SPECIFICATIONS,
CONTRACT DOCUMENTS
AND DRAWINGS

FOR

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

AVOYELLES PARISH POLICE JURY
(OWNER)

PRESIDENT
DARRELL WILEY

VICE PRESIDENT
JACOB COCO

POLICE JURORS
DARRELL SAMPSON
CLYDE BENSON
MARK BORREL
TRAVIS FRANKS
MCKINLEY KELLER
SAM PEARCE
ALLEN THOMAS

JANUARY 2026

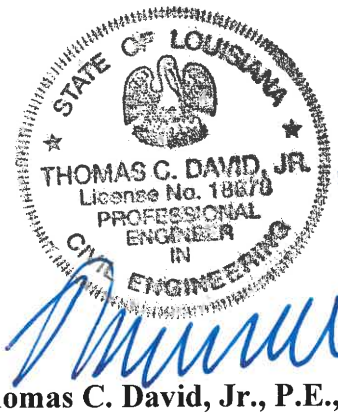
VOLUME 1 OF 2
(BASE BID)

PAN AMERICAN ENGINEERS, LLC
1717 JACKSON STREET
ALEXANDRIA, LOUISIANA 71301
318-473-2100 PHONE
PAE JOB NOS. 12719

The following Contract Documents and Technical Specifications have been prepared under my direct supervision and guidance for Avoyelles Parish Police Jury in conjunction with the Plans and for the explicit use by the Owner and Contractors for the bidding and construction of the project:

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX



Thomas C. David, Jr., P.E., P.L.S.
CIVIL ENGINEER

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

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Pan American Engineers, LLC
2025

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

DIVISION 00

BIDDING AND CONTRACT DOCUMENTS

SECTION 00100

ADVERTISEMENT FOR BIDS

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

Separate sealed bids for the AVOYELLES PARISH POLICE JURY, AVOYELLES PARISH RECREATION AND EDUCATION COMPLEX will be received by the Avoyelles Parish Police Jury at their office at 312 N. Main Street, Second Floor, Parish Courthouse, Marksville, Louisiana, 71315 until 10:00 a.m. on Tuesday, March 3, 2026, and then at said office publicly opened and read aloud. Any bid received after the specified time and date will not be considered.

The Instructions to Bidders, Bid Form, Agreement Between Owner and Contractor, Forms of Bid Bond, Performance and Payment Bonds, Drawings and Specifications, and other Contract Documents may be examined at the following location:

PAN AMERICAN ENGINEERS, LLC
(Design Professional)
1717 JACKSON STREET (71301)
P. O. BOX 8599 (71306)
ALEXANDRIA, LOUISIANA
(318) 473-2100

The work is generally described as follows:

Base Bid: Demolition of minor items including aggregate drive, trees, stumps, existing drainage pipe, etc. and the construction/installation of a 4-ballfield complex including required erosion controls, earthen cut/fill, subsurface drainage, brick backstop walls, tension backstop netting systems, turf curbs, dugouts, bleacher canopies, vinyl coated chain link fence and gates, synthetic turf infield and play area systems, field amenities, ballfield lighting, scoreboards, site utilities/extensions, concrete walks, topsoil placement, site grading, edge sodding, sodding, outfield sprigging and irrigation, hydroseeding, etc.

Alternate No. 1: Deletion of synthetic turf play area in common area between ballfields and construction/installation of concessions/restrooms complete including foundation, building, utility connections, mechanical, electrical, plumbing, lighting, downspout subsurface drainage and connections, perimeter concrete walk, HVAC chain link fence and gate and wastewater treatment plant system with utility extensions/connections and perimeter fence and gates.

Alternate No. 2: Installation of aluminum angle frame bleacher assemblies (two (2) assemblies per field (8 total)).

This project is classified as Building Construction per L.R.S. 37:2163.C.

Copies of the bidding documents shall be obtained from the office of Pan American Engineers, LLC upon deposit of $150.00 for each set of documents; or from the electronic bid submittal option as noted in the Advertisement. The deposit on the first set of documents furnished to bonafide prime bidders will be fully refunded upon return of the documents, in good condition, no later than ten (10) days after receipt of bids. On other sets of documents furnished to bidders, the deposit less actual cost of reproduction will be refunded upon return of the documents, in good condition, no later than ten (10) days after receipt of bids.

Pursuant to L.R.S. 38:2212.E.(1) Bidders, have the option to submit bids and bid bonds electronically. Electronic bids for this project may be submitted through Central Bidding at www.CentralAuctionHouse.com. To register, or for assistance with completing an e-bid, contact Central Bidding at 225-810-4814 or 866-570-9620.

The OWNER reserves the right to reject any or all bids for just cause. Such actions will be in accordance with Title 38 of Public Bid Law.

In accordance with L.R.S. 38:2212.B.(1), the provisions and requirements stated in the Bidding Documents shall not be considered as informalities and shall not be waived.

Each Bidder must deposit with the bid, security in the amount of at least five percent (5%) of the total bid price, as described in the Instructions to Bidders. Bid bonds shall be written by a surety or insurance company meeting the requirements noted in L.R.S. 38:2218.

The successful Bidder shall be required to furnish a Performance Bond and Payment Bond, in an amount equal to 100% of the Contract amount, written by a surety or insurance company meeting the requirements noted in L.R.S. 38:2219 A.(1)(a), (b) and (c), or for Federally funded projects, must be listed as acceptable on the U.S. Department of Treasury Circular 570.

Avoyelles Parish Police Jury is an equal opportunity employer.

Avoyelles Parish Police Jury encourages all small and minority-owned firms and women's business enterprises to apply.

Any person with disabilities required special accommodations must contact the Avoyelles Parish Police Jury no later than seven (7) days prior to bid opening.

Avoyelles Parish Police Jury
Darrell Wiley, President
312 North Main Street
Courthouse Building
Marksville, Louisiana 71351

PLEASE PUBLISH THREE (3) TIMES:
Friday, January 30, 2026
Friday, February 6, 2026
Friday, February 13, 2026

SECTION 00200

INSTRUCTIONS TO BIDDERS

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

1. Defined Terms
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3. Qualifications of Bidders
4. Examination of Contract Documents and Site
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28. Sales and Use Tax Exemption

1. Defined Terms:

1.1 Terms used in these Instructions to Bidders which are defined in the General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom OWNER (on the basis of OWNER'S evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, the proposed Contract Documents (including all Addenda issued prior to receipt of Bids) and the Drawings.

2. Copies of Bidding Documents:

2.1 Complete sets of the Bidding Documents in the number and for the sum stated in the Advertisement or Invitation to Bid may be obtained from ENGINEER.

2.2 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the WORK and do not confer a license or grant for any other use.

3. Qualifications of Bidders:

3.1 To demonstrate qualifications to perform the WORK, each Bidder must be prepared to submit within five days of OWNER'S request; written evidence, such as financial data, previous experience, present commitments and other such data as may be called for in the General Conditions.

4. Examination of Contract Documents and Site:

4.1 It is the responsibility of each Bidder before submitting a Bid, to (a) examine the contract Documents thoroughly, (b) visit the site to become familiar with local Laws and Regulations that may affect cost, progress, performance or furnishing of the WORK, (c) consider federal, state and local Law and Regulations that may affect cost, progress, performance or furnishing of the WORK, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify ENGINEER of all conflicts, errors or discrepancies in the Contract Document.

4.2 Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and ENGINEER by OWNERs of such Underground Facilities or others, and OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.3 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 5.04 and 5.05 of the General Conditions.

4.4 Before submitting a Bid, each Bidder at Bidder’s own expense, will be responsible to make or obtain any examinations, investigations, explorations, tests, studies and data concerning physical conditions (surface, subsurface and underground facilities) at or contiguous to the site, or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.5 On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up, and restore the site to its former condition upon completion of such explorations.

4.6 The lands upon which the WORK is to be performed, rights-of-way and easements for access thereto and other lands designated for use by CONTRACTOR in performing the WORK are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.

4.7 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the WORK required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated

in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the WORK.

5. Interpretations and Addenda:

5.1 All questions about the meaning or intent of the Contract Documents are to be directed to the ENGINEER. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than ten (10) days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by OWNER and ENGINEER.

6. Bid Security:

6.1 Each Bid must be accompanied by Bid Security made payable to OWNER in an amount of five percent of the Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions.

6.2 The time period for holding bids and Bid Security shall be in accordance with Louisiana Revised Statute (L.R.S.) 38:2215. The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security, whereupon the Bid Security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within fifteen (15) days after the Notice of Award, OWNER may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. Bid Security with Bids which are not competitive will be returned within seven days after the Bid opening.

6.3 In accordance with L.R.S. 38:2218.C, all Bid Guaranty Bonds shall be written by a surety or insurance agency currently on the U.S. Department of Treasury Financial Management Service list of approved companies, or by a Louisiana domiciled insurance company with at least an A-rating in the latest printing of the A.M. Best’s Key Rating Guide or by an insurance company in good standing licensed to write bonds either domiciled in Louisiana or owned by Louisiana residents.

7. Contract Time:

7.1 The number of days within which, or the dates by which, the WORK is to be Substantially Completed, and also completed and ready for final payment (the Contract Time) are set forth in the Agreement.

8. Liquidated Damages:

8.1 Provisions for liquidated damages are set forth in the Agreement.

9. Substitute Materials or Products - Prior Approvals:

9.1 The name of a certain brand, make, manufacturer, or definite specifications is to denote the quality of standard of the article desired, but does not restrict bidders to the specific brand, make, manufacturer, or specification named. It is to set forth and convey to prospective bidders the general style, type, character, and quality of the article desired.

9.2 When in specifications or contract documents a particular brand, make of material, device, or equipment is shown or specified, such brand, make of material, device, or equipment shall be regarded merely as a standard. When in specifications or contract documents an architect or engineer specifies a particular brand, make of material, device, or equipment or equal thereto, he shall adequately identify said product by including, minimally, the model or catalog number of the product.

