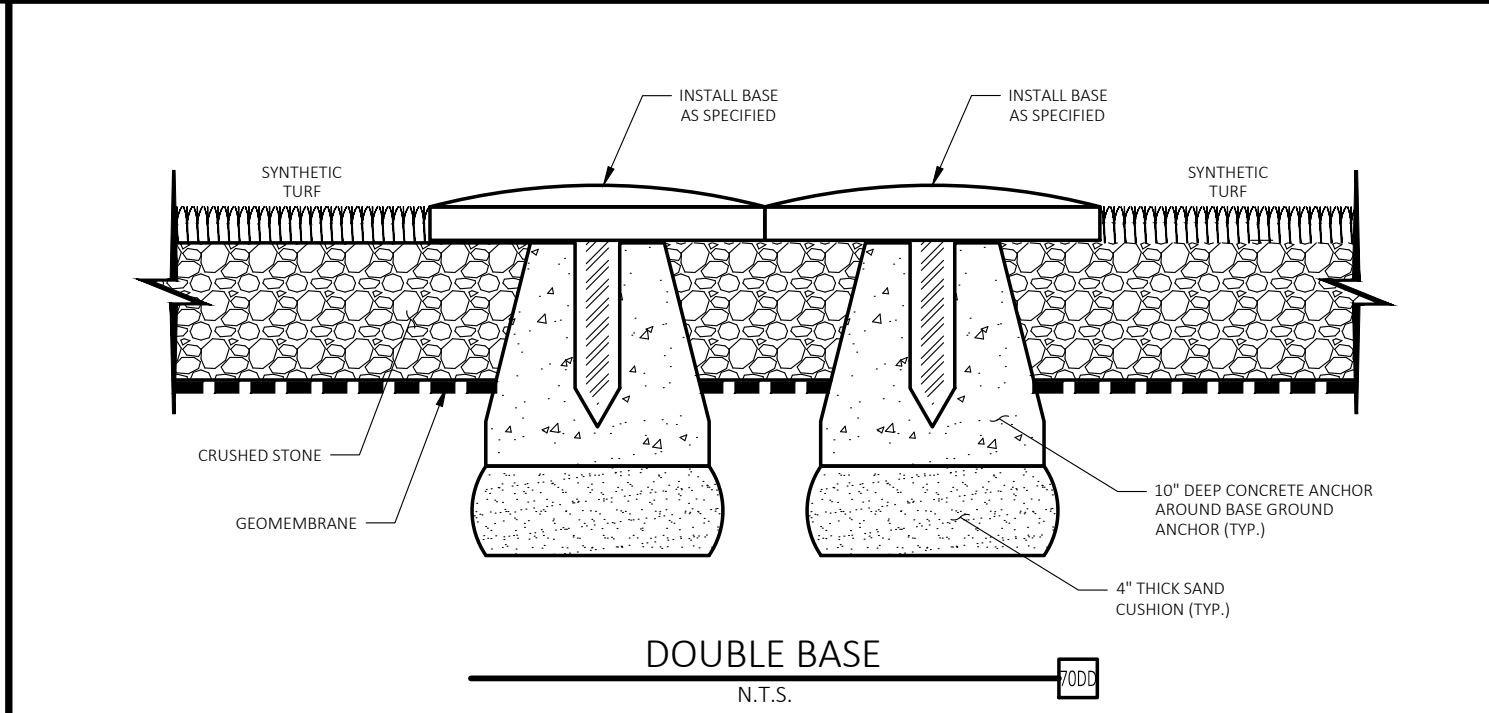
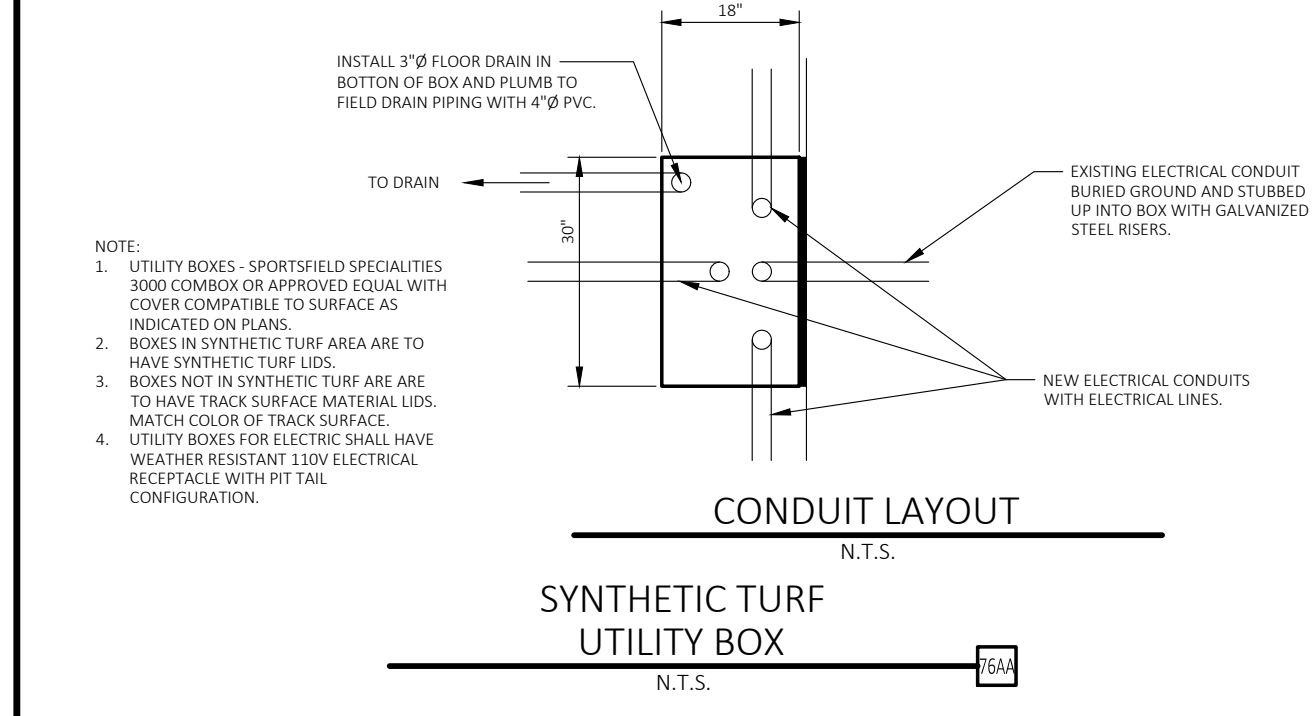
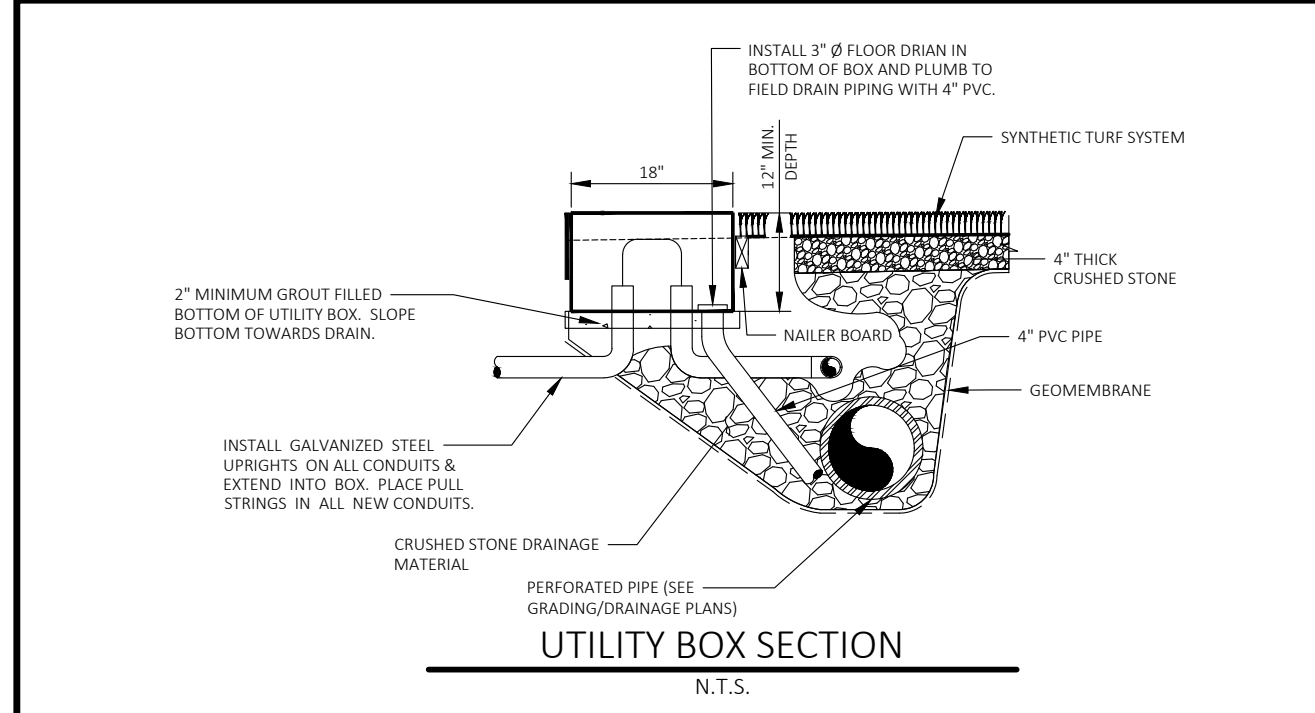