9.3 If a potential supplier wishes to submit for prior approval a particular product other than a product specified in the contract documents, he shall do so no later than seven working days prior to the opening of bids. Within three days, exclusive of holidays and weekends, after such submission, the prime design professional shall furnish to both the public entity and the potential supplier written approval or denial of the product submitted.

9.4 After the receipt of Bids, the Contract, if awarded, will be on the basis of material and product described in the Drawings or specified in the Specifications without consideration of possible substitute of "or equal" items except as specified in 9.3 above.

10. Subcontractors, Suppliers and Others:

10.1 No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person or organization against whom CONTRACTOR has reasonable objection.

11. Bid Form:

11.1 The Bid Form is included with the Bidding Documents; additional copies may be obtained from the ENGINEER.

11.2 All blanks on the Bid Form must be completed in ink or by typewriter.

11.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign). The corporate address must be shown where indicated on the Bid Form.

11.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear where indicated on the Bid Form and the official address of the partnership must be shown where indicated on the Bid Form.

11.5 All names must either be clearly written and legible or be typed or printed where indicated on the Bid Form.

11.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in where indicated on the Bid Form).

11.7 The address for communications regarding the Bid must be shown where indicated on the Bid Form.

12. Submission of Bids:

12.1 Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), and name and address of the Bidder, and Louisiana CONTRACTOR's license number, and accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system the sealed envelopes shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

12.2 Bidder shall submit with the Bid a Corporate Resolution (See Section 00900) or other similar written evidence of the authority of the person signing the Bid in accordance with L.R.S. 38:22.2.B.(2) and 38:2212.B.(5).

13. Modification and Withdrawal of Bids:

13.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

13.2 If, within forty-eight (48) hours of the Bid opening, exclusive of Saturdays, Sundays and legal holidays, any Bidder who files a duly signed, and sworn written notice with OWNER to the satisfaction of OWNER that there was a patently obvious mechanical, clerical or mathematical error in its Bid, that Bidder may withdraw its Bid and the Bid Security will be returned as provided by L.R.S. 38:2214.C. Thereafter, the Bidder will be disqualified from future bidding on the Contract.

14. Opening of Bids:

14.1 Bids will be opened and (unless obviously nonresponsive) read aloud publicly. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to Bidders after the opening of Bids.

15. Award of Contract:

15.1 For reasons of just cause, as provided by L.R.S. 38:2214.B., the OWNER reserves the right to reject any and all Bids. The OWNER will disregard all nonconforming, nonresponsive, unbalanced or conditional Bids. Bids which are unsigned or are not accompanied by the required Bid Security shall be irrevocably rejected. When one or more bid is rejected, the reason therefore shall be given. Bids may be considered irregular and subject to rejection if they show serious omission, unauthorized alteration of form, unauthorized alternate bids, incomplete or unbalanced unit prices, or irregularities of any kind.

15.2 In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

15.3 OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of

Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the WORK in accordance with the Contract Documents to OWNER'S satisfaction within the prescribed time.

15.4 If the contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project.

15.5 In accordance with L.R.S. 38:2215(A), the OWNER shall act not later than forty-five calendar days after the date of opening bids to award such public works contract to the lowest responsible and responsive bidder or to reject all bids. However the OWNER and the lowest responsible and responsive bidder, by mutually written consent, may agree to extend the deadline for award by one or more extensions of thirty calendar days.

16. Contract Security:

16.1 Article 6 of the General Conditions sets forth OWNER'S requirements as to Performance and Payment Bonds. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required Performance and Payment Bonds.

16.2 In addition to the requirements in Article 6, in order to be acceptable to the OWNER, a surety company issuing Bid Guaranty Bonds, or 100% Performance/Payment Bonds, called for in these Specifications, shall meet and comply with the following minimum standards:

A. Surety must be admitted to do business in the State of Louisiana and shall comply with the provisions of L.R.S. 38:2241. The Surety Company shall be in conformance with L.R.S. 38:2219.

B. Surety shall have been in business and have a record of successful continuous operations for at least five (5) years.

C. Attorneys-in-fact who sign bid bonds or performance/payment bonds must file with such bond a certified copy of their power of attorney to sign such bond.

D. Agents of surety companies must list their name, address and telephone number on all bonds.

E. The life of the bonds shall extend twelve (12) months beyond the date of final payment and shall contain a waiver of alteration to the terms of the Contract, extensions of time and/or forbearance on the part of the OWNER.

17. Signing of Agreement:

17.1 When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with other necessary Contract Documents attached. Within fifteen (15) days thereafter CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds. Within ten (10) days thereafter OWNER shall deliver one (1) fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

17.2 However, as noted in L.R.S. 38:2215.B., if all documents required of lowest responsive and responsible bidder have been provided to the OWNER, the Agreement shall be executed not later than sixty (60) calendar days after the date of award.

18. Retainage:

18.1 Retainage of 10% of the value of WORK completed and materials stored on-site shall be deducted from the CONTRACTOR'S Application for Payment for contract prices up to $500,000.00.

18.2 Retainage of 5% of the value of WORK completed and materials stored on-site shall be deducted from the CONTRACTOR'S Application for Payment for contract prices of $500,000 or more.

19. Contractor's License Certification:

19.1 If the bid submitted for this project exceeds fifty thousand dollars, in accordance with L.R.S. 37:2163.A.(1) the Bidder shall show his license number on the bid envelope; and, by placement of the authorized signature of Bidder on the Louisiana Uniform Public Work Bid Form, such signature shall be deemed as a certification that the Bidders holds an active license under the provisions of Title 37: Chapter 24. Contractors.

20. Issuance of Bidding Documents:

20.1 No Bidding Documents will be issued later than twenty-four (24) hours of the date set for receiving bids, as provided by L.R.S. 37:2163.B.

20.2 Bids shall be received from Bidders only on the Bid Form in the Bidding Documents which is issued to him in his name, as provided in the L.R.S. 37:2163. A single bid shall be submitted for all portions of the Contract Work.

21. Issuance of Addenda Deadline:

21.1 No addenda will be issued within seventy-two (72) hours of the advertised bid time, exclusive of Saturdays, Sundays and legal holidays without resulting in the extending the bid period for at least seven (7) working days but not more than twenty-one (21) working days, as provided by L.R.S. 38:2212.O.(2)(b).

22. Bids to Remain Open:

22.1 As provided by L.R.S. 38:2215A., all Bids shall remain open for forty-five (45) calendar days after the day of the Bid opening, however as provided under L.R.S. 38:2215.D, these provisions are not applicable for projects requiring the sale of bonds or financed in whole or in part by federal or other funds which will not be readily available at the time bids are opened.

22.2 Extensions of time when Bids shall remain open beyond the forty-five (45) calendar day period specified in L.R.S. 38:2215.A may be made only by mutual agreement between the OWNER and the lowest responsible bidder by one or more thirty (30) calendar day extensions.

23. Discrepancies on Bid Form:

23.1 For the purpose of evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the Bid Form as submitted by bidders:

A. Obviously misplaced decimal points will be corrected; and,

B. In case of discrepancy between unit price and unit price extension, the unit price will govern; and,

C. Apparent errors of unit price extension(s) will be corrected; and

D. Apparent errors in addition of unit price extension(s) will be corrected; and

E. If a cap amount has been established for an item, such as for Mobilization, and the amount that is bid exceeded the established cap amount, the amount bid for said item shall be reduced to the established cap amount.

23.2 The Bids shall be evaluated on the basis of the unit prices and totals of unit price extensions arrived at by resolution of arithmetic discrepancies as provided above, and the bid will be so reflected on the abstract of bids.

24. Required Certifications, Attestations, Etc.

24.1 In accordance with L.R.S. 38:2227 and 38:2212.10.C, the low bidder on this project must submit the completed Attestation/Affidavit Form (Past Criminal Conviction of Bidders, Verification of Employees, and Certification Regarding Unpaid Workers Compensation Insurance) (L.R.S. 23:1726(B) - Certification Regarding Unpaid Workers Compensation Insurance) (L.R.S. 38:2216.1 – Prohibition of Contracts with Companies that Discriminate Against Firearm and Ammunition Industries) (L.R.S. 38:2224 - Contractor Non-Collusion Affidavit) (Section 00910). The forms shall be submitted to the ENGINEER within 10 days after the opening of bids.

24.2 Before award of the contract, the successful Bidder shall furnish to the OWNER the following documents:

A. All applicable insurance documents.

25. Unique Entity ID (UEI)

25.1 The successful bidder must have an active Unique Entity ID (UEI) and be registered with the Federal System of Award (SAM) Registration Program prior to award of contract."

25.2 If the successful bidder does not presently have a Unique Entity ID (UEI) number; a UEI number can be obtained free of charge at http://sam.gov/content/entity-registration.

25.3 All proposed subcontractors must have an active UEI number prior to execution of any subcontract between the selected CONTRACTOR and subcontractor.

26. Conflict Between Drawings and Specifications:

26.1 Where an obvious conflict exists between the Drawings and Specifications, the ENGINEER shall decide which governs and the CONTRACTOR shall comply with the decision. Such decision shall not be grounds for additional payment to the CONTRACTOR, i.e. the CONTRACTOR shall include the price of the more expensive alternative in his bid.

27. Drawings and Specifications Issued to Successful Bidder

27.1 The successful Bidder for this Contract will be furnished four (4) complete sets of Drawings and Specifications at no cost. If, during the prosecution of the work the CONTRACTOR should deem it necessary to have additional sets of Drawings and Specifications they may be purchased from the ENGINEER at the cost of reproduction.

28. Sales And Use Tax Exemption

28.1 In accordance with applicable rules adopted and promulgated by the Louisiana Department of Revenue, the OWNER intends to designate the CONTRACTOR and all subcontractors as its agents for the purchase and lease of materials, supplies or equipment for this Project. The CONTRACTOR and all subcontractors shall accept the agency designation. The designation and acceptance thereof shall be made on the form prescribed by the Louisiana State Department of Revenue which form shall be part of the contract between the OWNER, and the CONTRACTOR. A copy of this form is included in Section 00450.

28.2 The agency relationship between the OWNER and the CONTRACTOR and all subcontractors shall relieve the CONTRACTOR and subcontractors (1) from paying any state or local sales or state or local use taxes on materials, supplies or equipment which is affixed to and/or made a part of the real estate of the project or work or which is permanently incorporated into the project or work and, (2) from paying any state or local use taxes on any materials, supplies or equipment which is leased and used exclusively for the project or work. Accordingly, in preparing their bids and computing costs, the CONTRACTOR and subcontractors shall not consider sales and/or use taxes which would otherwise be due.

28.3 The CONTRACTOR and subcontractors shall furnish a copy of such certificate to all vendors or suppliers of any of the materials, supplies or equipment described above.

28.4 The CONTRACTOR and subcontractors shall make all purchases and leases on behalf of and as the agent of the OWNER.

28.5 Rules and regulations of the Louisiana Department of Revenue shall prevail over any conflicting provisions or specifications of the Contract.

28.6 The CONTRACTOR shall enter into a separate Contract with the OWNER prior to issuance of the Notice to Proceed as it relates to the agent arrangement for sales tax exemptions. A copy of the contract is included in Section 00460.

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SECTION 00300
LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: Avoyelles Parish Police Jury
312 North Main Street
Marksville, Louisiana 71351
(Owner to provide name and address of owner)

BID FOR: Avoyelles Parish Police Jury
Avoyelles Parish Recreation and Education Complex
Job No. 12719
(Owner to provide name of project and other identifying information)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by:

Pan American Engineers, LLC and dated: January 2026
(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____ Dollars ($ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 -*Additive Alternate No. 1: Delete synthetic turf play area and construct concessions/restrooms building complete for the lump sum of:*

_____ Dollars ($ _____)

Alternate No. 2: *Additive Alternate No. 1: Install aluminum angle frame bleachers assemblies ((two (2) assemblies per field) (8 total)) for the lump sum of:*

_____ Dollars ($ _____)

Alternate No. 3: *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

N/A Dollars ($ N/A)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

_____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER:** _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

**** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

SECTION 00400

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the Avoyelles Parish Police Jury, as OWNER in the penal sum of _____ DOLLARS ($_____) for the payment of which sum well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this ____ day of _____, 2026. The Condition of the above obligation is such that whereas the Principal has submitted to the Avoyelles Parish Police Jury, a BID, attached hereto and hereby made a part thereof, to enter into a contract in writing, for Avoyelles Parish Recreation and Education Complex.

NOW THEREFORE,

a. If said BID shall be rejected, or

b. If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Agreement attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor and furnishing materials in connection therewith, and shall in all other respects perform the Agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

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

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

_____ PRINCIPAL

BY:
_____ TITLE

_____ SURETY

BY:
_____ TITLE

IMPORTANT: Bid Guaranty Bonds: In accordance with Louisiana Revised Statute 38:2218.C, all Bid Guaranty Bonds shall be written by a surety or insurance agency currently on the U.S. Department of Treasury Financial Management Service list of approved companies, or by a Louisiana domiciled insurance company with at least an A-rating in the latest printing of the A.M. Best's Key Rating Guide or by an insurance company in good standing licensed to write bonds either domiciled in Louisiana or owned by Louisiana residents.

R-1020 (4/12)

LDR
Contributing to a better quality of life

Designation of Construction Contractor as Agent of a Governmental Entity Sales Tax Exemption Certificate

Avoyelles Parish Police Jury , an agency of the United
Legal Name of Governmental Entity

States government, or an agency, board, commission, or instrumentality of the State of Louisiana or its political subdivisions, including parishes, municipalities and school boards, does hereby designate the following contractor as its agent for the purpose of making sales tax exempt purchases on behalf of the governmental body:

Name of Contractor		
Address		
City	State	ZIP

This designation of agency shall be effective for purchases of component construction materials, taxable services and leases and rentals of tangible personal property for the following named construction project:

Construction Project	Contract Number
Avoyelles Parish Recreation and Education Complex	

This designation and acceptance of agency is effective for the period

Beginning Date *(mm/dd/yyyy)*	End Date *(mm/dd/yyyy)*

Purchases for the named project during this period by the designated contractor shall be considered as the legal equivalent of purchases directly by the governmental body. Any materials purchased by this agent shall immediately, upon the vendor's delivery to the agent, become the property of this government entity. This government entity, as principal, assumes direct liability to the vendor for the payment of any property, services, leases, or rentals made by this designated agent. This agreement does not void or supersede the obligations of any party created under any construction contract related to this project, including specifically any contractual obligation of the construction contractor to submit payment to the vendors of materials or services for the project.

This contractor-agent is not authorized to delegate this purchasing agency to others; separate designations of agency by this governmental entity are required for each contractor or sub-contractor who is to purchase on behalf of this governmental entity. The undersigned hereby certify that this designation is the entirety of the agency designation agreement between them. In order for a purchase for an eligible governmental entity through a designated agent to be eligible for sales tax exemption, the designation of agency must be made, accepted, and disclosed to the vendor before or at the time of the purchase transaction.

Designation of Agency		
Signature of Authorized Designator	Date *(mm/dd/yyyy)*	
Name of Authorized Designator Darrell Wiley, President		
Name of Governmental Entity Avoyelles Parish Police Jury		
Address 312 N. Main Street, Courthouse Building		
City Marksville	State La	ZIP 71351

Acceptance of Agency		
Signature of Contractor or Subcontractor Authorized Acceptor	Date *(mm/dd/yyyy)*	
Name of Contractor's or Subcontractor's Acceptor		
Name of Contractor		
Address		
City	State	ZIP

This designation of agency form, when properly executed by both the contractor and the governmental entity, shall serve as evidence of the sales tax exempt status that has been conferred onto the contractor. No other exemption certificate form is necessary to claim exemption from sales taxes. The agency agreement evidenced by this sales tax exemption certificate must be implemented at the time of contract execution with the governmental entity. The contract between the governmental entity and his agent must contain provisions to authenticate the conferment of agency.

SECTION 00460

SALES TAX EXEMPTION CONTRACT

CONTRACT FOR L.R.S. 47:301(8)(c) SALES AND TAX EXEMPTION

WHEREAS, _____, (Contractor), has been awarded a Contract with Avoyelles Parish Police Jury, (Owner), a public entity/political subdivision, in accord with the Louisiana public bid Law for the following public project:

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

WHEREAS, the Contractor and/or its subcontractors on this project, in their execution of the Project will use and/or purchase tangible property and/or goods which will be consumed in completing the Project or which will be incorporated into the Project;

WHEREAS, the Contractor and/or its subcontractors on this project, in bidding on the Project, did not include sales and use taxes on tangible property and/or goods which will be consumed in completing the Project or which will be incorporated into the Project;

WHEREAS, the Owner wishes to avail itself of the sales and use tax exemption afforded to it by L.R.S. 47:301(8)(c);

WHEREAS, the Owner wishes to avoid paying sales and use taxes when it has no legal obligation to do so;

WHEREAS, the Owner's unnecessary payment of sales and use taxes could be a violation of its duty to prudently administer the public funds in its charge;

WHEREAS, the parties may avoid the unnecessary payment of sales and use taxes if the Contractor or its subcontractors on this project act as the Owner's agent and/or instrumentality for the purchase and/or use of tangible property which will be consumed in completing the Project or which will be incorporated into the Project;

WHEREAS, the Contractor and its subcontractors on this project and the Owner mutually agree to a contract of agency and/or instrumentality between them for the purchase and/or use of tangible property which will be consumed in completing the Project or which will be incorporated into the Project and thereby avoid the unnecessary payment of sales and/or use taxes;

NOW THEREFORE the Owner appoints the Contractor and its subcontractors on this project as its agent and/or instrumentality for purposes of the purchase and/or use of tangible property which will be consumed in completing the Project or which will be incorporated into the Project subject to the following conditions:

All purchases under this Contract shall be made from the public funds paid to the Contractor and/or its subcontractors on this project and shall be charged to the contract price for the Project. The Contractor and/or its subcontractors on this project shall obtain invoices for all purchases made under this Contract. The invoices shall bear the name and number of the Project as listed above. All materials and equipment shall be purchased by the Contractor and/or its subcontractors on this project in the name of the Owner using funds that are accounted for to the Owner and that are traced to public funds.

Title to all property purchased under this Contract shall immediately pass to the Owner at the time of the purchase, but the Contractor and/or its subcontractors on this project shall be the depositary or custodian of the property until the Owner accepts the Project as substantially complete at which time this Contract shall terminate.

In the event that the Contractor and/or its subcontractors on this project are subject to a sales or use tax audit by either the State of Louisiana or a local government subdivision and the taxing authority assess taxes on any materials or equipment incorporated into the Project or use in its work, the Owner shall be responsible for defending the tax-exempt status or the purchases at issue unless the tax liability is due to the non-compliance to this contract by the Contractor and/or its subcontractors. Moreover, should the taxing authority prevail in imposing its sales or use tax, the Owner shall be ultimately liable for remitting to the taxing authority the taxes, interest and penalties ultimately found due unless the Contractor and/or its subcontractors on this project have failed to comply with this Contract, in which event the Contractor and/or its subcontractors shall be solely responsible for the payment of taxes found to be due.