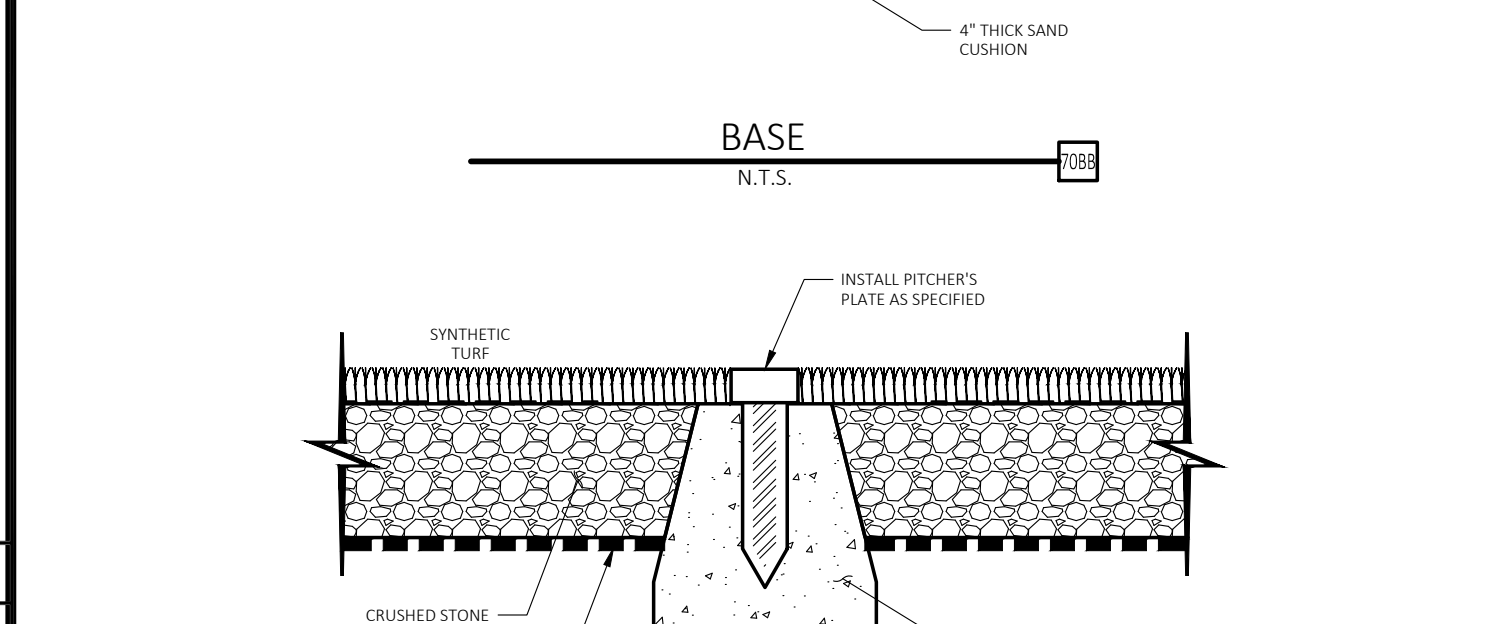
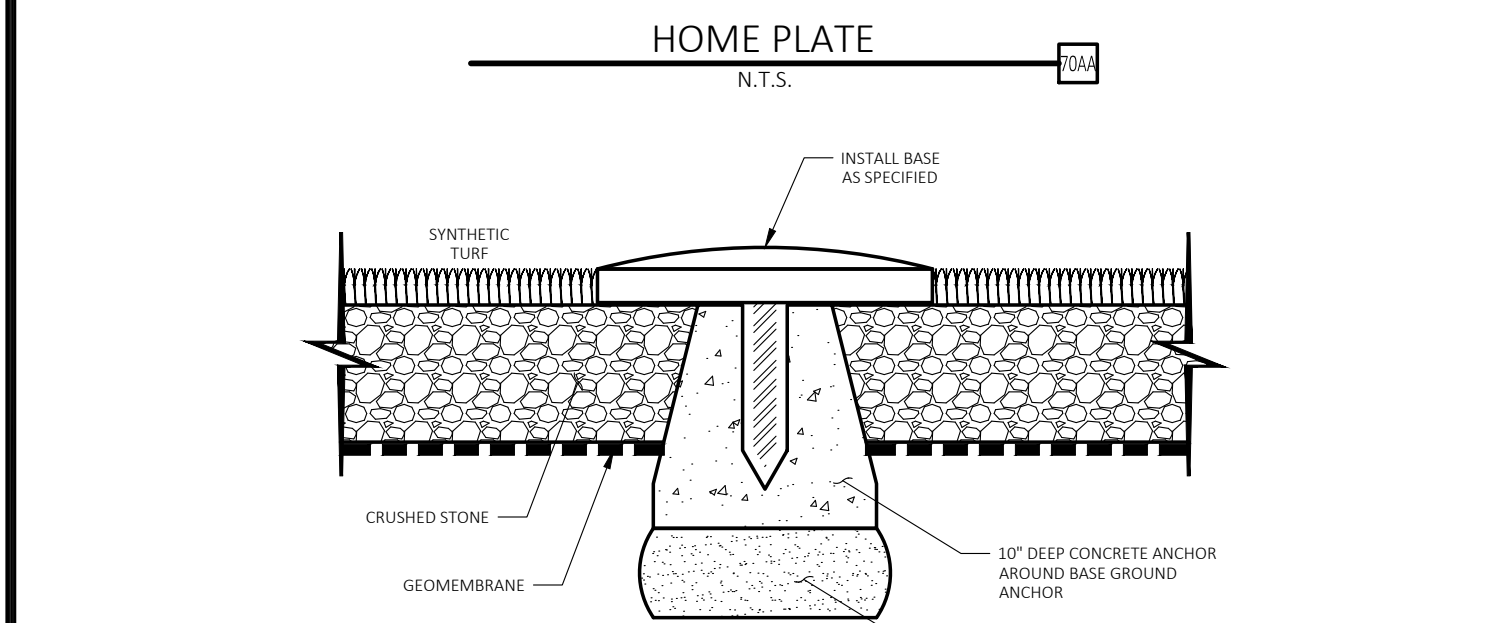
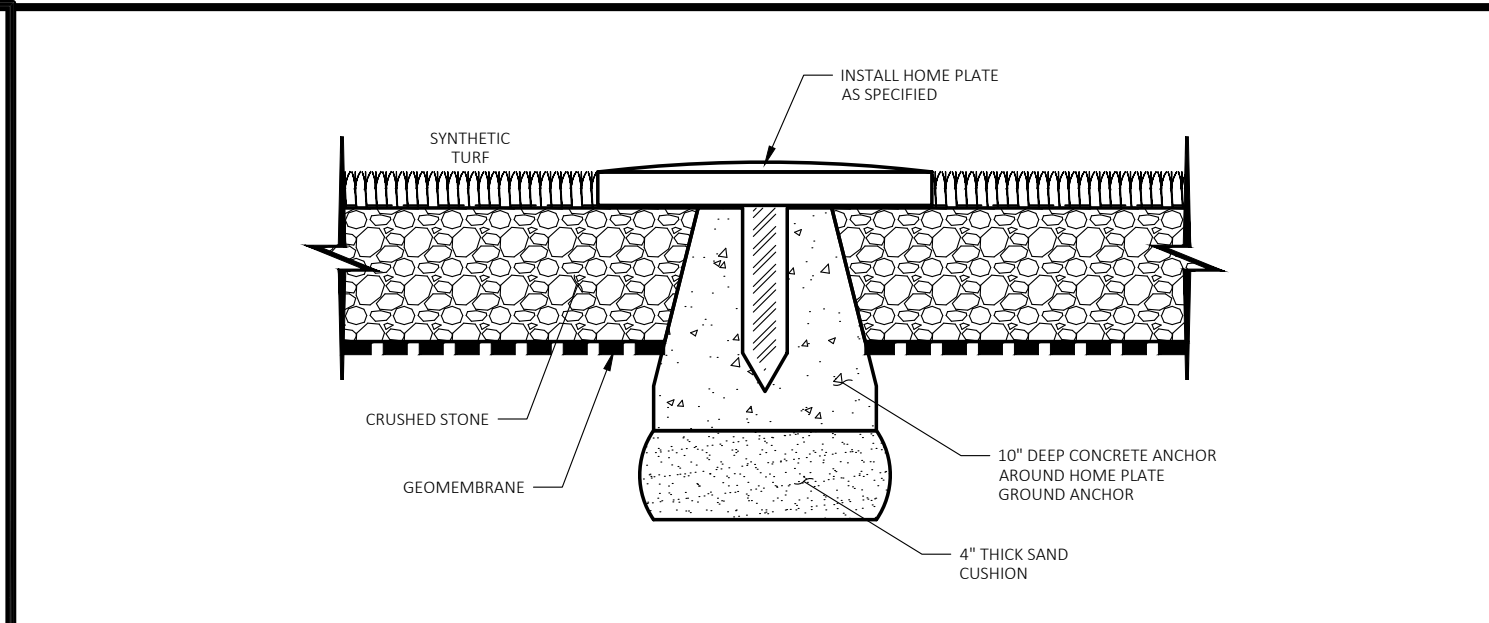
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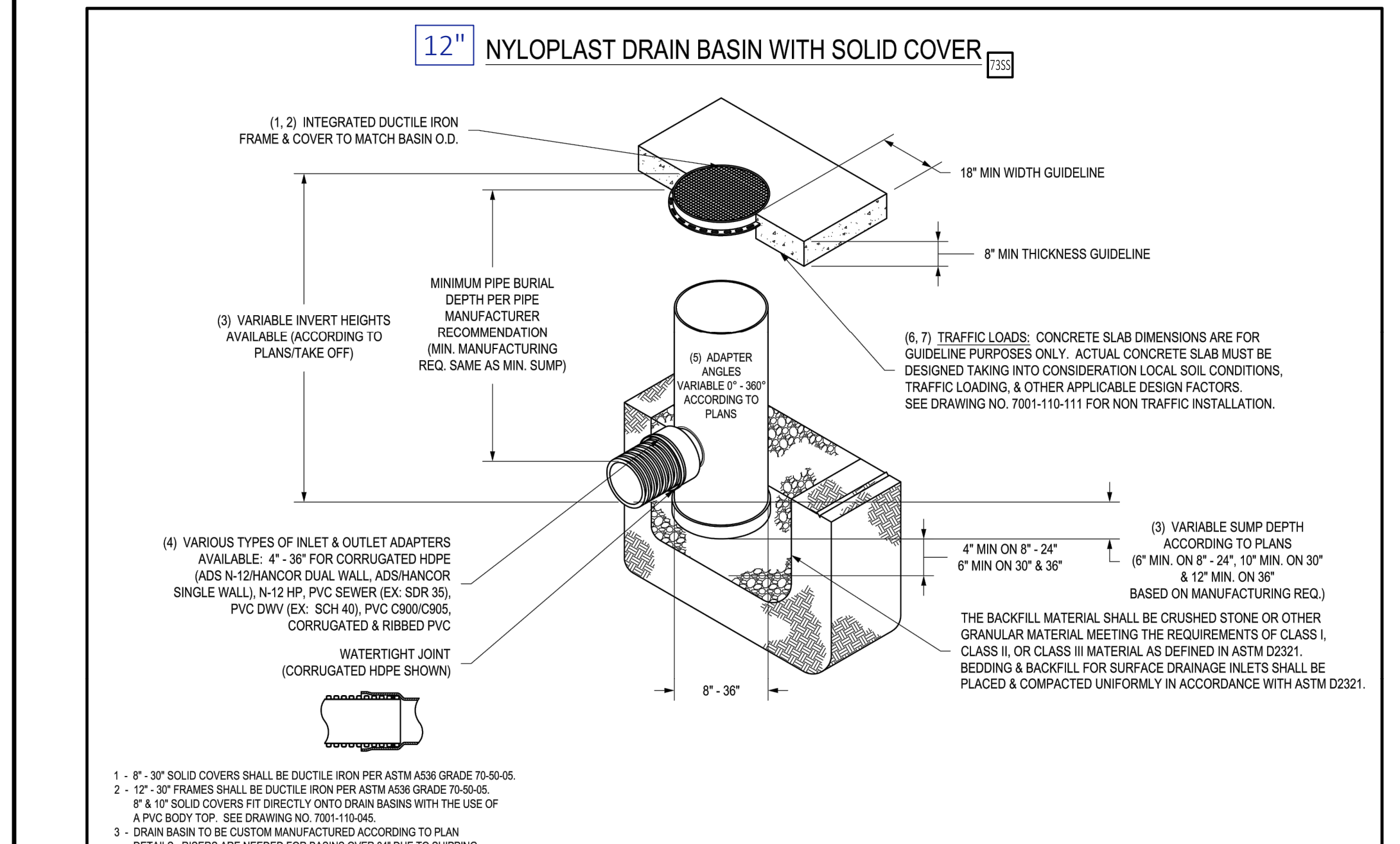
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CHECKED: 137
SCALE: NONE
DATE: 2012
DRAWING NUMBER: BBDIV-1
REV: A