This Contract does not limit or otherwise alter Contractor’s responsibilities (1) to fully insure materials and equipment to be furnished by Contractor; (2) to insure the work at all times prior to substantial completion; (3) to fully warrant all materials and equipment furnished by Contractor; (4) to alter the method or time frames for payments established under the Project; (5) to change the rights of the Owner to accept or reject the work or any part thereof or alter the manner or time frames in which inspections may be made by the Engineer or Architect on behalf of the Owner; (6) to provide for the safety and protection of materials and equipment whether in storage on or off site and regardless whether titled to the contracting agency as part of the work; (7) to maintain liability and property insurance, specifically including coverage for damages to the materials and equipment prior to final acceptance and claims for damages because of bodily injury, sickness, or death and any of the Contractor’s and/or it subcontractors on this project employees or any person other than the Contractor’s and/or its subcontractors on this project employees; (8) to properly correct the work as required by the Engineer or Architect or diminish the Owner’s and Engineer’s or Architect’s right to reject any portions of the work.

The Contractor accepts its appointment as indicated by the signature of its authorized agent on the date shown below. The subcontractors of the Contractor on this project shall accept this appointment by their execution of a subcontract with the Contractor to which this Sales Tax Exemption Agreement shall be incorporated by reference and attached as an Exhibit thereto.

CONTRACTOR

AVOYELLES PARISH POLICE JURY

SECTION 00500

NOTICE OF AWARD

Date: _____

Project: Avoyelles Parish Recreation and Education Complex

Owner: Avoyelles Parish Police Jury	Owner's Contract No.:
Contract:	Engineer's Project No.: 12719
Bidder:	
Bidder's Address:	

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for Avoyelles Parish Police Jury Avoyelles Parish Recreation Complex.

The Contract Price of your Contract is _____ Dollars ($_____).

Four (4) copies of the proposed Contract Documents accompany this Notice of Award.

Four (4) sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within fifteen (15) days of the date you receive this Notice of Award.

1. Deliver to the Owner four (4) fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Paragraph 16), General Conditions (Article 6.01).
3. Other conditions precedent:
   1. *Provide Certification of Insurance as specified (SC-6.02 and SC-6.03)*
   2. *Provide affidavits, certificates, and required documents as specified in the Instructions to Bidders (Paragraph 24).*

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Avoyelles Parish Police Jury
Owner

By: _____
Authorized Signature

Project Engineer
Title

SECTION 00600

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT
(LUMP SUM)

THIS AGREEMENT is by and between Avoyelles Parish Police Jury ("Owner") and _____ ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

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

Base Bid: Demolition of minor items including aggregate drive, trees, stumps, existing drainage pipe, etc. and the construction/installation of a 4-ballfield complex including required erosion controls, earthen cut/fill, subsurface drainage, brick backstop walls, tension backstop netting systems, turf curbs, dugouts, bleacher canopies, vinyl coated chain link fence and gates, synthetic turf infield and play area systems, field amenities, ballfield lighting, scoreboards, site utilities/extensions, concrete walks, topsoil placement, site grading, edge sodding, sodding, outfield sprigging and irrigation, hydroseeding, etc.

Alternate No. 1: Deletion of synthetic turf play area in common area between ballfields and construction/installation of concessions/restrooms complete including foundation, building, utility connections, mechanical, electrical, plumbing, lighting, downspout subsurface drainage and connections, perimeter concrete walk, HVAC chain link fence and gate and wastewater treatment plant system with utility extensions/connections and perimeter fence and gates.

Alternate No. 2: Installation of aluminum angle frame bleacher assemblies (two (2) assemblies per field (8 total)).

All as indicated within the Bidding Documents dated November 2025.

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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:

Avoyelles Parish Police Jury - Avoyelles Parish Recreation and Education Complex

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Pan American Engineers, LLC which 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.

3.02 Engineer's contact information is as follows:

Pan American Engineers, LLC
1717 Jackson Street (P. O. Box 8599)
Alexandria, Louisiana 71301 (71306)
(318) 473-2100 telephone

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 *Contract Times: Days*

A. The Work will be substantially completed within 365 days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 410 days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above 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),

1. *Substantial Completion*: Contractor shall pay Owner $500.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion until the Work is substantially complete.

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2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment

3. Liquidated damages for failing to timely attain Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5 – CONTRACT PRICE

A. Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an Lump Sum total of _____Dollars ($ _____).

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 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 as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of 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 final completion and acceptance of all Work covered by the Contract Documents, 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, including but not limited to liquidated damages. Retainage indicated below does not include withholdings for known incomplete work. Such withholdings are not included in calculating the retainage but are additional monies withheld.

a. For Contract Prices of $500,000 or less, 90% of Work completed and/or cost of materials and equipment not incorporated in the Work (with the balance of 10% being retainage).

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b. For Contract Prices in excess of $500,000, 95% of Work completed and/or cost of materials and equipment not incorporated in the Work (with the balance of 5% being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to the applicable percent based on the preceding Paragraph 6.02.A.1 of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 15.01.E of the General Conditions and less the value of Engineer's estimate of the 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.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer.

ARTICLE 7 – CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 8, inclusive).
2. Performance bond (pages 1 to 4, inclusive).
3. Payment bond (pages 1 to 4, inclusive).
4. General Conditions (pages 1 to 70, inclusive).
5. Supplementary Conditions (pages 1 to 18, inclusive).
6. Specifications as listed in the table of contents of the Project Manual.
7. Drawings consisting of 34 sheets with each sheet bearing the following general title: Avoyelles Parish Police Jury, Avoyelles Parish Recreation and Education Complex
8. Addenda (numbers _____ to _____, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages 1 of 1, inclusive).
    b. Bid Bond
    c. Documentation submitted by Contractor.
        1) Attestation/Affidavit – L.R.S. 38:2227 (Past Criminal Convictions of Bidders); L.R.S. 38:2212.10 (Verification of Employees); L.R.S. 23:1726(B) (Certification

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Regarding Unpaid Workers Compensation Insurance); L.R.S. 38:2216.1 – Prohibition of Contracts with Companies that Discriminate Against Firearm and Ammunition Industries; and L.R.S. 38:2224 - Contractor Non-Collusion Affidavit.

The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

d. Notice to Proceed (pages 1 of 1, inclusive).

e. Work Change Directives.

f. Change Orders.

B. The documents listed in Paragraph 7.01.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 7.

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

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS, CERTIFICATIONS AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

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6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work

8. 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.

9. 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.

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

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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8.03 *Standard General Conditions*

A. Owner stipulates that the General Conditions that are made a part of this Contract are EDCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and the Owner has shown all modifications to the standard wording of such published document to the Contractor in the Supplementary Conditions.

ARTICLE 9 – MISCELLANEOUS

9.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

9.02 *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.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

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

OWNER:	CONTRACTOR
Avoyelles Parish Police Jury	
By:	By:
Title: Darrell Wiley, President	Title:
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Address for giving notices:	Address for giving notices:
312 N. Main Street	
Marksville, Louisiana 71351	
	License No.:

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SECTION 00620

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*):
Avoyelles Parish Police Jury
312 North Main Street
Marksville, Louisiana 71351

CONTRACT
Effective Date of Agreement:
Amount:
Description (*Name and Location*): Avoyelles Parish Recreation and Education Complex

BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

EJCDC® C-610, Performance Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

   3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

   3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

   3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. 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:

   5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

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

   5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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

      5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

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5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven 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 5.4, and the Owner refuses the payment, 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.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. 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 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

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

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

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of 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 periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

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

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14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for 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 Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: None

FOR INFORMATION ONLY – (*Name, Address and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other party*): Pan American Engineers, LLC, P. O. Box 8599, Alexandria, Louisiana 71306

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SECTION 00630

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*):
Avoyelles Parish Police Jury
312 North Main Street
Marksville, Louisiana 71351

CONTRACT
Effective Date of Agreement:
Amount:
Description *(Name and Location)*: Avoyelles Parish Recreation and Education Complex
BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

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1. The Contractor and 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 Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

    5.1. Claimants who do not have a direct contract with the Contractor

        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

    7.2. Pay or arrange for payment of any undisputed amounts.

    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for

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the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction 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 Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

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

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, 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 will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

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

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

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16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

16.1.4. A brief description of the labor, materials, or equipment furnished;

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *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 Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction 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.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: None

FOR INFORMATION ONLY – (*Name, Address, and Telephone*)
Surety Agency or Broker:
Owner's Representative (*Engineer or other*): Pan American Engineers, LLC, P.O. Box 8599, Alexandria, Louisiana 71306

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SECTION 00640

NOTICE TO PROCEED

Date: _____

Project: Avoyelles Parish Recreation and Education Complex	
Owner: Avoyelles Parish Police Jury	Owner's Contract No.:
Contract:	Engineer's Project No.: 12719
Contractor:	
Contractor's Address:	

You are notified that the Contract Times under the above Contract will commence to run on _____. On that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the number of days to achieve Substantial Completion is 365, and the number of days to achieve readiness for final payment is 410.

Also, before you may start any Work at the Site, you must:

1) Notify ENGINEER'S office as to date crews will move to the site so as to coordinate field control and layout work.
(2) Provide ENGINEER'S office with detailed submittal data on all material to be incorporated into project (Section 01340 - Shop Drawings, Samples and Project Data).

Avoyelles Parish Police Jury
Owner

Given by:

_____
Authorized Signature

Project Engineer
Title

_____
Date

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SECTION 00650

CHANGE ORDER

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Avoyelles Parish Recreation and Education Complex	Owner: Avoyelles Parish Police Jury	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 12719

You are directed to make the following change(s) in this contract: Attach itemized breakdown in accordance with L.R.S. 38:2212M.(5). Also, please give brief description and justification of change(s) below.

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:	**CHANGE IN CONTRACT TIMES:**
Original Contract Price: $_____	Original Contract Times: ☐ Working days ☐ Calendar Days Substantial completion (days or date): _____ Ready for final payment (days or date): _____
[Increase] [Decrease] from previously approved Change Orders No. _____ to No. $_____	[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____: Substantial completion (days): _____ Ready for final payment (days): _____
Contract Price prior to this Change Order: $_____	Contract Times prior to this Change Order: Substantial completion (days or date): _____ Ready for final payment (days or date): _____
[Increase] [Decrease] of this Change Order: $_____	[Increase] [Decrease] of this Change Order: Substantial completion (days or date): _____ Ready for final payment (days or date): _____
Contract Price incorporating this Change Order: $_____	Contract Times with all approved Change Orders: Substantial completion (days or date): _____ Ready for final payment (days or date): _____

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Pan American Engineers, LLC	Avoyelles Parish Police Jury	Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable):

_____ Date: _____

(Note: Before any Change Order is routed to Owner for approval it must first be routed to the Funding Agency for review).