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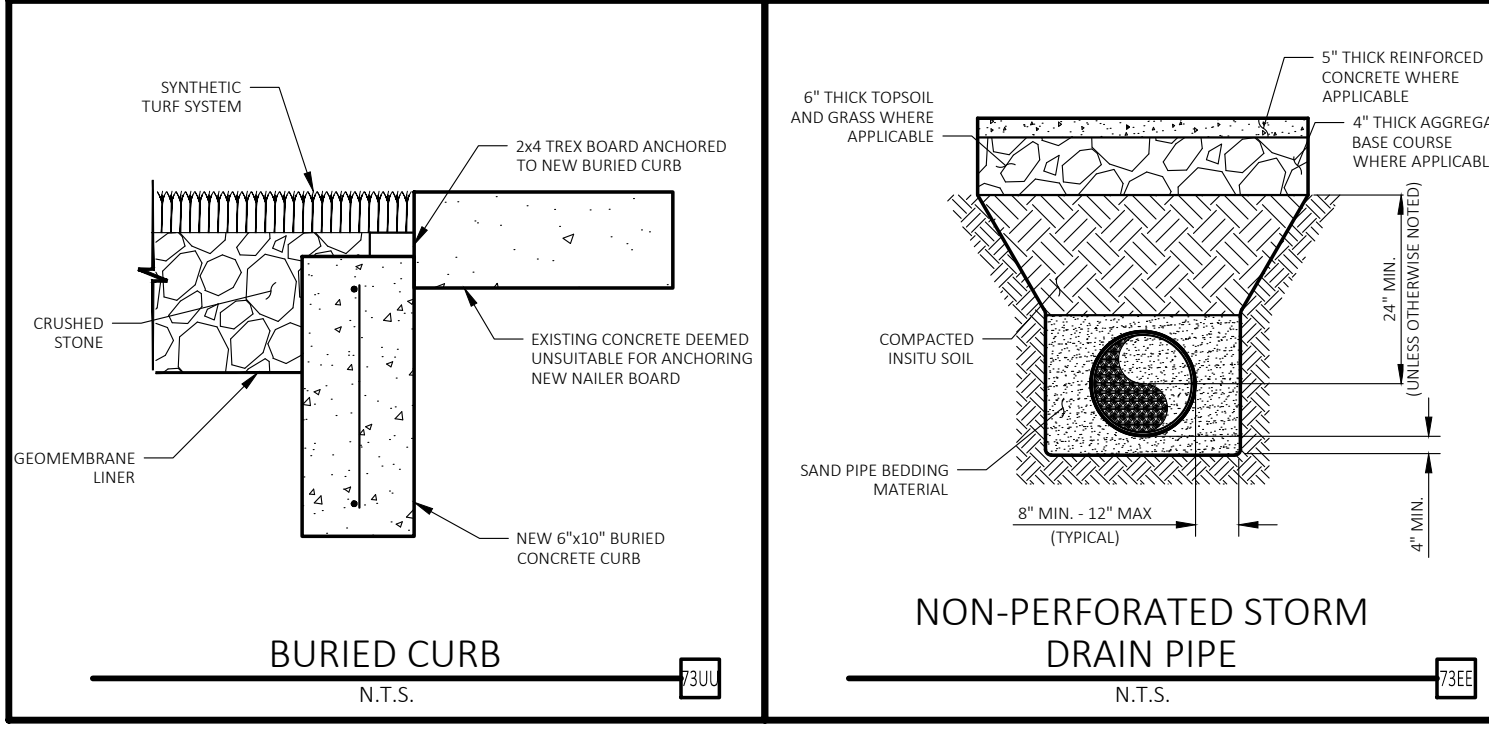