SECTION 00660

WORK CHANGE DIRECTIVE

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Avoyelles Parish Recreation and Education Complex	Owner: Avoyelles Parish Police Jury	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 12719

Contractor is directed to proceed promptly with the following change(s):

Item No.	Description

Attachments (list documents supporting change):

_____

_____

Purpose for Work Change Directive:

Authorization for Work described herein to proceed on the basis of Cost of the Work due to:

- ☐ Nonagreement on pricing of proposed change.
- ☐ Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

Estimated change in Contract Price and Contract Times:

Contract Price $_____ (increase/decrease) Contract Time _____ (increase/decrease) days

Recommended for Approval by Engineer:	Date
Authorized for Owner by:	Date
Received for Contractor by:	Date
Received by Funding Agency (if applicable):	Date:

SECTION 00670

FIELD ORDER

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Avoyelles Parish Recreation and Education Complex	Owner: Avoyelles Parish Police Jury	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 12719

Attention:
You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 11.04.A, for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference: _____ _____
(Specification Section(s)) (Drawing(s) / Detail(s))

Description: _____

Attachments: _____

	Engineer:
Receipt Acknowledged by Contractor:	Date:

Copy to Owner

SECTION 00700

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document 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, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

    a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

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requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

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recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

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

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

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice 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.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

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33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *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, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *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.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *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 of such Work.

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43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, 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 a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire 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; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

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1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, 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 exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the 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 is not intended to and 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 Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. 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 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means 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, means 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, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that 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 Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for 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;

2. a preliminary Schedule of Submittals; 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

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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.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, 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 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will 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 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 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 the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required 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.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will 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.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

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

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

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

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inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. 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 had actual knowledge thereof.

B. *Resolving Discrepancies*

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

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

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

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B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. 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 its consultants, including electronic media versions, or reuse any 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; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract 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 Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

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

4.03 *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

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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.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 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 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

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D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing 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.

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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 permanent improvements are to be made 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.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all 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 directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

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

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

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and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of 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 structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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;

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

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

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 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

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 Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

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

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

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3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then 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 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

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or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. 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 Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

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 removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) 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. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. 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, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. 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

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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, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, 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, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, 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 failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

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Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

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Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, 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.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

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L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is 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; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

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4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

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Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, 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, risks, 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 Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights 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 insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

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6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *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.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

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B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. 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 will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, 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, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will 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.

C. All materials and equipment must 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.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

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3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) whether 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 other work on the Project) to adapt the design to the proposed substitute item; and

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

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

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

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E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

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H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *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 an 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 will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, 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 specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, 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 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.

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7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. 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 the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *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.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, 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 such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

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7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. 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, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.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 at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer 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).

E. 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.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

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I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as 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.

7.15 *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 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 by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must 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 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, 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.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of 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, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.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. Engineer will

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document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

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.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, 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.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

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 review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

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9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused 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.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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 7.18.A will 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.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

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D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. 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 such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

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E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, 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.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

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

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

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B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all 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 damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

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

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

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9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *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.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

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ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *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.

10.02 *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 10.07. 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.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

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E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, 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, will 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 Contractor under Paragraph 15.06.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 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

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ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in 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;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes 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. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *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, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

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1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will 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 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
      b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 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 Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
      d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
      e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
      f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

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11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

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Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety 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), 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.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

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and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

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2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

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 in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will 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 bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, 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 will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

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

5. Other costs consisting of 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, which are

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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.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as 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 builder's risk or other property insurance established in accordance with Paragraph 6.04), 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 include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

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

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, 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 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

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

5. 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.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

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Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *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 and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash 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, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *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.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. 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.

D. 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

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thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

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.

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D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. 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, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

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losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages 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 pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, 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, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *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, then Owner may order Contractor to stop the Work,

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or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will 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.

14.07 *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 defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or 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, 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 incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. 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 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 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement 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.

2. 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 must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

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establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, 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 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, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and 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:

   a. 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; or

   b. 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.

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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:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. 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 stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

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b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. 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; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, 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, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *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 and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

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submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, 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.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy 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

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significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. 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 15.03 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.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *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, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *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, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
    a. all documentation called for in the Contract Documents;
    b. consent of the surety, if any, to final payment;
    c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

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d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, 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, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: 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 have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

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appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written 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. Contractor shall pay all 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). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. 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.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, 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.

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F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *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 written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and 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);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, 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 complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

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attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds 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.

F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. 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. 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; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 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 16.03.

B. 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, 7 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

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provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal 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 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract 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.

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18.03 *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. 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.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is 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.

18.09 *Successors and Assigns*

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

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SECTION 00710

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

Pan American Engineers, LLC

For

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

SC-2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

SC-2.01.A Add the following sentence at the end of Paragraph 2.01.A.:

The Owner shall record within thirty (30) days the Agreement Between Owner and Contractor and Performance and Payment Bond with the Clerk of Court in the Parish in which work is to be performed in accordance with Louisiana Revised Statute (L.R.S.) 38:2241A(2).

SC-2.02 *Copies of Documents*

SC-2.02.A Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Owner shall furnish to Contractor up to four (4) printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

SC-4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A Delete Paragraph 4.01.A in its entirety and insert the following in its place:

A. The Contract Times will commence to run on the day indicated in the Notice to Proceed. In accordance with L.R.S. 38:2215.C; A Notice to Proceed shall be issued within 30 days of the Effective Date of the Agreement; or the Notice to Proceed may be given at any time mutually agreed to by the Owner and Contractor.

SC-4.05 *Delays in Contractor's Progress*

SC-4.05.A Delete Paragraph 4.05.A in its entirety and insert the following in its place:

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Times.

SC-4.05.C Add the following paragraph immediately at after Paragraph 4.05.C.4:

5. *Weather-Related Delays*

a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.

b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:

1) Every workday on which the total precipitation occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds one inch (1") of precipitation (as rain equivalent) will be considered a "bad weather day".

2) Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by the nearest public weather monitoring station.

3) Contractor shall anticipate the number of foreseeable bad weather days per month indicated in the Chart below:

January	11 days	February	10 days
March	8 days	April	7 days
May	5 days	June	6 days
July	6 days	August	5 days

September	4 days	October	3 days
November	5 days	December	8 days

4) In each month, every bad weather day exceeding the number of foreseeable bad weather days established in SC.4.05.C.5.b.3 will be considered as "abnormal weather conditions." The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor's then-current Progress Schedule's critical path for the Project.

SC-4.05.D Delete Paragraph 4.05.D in its entirety and insert the following in its place:

D. Contractor's entitlement to an adjustment of Contract Times is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Adjustments of Contract Times are subject to the provisions of Article 11.

SC-5.01 *Availability of Lands*

SC-5.01.C Add the following new paragraph immediately after Paragraph 5.01.C:

D. Permanent improvements on private property are limited to those areas having an executed easement or servitude agreement prior to installation. Contractor is to comply with all terms, restrictions, special conditions, etc., as described in the easements or servitudes. Costs of such compliance are to be reflected in related work. No separate compensation will be made for this compliance.

SC-5.03 *Subsurface and Physical Conditions*

SC-5.03.D Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the

Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at the Engineer's Office during regular business hours, or may request copies from Engineer.

SC-5.04 *Differing Subsurface or Physical Conditions*

SC-5.4.E Delete Paragraph 5.04.E.1.b tin its entirety and insert the following in its place:

b. With respect to Work that is paid for on a unit price basis, the provisions of L.R.S. 38:2212 M(5) shall prevail.

SC-5.06 *Hazardous Environmental Conditions at Site*

SC-5.06.A Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
N/A	N/A	N/A

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
N/A	N/A	N/A

SC-6.01 *Performance, Payment and Other Bonds*

SC-6.01.A Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 Edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 Edition).

SC-6.02 *Insurance – General Provisions*

SC-6.02.B Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC-6.03 *Contractor's Insurance*

SC-6.03.B. Add the following new paragraph immediately after Paragraph 6.03.B.5:

6. Remain in effect for one (1) year after final payment.

SC-6.03.C. Add the following new paragraph immediately after Paragraph 6.03.C:

D. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation:

a. State:	Statutory
b. Applicable Federal (e.g., Longshoreman's):	Statutory
c. Employer's Liability:	$1,000,000

2. Contractor's General Liability which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

a. General Aggregate	$2,000,000
b. Products – Completed Operations Aggregate	$1,000,000
c. Personal and Advertising Injury	$1,000,000
d. Each Occurrence (Bodily Injury and Property Damage)	$1,000,000

e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable.

f. Excess or Umbrella Liability

□ General Aggregate	$2,000,000
□ Each Occurrence	$2,000,000

3. Automobile Liability:

a. Combined Single Limit of	$1,000,000

4. The Contractual Liability shall provide coverage for not less than the following amounts:

a. Bodily Injury:	
Each person	$1,000,000
Each Accident	$1,000,000
b. Property Damage:	

Each Accident	$1,000,000
Annual Aggregate	$2,000,000

5. The Contractor shall provide the Owner with an Owner's Protective Liability Insurance Policy naming the Owner and the Engineer as additional insureds, and each of their officers, agents and employees as additional insureds under that policy, said policy to protect said parties from claims which may arise from operations under the contract. Limits of policy coverage shall be bodily injury liability $1,000,000 each person/$2,000,000 aggregate; property damage - $1,000,000 per person/$2,000,000 aggregate. Any and all additional premium charges for securing this insurance shall be included as part of the Contractor's bid and contract price.

6. The Contractor, shall cause the Owner and the Engineer to be named as an additional insureds under the Contractor's liability policy and any and all additional premium charges for securing an endorsement to the Contractor's liability policy naming the Owner and the Engineer as an additional insureds shall also be included as part of the Contractor's bid and contract price.

SC-6.03.C Add the following new paragraph immediately after Paragraph 6.03.C:

D. Exhibit A: Certificate of Insurance - Insured/Contractor (Exhibit A1); and Certificate of Insurance - Insured/Owner (Exhibit A2); Exhibit A1 and Exhibit A2 are samples showing sample insurance coverages. Actual coverage required shall be as stated in the General & Supplemental Conditions.

SC-6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04 in its entirety.

SC-6.05 *Property Losses; Subrogation*

SC-6.05 Delete Paragraph 6.05 in its entirety.

SC-6.06 *Receipt and Application of Property Insurance Proceeds*

SC-6.06 Delete Paragraph 6.06 in its entirety.

SC-7.04 *Services, Materials, and Equipment*

SC-7.04.C Add the following new paragraph immediately after paragraph 7.04.C:

D. Suppliers of all major materials or equipment furnished shall supply manufacturer's printed warranties on all materials or equipment furnished. The Contractor shall furnish these warranties with the Shop Drawings submittal. The warranties shall warrant the materials or equipment for a period of one (1) year from the filing of the Substantial Completion certificate.

SC-7.05 *"Or Equals"*

SC-7.05.A Delete paragraph 7.05.A in its entirety and insert the following:

(1) The name of a certain brand, make, manufacturer, or definite specifications is to denote the quality standard of the article desired, but does not restrict bidders to the specific brand, make, manufacturer, or specification named. It is to set forth and convey to prospective bidders the general style, type, character, and quality of article desired.

(2) When in specifications or contract documents a particular brand, make of material, device, or equipment is shown or specified, such brand, make of material, device, or equipment shall be regarded merely as a standard.

B. When in specifications or contract documents an architect or engineer specifies a particular brand, make of material, device, or equipment, or equal thereto, he shall adequately identify said product by including, minimally, the model or catalog number of the product.

C. If a potential supplier wishes to submit for prior approval a particular product other than a product specified in the contract documents, he shall do so no later than seven working days prior to the opening of bids. Within three days, exclusive of holidays and weekends, after such submission, the prime design professional shall furnish to both the public entity and the potential supplier written approval or denial of the product submitted. If the prime design professional fails to respond within the time period

provided for in this Paragraph, the submitted product shall be considered approved.

SC-7.09 *Permits*

SC-7.09.A Add the following new language to the end of the last sentence of Paragraph 7.09.A:

A. ;unless otherwise stated in the Contract Documents.

SC-7.10 *Taxes*

SC-7.10.A Delete paragraph 7.10.A in its entirety and insert the following:

A. Contractor shall include all city, state and federal taxes and sales taxes in his bid except when exempted as an Agent of Governmental Entity by Louisiana Department of Revenue Form LDR R-1020. Tax exempt status will be granted to the Contractor, providing the Contractor processes the necessary LDR form(s).

SC-7.17 *Contractor's General Warranty and Guarantee*

SC-7.17.E Add the following new paragraph immediately after paragraph 7.17.E:

F. In accordance with L.R.S. 9:2774, the commencement date for ALL warranties or guarantees of every nature or kind shall be the date of Substantial Completion. It shall be the Contractor's sole responsibility to ensure that all written warranties include this commencement time. Also, in accordance with L.R.S. 9:2274, the provision of this Section shall not be subject to waiver by contract.

SC-7.18 *Indemnification*

SC-7.18 Delete Paragraphs 7.18.A and 7.18.B in their entirety and insert the following:

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer and their consultants, agents and employees from and against all claims, damages, losses and expense, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage,

loss or expense is caused in whole or in part by any negligent act or omission, or breach of this contract, by Contractor, or any Subcontractors of Contractor or, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable. Any and all insurance premium cost that insures this obligation to indemnify shall be included as part of the Contractor's bid and contract price.

B. In any and all claims against Owner or Engineer or any of their consultants, agents or employees by any person, agent or employee of Contractor, and Subcontractor, or any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 7.18.A. shall not be limited in any way by any limitation on the legal remedies or the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under worker's or workmen's compensation acts, disability benefit act or other employee benefit acts.

SC-11.02 *Change Orders*

SC-11.02.B Add the following new paragraphs immediately after Paragraph 11.02.B:

A. Before a Change Order is prepared, the Contractor shall provide and deliver to the Engineer the following information concerning the Cost of Work, not subject to waiver in accordance with L.R.S. 38:2212M.(5), within a reasonable time after being notified to prepare said Change Order.

1. A detailed itemized list of labor, material and equipment costs for the General Contractor's Work including quantities and unit costs for each item of labor, material and equipment.

2. An itemized list of labor, material and equipment costs for each Subcontractor's and/or Sub-Subcontractor's Work including quantities and unit costs for each item of labor, material and equipment.

B. After a Change Order has been approved, no future requests for extensions of time or additional cost shall be considered for that Change Order.

11.07 Change of Contract Price

C. Contractor's Fee: When applicable, the Contractor's fee for overhead and profit will 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 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 8 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 8 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 Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 8 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 8 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 16 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

SC-13.01 *Cost of the Work*

SC-13.01.B. Delete Paragraphs 13.01.B.5.c.1 and 13.01.B.5.c.2 in their entirety and insert the following in their place:

c. *Construction Equipment Rental:*

1) Rentals of all construction equipment and machinery, and the parts thereof 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.

2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the Equipment Rental Rate Book as defined in the Louisiana Public Bid Law, or if not available, the latest edition of "Blue Book" rates, or special equipment rates agreed to by the Owner and Engineer. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than $1,000 will be considered small tools.

SC-13.03 *Unit Price Work*

SC-13.03.E Delete Paragraphs 13.03.E.1 and 13.03.E.2 in their entirety and insert the following in their place:

1. In regards to established unit prices as originally bid the provisions of R.S. 38:2212M.(5) shall apply.

SC-15.02 *Progress Payments*

SC-15.01.B Add the following new paragraphs immediately after Paragraph 15.01.B.4:

5. Normal retainage shall not be due the Contractor until after substantial completion and expiration of the forty-five day lien period and submission to the Engineer of a clear lien certificate, consent of surety, and invoice for retainage. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, including applicable insurance.

SC-15.01.D Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:

1. Forty-five (45) days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount will (subject to the provisions of Paragraph 15.01.E) become due, and when due will be paid by Owner to Contractor; except for projects funded fully or in part by a Federal reimbursement program. For such projects the Owner will make payment in a timely manner consistent with reimbursement.

SC-15.03 *Substantial Completion*

SC-15.03.A Delete Paragraph 15.03.A in its entirety and insert the following in its place:

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 and request that Engineer schedule a site visit to review the status of work. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

SC-15.03.C Delete Paragraph 15.03.C in its entirety and insert the following in its place:

C. If Engineer considers the work as substantially complete, Engineer will deliver to Owner a report recommending consideration of acceptance of the Contract as substantially complete. There shall be attached to the report a punch list of items to be completed or corrected before final payment.

Owner shall timely consider the Engineer's recommendation of acceptance and either officially accept or reject the recommendation. If the recommendation is rejected by the Owner, the Owner shall notify the Contractor in writing, stating reasons therefore. If the recommendation is accepted by the Owner, either an adopted governing body resolution; or a Notice of Acceptance document dated and signed by the Owner shall establish the date of Substantial Completion. The Owner will record the resolution or the Notice of Acceptance document with the Clerk of Court in the Parish in which the work has been performed. Any punch list generated during the project will include the cost estimates for the particular items of work the Engineer has developed based on the mobilization, labor, material, and equipment costs of correcting each punch list item. The values established for punch list items shall be withheld in addition to the withheld retainage amount.

SC-15.03.D Delete Paragraph 15.03.D in its entirety and insert the following in its place:

D. Warranties required by the Contract Documents shall commence on the date of Acceptance of the Work unless otherwise agreed to in writing by the Owner and Contractor. Unless otherwise agreed to in writing by the Owner and Contractor, security, maintenances, heat, utilities, damage to the Work not covered by the punch list and insurance shall become the Owner's responsibility on the Date of Substantial Completion.

SC-15.03.E Delete Paragraph 15.03.E in its entirety and insert the following in its place:

C. If all punch list items have not been completed by the end of the forty-five (45) day lien period, through no fault of the Engineer or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within forty-five (45) days after notification, the Surety has not completed the punch list, through no fault of the Engineer or Owner, the Owner may, at his option, contract to have the balance of the Work completed and pay for such Work with the unpaid funds remaining in the Contract sum.

SC-15.03.F Delete Paragraph 15.03.F in its entirety and insert the following in its place:

D. At the end of the 45 day lien period, payment shall be approved for all punch list items completed up to that time and for the contract retainage. After that payment, none of the remaining funds shall be due the Contractor until all punch list items are completed and are accepted by the Engineer. If funds remaining are less than that required to complete the Work, the Contractor shall pay the difference.

SC-15.06 *Final Payment*

SC-15.06.A Delete Paragraph 15.06.A.2.e in its entirety and insert the following in its place:

e. A certified clear lien certificate on the Contract obtained from the Clerk of Court after 45 days from the recordation date of the certificate of substantial completion.

SC-15.06.A Delete Paragraph 15.06.A.3 in its entirety.

SC-15.06.E Delete Paragraph 15.06.E in its entirety and insert the following in its place:

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 45 days of Owner's receipt of the final Application for Payment from Engineer.

SC-16.01 *Owner May Suspend Work*

SC-16.01.A Delete Paragraph 16.01.A. in its entirety and insert the following in its place:

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 60 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be

submitted no later than 30 days after the date fixed for resumption of Work. If Work is suspended by Owner for more than 60 consecutive days, Contractor shall be entitled to an adjustment in Contract Price and/or and adjustment of Contract Time directly attributable to any such suspension.