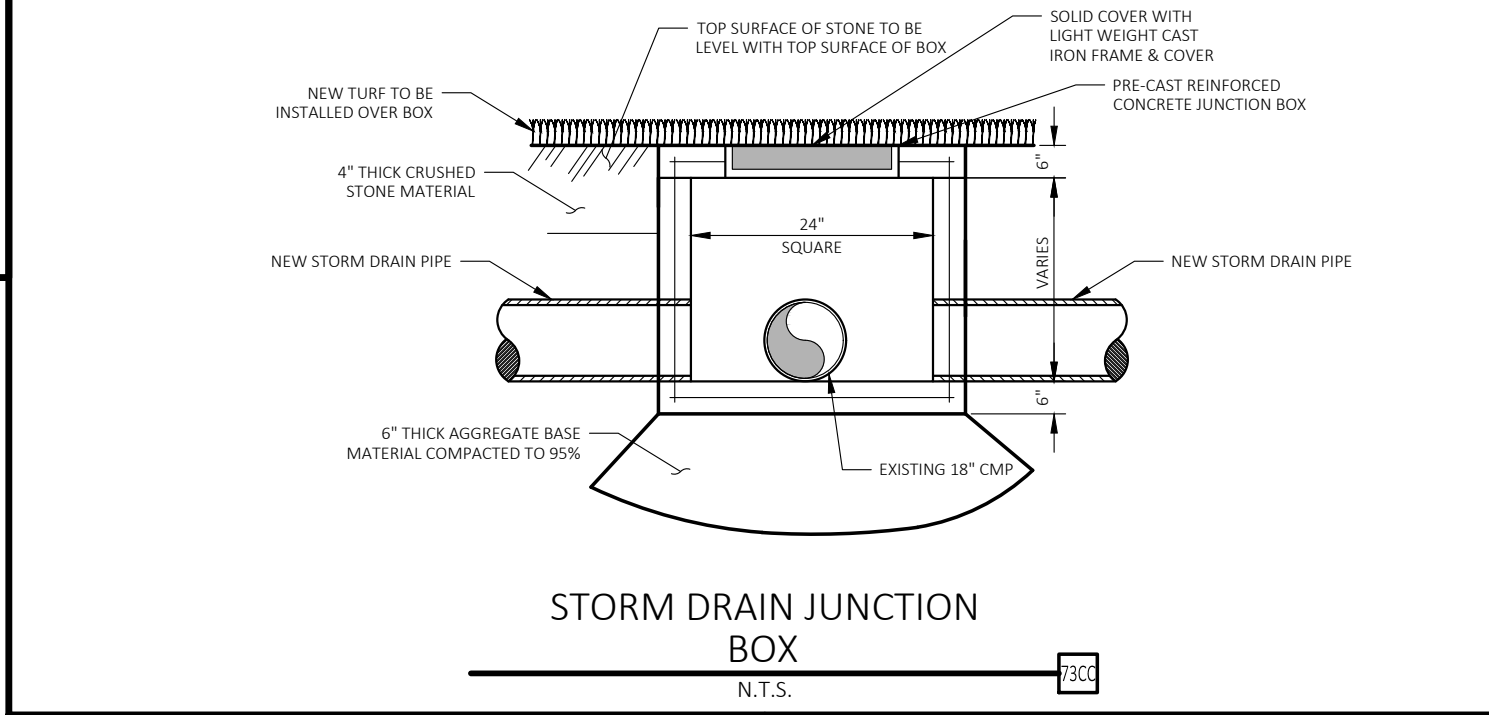
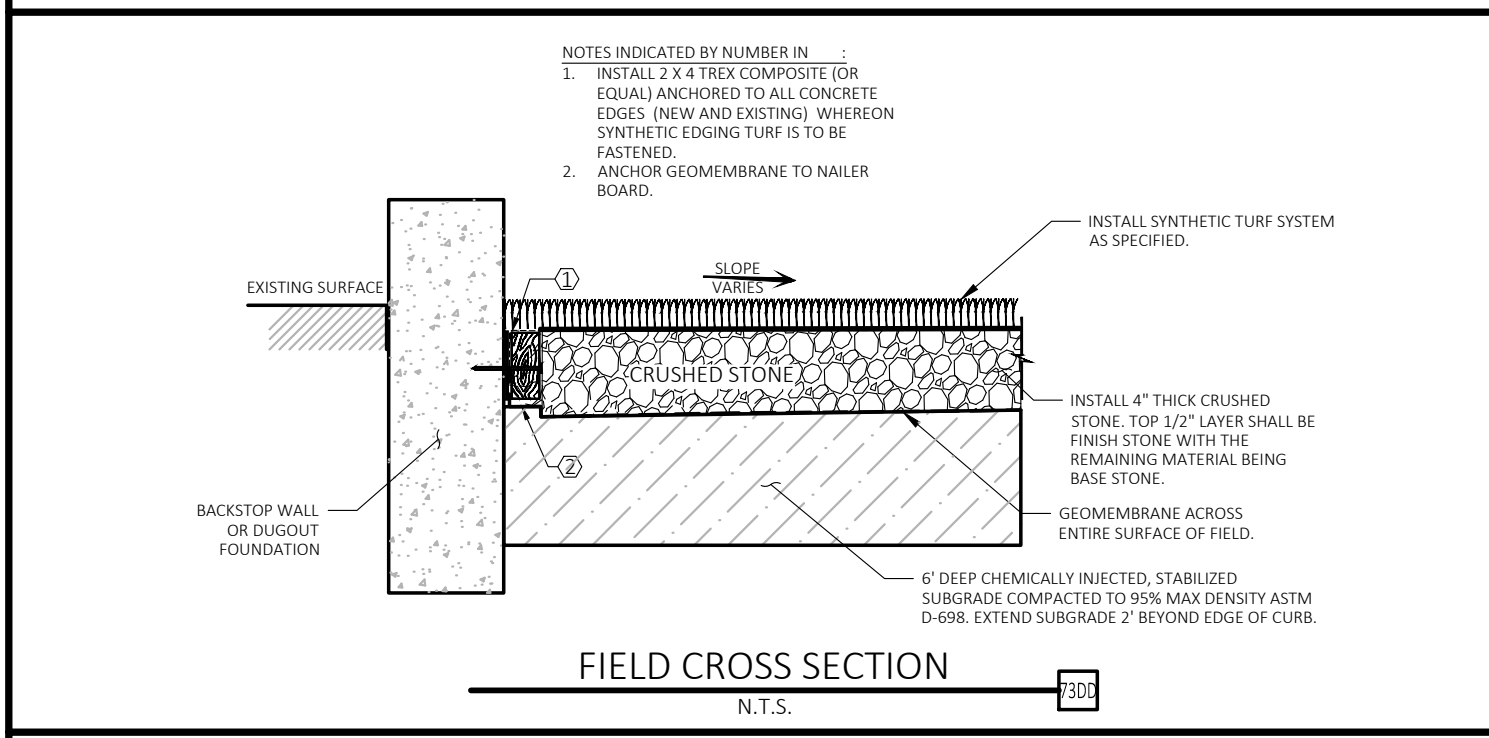