SC-16.04 *Contractor May Stop Work or Terminate*

SC-16.04 Delete Paragraph 16.04.A. and 16.04.B in its entirety and insert the following in its place:

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 45 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 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 16.03.

B. 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 45 days to pay Contractor any sum finally determined to be due, Contractor may, 7 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 are not intended to preclude Contractor from submitting a Change Proposal 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.

SC-18.07 *Controlling Law*

SC-18.07 Delete Paragraph 18.07.A in its entirety and insert the following in its place:

A. This Contract is to be governed by the nearest District Court to the location of the Project; and overriding distance, the District Court within the Parish where the Project is located, if such District Court exists.

SC-18.11 *Precedence Between Federal Compliance Provisions and Other Provisions*

SC-18.11 Add the following new paragraph immediately after Paragraph 18.10:

A. Where discrepancies between federal compliance provisions, if any, and other Contract Documents exist, the federal compliance provisions shall take precedence.

SC-18.12 *Ownership and Use of Drawings, Specifications and Other Instruments of Service*

SC-18.12 Add the following new paragraph immediately after Paragraph 18.11:

A. All Drawings, Specifications and all other documents and things (in electronic and/or tangible form) prepared by the Engineer (or Engineer's consultants) are deemed work made for hire and shall be the property of the Owner, including all copyrights thereto as provided in R.S. 38:2317.

SC-18.13 *Recovery of Attorney's Fees*

SC-18.13 Add the following new paragraph immediately after Paragraph 18.12:

A. In the event that it is necessary to enforce this contract in any judicial forum, the parties agree that whoever substantially prevails in the litigation shall be entitled to its reasonable attorney's fees as fixed by the court.

SC-18.14 *Contractor and Subcontractor Employees*

SC-18.14 Add the following new paragraph immediately after Paragraph 18.13:

Contractor and its employees, officers, agents, representatives, and Subcontractors shall conduct themselves in an appropriate and professional manner, in accordance with the Owner's requirements, at all times while working on the Project. Any such individual who behaves in an inappropriate manner or who engages in the use of inappropriate language or conduct while on Owner's property, as determined by the Owner, shall be removed from the Project at the Owner's request. Such individual shall not be permitted to return without the written permission of the Owner. The Owner shall not be responsible or liable to Contractor or any Subcontractor for any additional costs,

expenses, losses, claims or damages incurred by Contractor or its Subcontractor as a result of the removal of an individual from the Owner's property pursuant to this paragraph. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

SC-18.15 *Human Remains, Archeological Sites, Etc.*

SC-18.15 Add the following new paragraph immediately after Paragraph 18.14:

A. If, during the course of the Work, the Contractor discovers human remains, unmarked burial or archaeological site, burial artifacts, or wetlands, which are not indicated in the Contract Documents, the Contractor shall follow all procedures mandated by State and Federal law, including but not limited to R.S. 8:671 et seq., R.S. 49:213.1 et seq., and Sections 401 & 404 of the Federal Clean Water Act. Request for adjustment of the Contract Sum and Contract Time arising from the existence of such remains or features shall be submitted in writing to the Owner pursuant to the Contract Documents.

SC-18.16 *Subcontractor Responsibility*

SC-18.16 Add the following new paragraph immediately after Paragraph 18.15:

A. The Contractor shall be solely responsible for selection and performance of all subcontractors. The Contractor shall not be entitled to claims for additional time and/or an increase in the contract sum due to a problem with performance or non-performances of a subcontractor.

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

SUPPLEMENTARY CONDITIONS

EXHIBIT A

EXHIBIT A1 - SAMPLE “CERTIFICATE OF INSURANCE - INSURED/CONTRACTOR”

EXHIBIT A2 - SAMPLE “CERTIFICATE OF INSURANCE - INSURED/OWNER”

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)

PRODUCER
ABC Agency
123 Street
Anywhere USA

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

John Doe Construction Co.
1 Construction Lane
Builder City USA

COMPANIES AFFORDING COVERAGE

COMPANY **A** — **XYZ Insurance Co**
COMPANY **B**
COMPANY **C**
COMPANY **D**

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY				GENERAL AGGREGATE	$ 2,000,000
	X COMMERCIAL GENERAL LIABILITY	1111111	01/01/07	01/01/08	PRODUCTS-COMP/OP AGG.	$ 1,000,000
	CLAIMS MADE X OCCUR				PERSONAL & ADV INJURY	$ 1,000,000
	OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE	$ 1,000,000
	X Additional Insured: Pan American Engineers, City of Tomorrow				FIRE DAMAGE (Any One Fire)	$ 50,000
	X Waiver of Rights of Recovery: Pan American Engineers, City of Tomorrow				MED. EXP (Any One Person)	$ 5,000
	AUTOMOBILE LIABILITY					
	X ANY AUTO	2222222	01/01/07	01/01/08	COMBINED SINGLE LIMIT	$ 1,000,000
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	HIRED AUTOS				BODILY INJURY (Per accident)	$
	NON-OWNED AUTOS					
	X Additional Insured: Pan American Engineers, City of Tomorrow				PROPERTY DAMAGE	$
	X Waiver of Rights of Recovery: Pan American Engineers, City of Tomorrow					
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	$
					AGGREGATE	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	UMBRELLA FORM				AGGREGATE	$
	OTHER THAN UMBRELLA FORM					$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				X WC STATU-TORY LIMITS / OTH ER	
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: X INCL / EXCL	3333333	01/01/07	01/01/08	EACH ACCIDENT	$ 1,000,000
					DISEASE-POLICY LIMIT	$ 1,000,000
					DISEASE-EACH EMPLOYEE	$ 1,000,000
	OTHER:					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

Pan American Engineers, LLC

P.O. Box 8599

Alexandria, La. 71306

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, IT'S AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

ABC Agency

Wyatt M Sanders

ACORD 25-S (1/95) Certificate #

EXAMPLE

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)

PRODUCER
ABC Agency
123 Street
Anywhere USA

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
City of Tomorrow

COMPANIES AFFORDING COVERAGE

COMPANY **A** — **XYZ Insurance Co**
COMPANY **B**
COMPANY **C**
COMPANY **D**

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY				GENERAL AGGREGATE	$1,000,000
	X COMMERCIAL GENERAL LIABILITY	4444444	Job Start Date		PRODUCTS-COMP/OP AGG.	$1,000,000
	CLAIMS MADE [X] OCCUR				PERSONAL & ADV INJURY	$1,000,000
	X OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE	$ 1,000,000
	X Additional Insured: Pan American Engineers				FIRE DAMAGE (Any One Fire)	$
	X Waiver of Rights of Recovery: Pan American Engineers, City of Tomorrow				MED. EXP (Any One Person)	$
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$
	ANY AUTO					
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	HIRED AUTOS				BODILY INJURY (Per accident)	$
	NON-OWNED AUTOS					
					PROPERTY DAMAGE	$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	$
					AGGREGATE	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	UMBRELLA FORM				AGGREGATE	$
	OTHER THAN UMBRELLA FORM					$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATU-TORY LIMITS / OTH ER	
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: INCL / EXCL				EACH ACCIDENT	$
					DISEASE-POLICY LIMIT	$
					DISEASE-EACH EMPLOYEE	$
	OTHER:					

EXAMPLE

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

Reference: Project Description

CERTIFICATE HOLDER

Pan American Engineers, LLC

P.O. Box 8599

Alexandria, La. 71306

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, IT'S AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

ABC Agency

ACORD 25-S (1/95) Certificate #

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

SUPPLEMENTARY CONDITIONS

EXHIBIT B

DUTIES, RESPONSIBILITIES AND LIMITATIONS OF
AUTHORITY OF PROJECT REPRESENTATIVE

EXHIBIT B

Duties, Responsibilities and Limitations of Authority of Project Representative

ENGINEER shall furnish a Project Representative (“PR"), assistants and other field staff to assist ENGINEER in observing progress and quality of the work of CONTRACTOR.

Through more extensive on-site observations of the Work in progress and field checks of materials and equipment by the PR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the work of CONTRACTOR. However, ENGINEER shall not, during such visits or as a result of such observations of CONTRACTOR's work in progress, supervise, direct, or have control over CONTRACTOR's work nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures selected by CONTRACTOR, for safety precautions and programs incident to the work of CONTRACTOR, for any failure of CONTRACTOR to comply with laws, rules, regulations, ordinances, codes or orders applicable to CONTRACTOR's performing and furnishing the work, or responsibility of construction for CONTRACTOR's failure to furnish and perform the Work in accordance with the Contract Documents.

The duties and responsibilities of the PR are limited to those of ENGINEER in ENGINEER's agreement with the OWNER and in the construction Contract Documents, and are further limited and described as follows:

A. General

PR is ENGINEER's agent at the Site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding PR's actions. PR's dealings in matters pertaining to the on-site Work shall in general be with ENGINEER and CONTRACTOR, keeping OWNER advised as necessary. PR's dealings with Subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. PR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

B. Duties and Responsibilities of PR

1. *Schedules:* Review the progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. *Liaison:*

   a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist in understanding the intent of Contract Documents; and assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.

   b. Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.

4. *Shop Drawings and Samples:*

a. Record date of receipt of Shop Drawings and Samples.

b. Receive Samples, which are furnished at the Site by CONTRACTOR, and notify ENGINEER of availability of Samples for examination.

c. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or Sample if the submittal has not been approved by ENGINEER.

5. *Review of Work, Rejection of Defective Work, Inspections and Tests:*

a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.

b. Report to ENGINEER whenever PR believes that any Work will not produce a completed Project that conforms generally to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of Work that PR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

c. Verify that tests, equipment and systems start-ups and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record and report to ENGINEER appropriate details relative to the test procedures and start-ups.

d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

6. *Interpretation of Contract Documents:* Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.