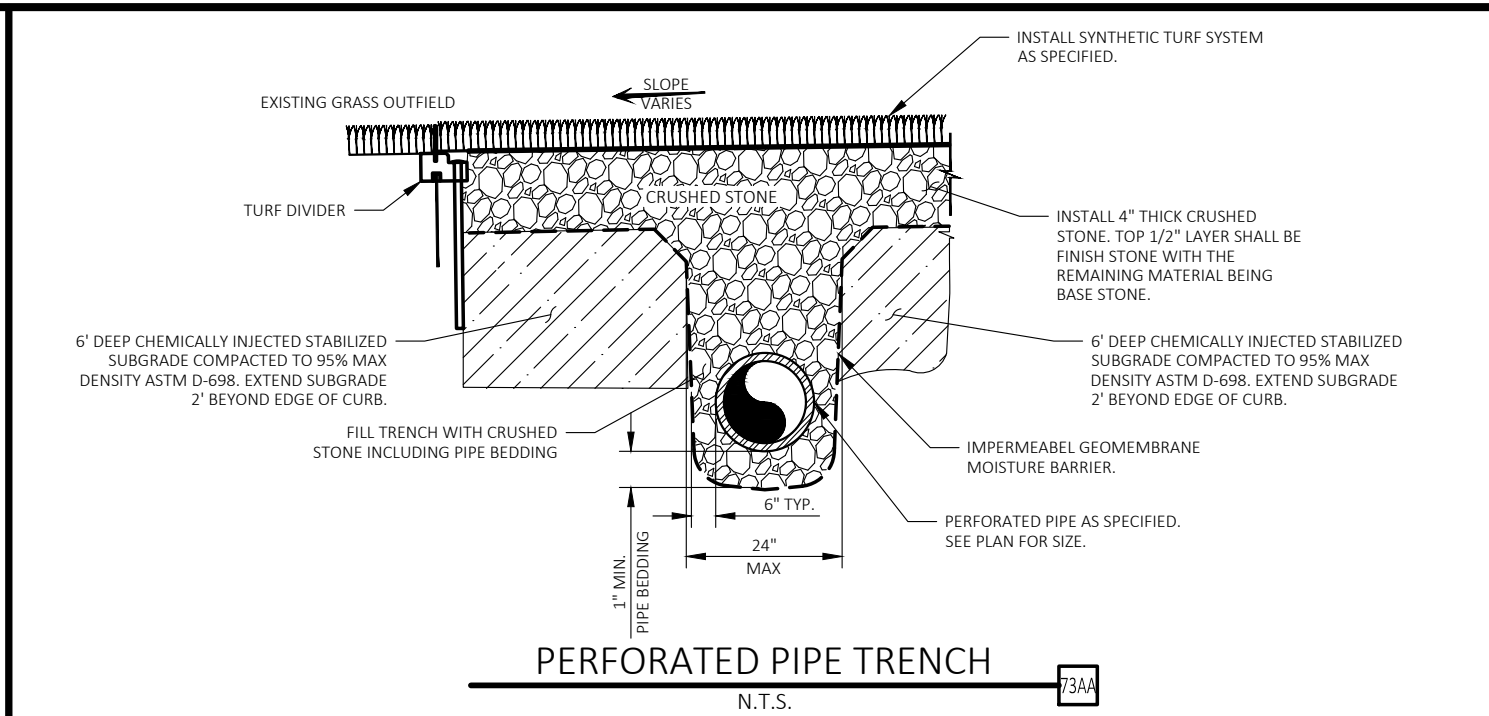
TURF DIVIDER
N.T.S.



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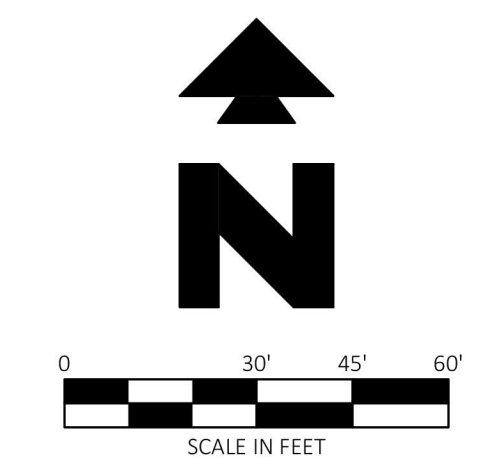


CITY OF BRENHAM SPORTS COMPLEX
SYNTHETIC TURF IMPROVEMENTS
2425 N PARK ST
BREHMAN, TX



F-7524

PROFESSIONAL OF RECORD	JIB
PROJECT MANAGER	CTH
DESIGNER	EGM
CEI PROJECT NUMBER	33198
DATE	7/21/2023
REVISION	REV-1



SITE BENCHMARK
 TIME ELEV. = 277.61
 LOCATION: TOP OF NE BOLT ON METAL LIGHT POLE

NOTE:
 SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

EXISTING LEGEND

	BENCHMARK (BM)
	DIRT LINE
	BREAK LINE
	CONTROL LINE
	CHAINLINK FENCE LINE
	SPRINKLER CONTROL VALVE
	LIGHT POLE STRAIGHT

DRAWING LOCATION: P:\230000\31188\DRAWINGS\CONCEPT\CP\31188-CSP-DWG - SAVED BY: J.WILLIAMS

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CITY OF BRENHAM SPORTS COMPLEX
 SYNTHETIC TURF IMPROVEMENTS
 2425 N PARK ST.
 BRENHAM, TX



2023-7-26
Jeffery J. Breese

PROFESSIONAL OF RECORD	JJB
PROJECT MANAGER	CTH
DESIGNER	JAW
CEI PROJECT NUMBER	33198
DATE	5/15/2023
REVISION	REV-0

CONCEPTUAL SITE PLAN
 SHEET TITLE
 SHEET NUMBER

CSP