7. *Modifications:* Consider and evaluate CONTRACTOR's suggestions for modifications in Drawings or Specifications and report with PR's recommendations to ENGINEER. Transmit to CONTRACTOR in writing decisions as issued by ENGINEER.

8. *Records:*

a. Maintain at the job Site orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, reproductions of original Contract Documents including all Work Change Directives, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing submittals received from and delivered to CONTRACTOR and other Project related documents.

b. Prepare a daily report or keep a diary or log book, recording CONTRACTOR's hours on the job site, weather conditions, data relative to questions of Work Change Directives, Change Orders or changed conditions, list of job Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER.

c. Record names, addresses and telephone numbers of all contractors, subcontractors and major suppliers of materials and equipment.

9. *Reports:*

a. Furnish to ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

b. Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.

c. Draft proposed Change Orders and Work Change Directives, obtaining backup material from CONTRACTOR and recommend to ENGINEER Change Orders, Work Change Directives, and Field Orders.

d. Report immediately to ENGINEER and OWNER the occurrence of any accident.

10. *Payment Requests:* Review Applications for Payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the Site but not incorporated in the Work.

11. *Certificates, Maintenance and Operation Manuals:* During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for the Work.

12. *Completion:*

a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.

b. Observe whether CONTRACTOR has had performed inspections required by laws, rules, regulations, ordinances, codes, or orders applicable to the Work, including but not limited to those to be performed by public agencies having jurisdiction over the Work.

c. Conduct a final inspection in the company of ENGINEER, OWNER and CONTRACTOR and prepare a final list of items to be completed or corrected.

d. Observe whether all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance and issuance of the Notice of Acceptability of the Work.

C. Limitations on Authority of PR

Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items), unless authorized by ENGINEER.

2. Shall not exceed limitations of ENGINEER's authority as set forth in the Agreement or the Contract Documents.

3. Shall not undertake any of the responsibilities of CONTRACTOR, Subcontractor, Suppliers, or CONTRACTOR's superintendent.

4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

5. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.

6. Shall not accept Shop Drawing or Sample submittals from anyone other than CONTRACTOR.

7. Shall not authorize OWNER to occupy the Project in whole or in part.

8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by ENGINEER.

(THIS FORM RESOLUTION, OR OTHER SIMILAR WRITTEN EVIDENCE OF AUTHORITY, IS REQUIRED TO BE SUBMITTED WITH BID (SEE INSTRUCTIONS TO BIDDERS – ARTICLE 12.2)

SECTION 00900

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF _____, INCORPORATED.

AT THE MEETING OF DIRECTORS OF _____,INCORPORATED, DULY NOTICED AND HELD ON _____, _____, A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT WAS:

RESOLVED THAT _____, BE AND IS HEREBY APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS AND TRANSACTIONS WITH THE AVOYELLES PARISH POLICE JURY, THE GOVERNING AUTHORITY OF THE AVOYELLES PARISH POLICE JURY OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO THE EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE AND RECEIPT THEREFOR ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING AND ACCEPTING EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF AN EXCERPT OF THE MINUTES OF THE ABOVE DATED MEETING OF THE BOARD OF DIRECTORS OF SAID CORPORATION, AND THE SAME HAS NOT BE REVOKED OR RESCINDED.

_____
SECRETARY-TREASURER

_____
DATE

(NOT REQUIRED TO BE SUBMITTED WITH BID)
SUBMIT BY THE LOW BIDDER WITHIN 10 DAYS AFTER BID OPENING

SECTION 00910

ATTESTATIONS/AFFIDAVITS

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX
NAME OF PROJECT

Before me, the undersigned notary public, duly commissioned and qualitied in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

L.R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

(a) Public bribery (L.R.S. 14:118)
(b) Corrupt influencing (L.R.S. 14:120)
(c) Extortion (L.R.S. 14:66)
(d) Money laundering (L.R.S. 14:230)

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

(a) Theft (L.R.S. 14:67)
(b) Identity Theft (L.R.S. 14:67.16)
(c) Theft of a business record (L.R.S.14:67.20)
(d) False accounting (L.R.S. 14:70)
(e) Issuing worthless checks (L.R.S. 14:71)
(f) Bank fraud (L.R.S. 14:71.1)
(g) Forgery (L.R.S. 14:72)
(h) Contractors; misapplication of payments (L.R.S. 14:202)
(i) Malfeasance in office (L.R.S. 14:134)

L.R.S. 38:2212.10 VERIFICATION OF EMPLOYEES

A. Appearer is registered and participates in a status verification system to verify that all employees in the state of Louisiana are legal citizens of the United States or are legal aliens.

B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.

C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

(NOT REQUIRED TO BE SUBMITTED WITH BID)
SUBMIT BY THE LOW BIDDER WITHIN 10 DAYS AFTER BID OPENING

L.R.S. 23:1726(B) CERTIFICATION REGARDING UNPAID WORKERS COMPENSATION INSURANCE

A. L.R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.

B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the bidding/proposing entity.

LA R.S. 38:2216.1 PROHIBITION OF CONTRACTS WITH COMPANIES THAT DISCRIMINATE AGAINST FIREARM AND AMMUNITION INDUSTRIES

A. R.S. 38:2216.1 prohibits public entities from entering into or renewing contracts valued at $100,000 or more, funded primarily with public money, with for-profit companies of fifty or more employees that discriminate against firearm entities or firearm trade associations.

B. By signing this bid/proposal, Affiant certifies:

(1) Affiant does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association based solely on the entity's or association's status as a firearm entity or firearm trade association.

(2) Affiant will not discriminate against a firearm entity or firearm trade association during the term of the contract based solely on the entity's or association's status as a firearm entity or firearm trade association.

_____ _____
NAME OF BIDDER NAME OF AUTHORIZED SIGNATORY OF BIDDER

_____ _____
DATE TITLE OF AUTHORIZED SIGNATORY OF BIDDER

_____
SIGNATURE OF AUTHORIZED
SIGNATORY OF BIDDER

WITNESSES:

_____

_____

Sworn to and subscribed before me this _____ day of _____, 202___

_____
Notary Public

(NOT REQUIRED TO BE SUBMITTED WITH BID)
SUBMIT BY THE LOW BIDDER WITHIN 10 DAYS AFTER BID OPENING

LA R.S. 38:2224 CONTRACTOR NON-COLLUSION AFFIDAVIT

STATE OF LOUISIANA

PARISH OF _____

BE IT KNOWN, that on this _____day of _____, 20_____, before me the undersigned Notary Public, duly commissioned and qualified, within and for the Parish of _____ _____, State of Louisiana, personally came and appeared _____, as the duly authorized agent of _____, who after being by me first duly sworn, did depose and say:

That _____ has/have been selected as Contractor for the PROJECT NAME: _____ and that affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course or their duties for affiant; and

That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

APPEARER FURTHER DECLARES, that they will, in all respects, comply with the public contract laws of the State of Louisiana, including Title 38 of the Louisiana Statutes, and particularly Section 2224, as amended, of such Title 38 of the Louisiana Revised Statutes.

WITNESSES:

_____

_____ BY: _____

Sworn to and subscribed before me this _____day of _____, 20___.

_____
Notary Public

Pan American Engineers, LLC
2025

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

BASE BID
TECHNICAL SPECIFICATIONS

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

DIVISION 1 - GENERAL PROVISIONS

Section 01010 - SUMMARY OF WORK
Section 01011 - DRAWINGS
Section 01015 - GENERAL CONDUCT OF WORK
Section 01016 - PROTECTION OF EXISTING UTILITIES
Section 01030 - SPECIAL PROJECT PROCEDURES
Section 01090 - ABBREVIATIONS
Section 01150 - MEASUREMENT AND PAYMENT
Section 01300 - CONSTRUCTION PROGRESS AND SCHEDULES
Section 01330 - SURVEY DATA
Section 01340 - SHOP DRAWINGS, SAMPLES AND PRODUCT DATA
Section 01400 - MOBILIZATION
Section 01435 - GEOTECHNICAL INVESTIGATION REPORT
Section 01500 - TEMPORARY FACILITIES
Section 01560 - MAINTENANCE OF WORK SITE
Section 01700 - CONTRACT CLOSEOUT
Section 01710 - CLEANING
Section 01720 - RECORD DRAWINGS
Section 01730 - OPERATION AND MAINTENANCE MANUALS
Section 01740 - WARRANTIES AND BONDS

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 Scope: This Section describes the location of the project site and the work to be performed.

1.2 Description of Site: The project site is located at 5197 LA Hwy 115, Bunkie, Louisiana 71322.

1.3 Work to Be Performed: The Avoyelles Parish Police Jury is soliciting bids for the following work at the project site:

Base Bid: Demolition of minor items including aggregate drive, trees, stumps, existing drainage pipe, etc. and the construction/installation of a 4-ballfield complex including required erosion controls, earthen cut/fill, subsurface drainage, brick backstop walls, tension backstop netting systems, turf curbs, dugouts, bleacher canopies, vinyl coated chain link fence and gates, synthetic turf infield and play area systems, field amenities, ballfield lighting, scoreboards, site utilities/extensions, concrete walks, topsoil placement, site grading, edge sodding, sodding, outfield sprigging and irrigation, hydroseeding, etc.

Alternate No. 1: Deletion of synthetic turf play area in common area between ballfields and construction/installation of concessions/restrooms complete including foundation, building, utility connections, mechanical, electrical, plumbing, lighting, downspout subsurface drainage and connections, perimeter concrete walk, HVAC chain link fence and gate and wastewater treatment plant system with utility extensions/connections and perimeter fence and gates.

Alternate No. 2: Installation of aluminum angle frame bleacher assemblies at each field (two (2) assemblies per field (8 total)).

All as indicated within the Bidding Documents dated November 2025.

1.4 Coordination of Work with Adjacent Project: It is anticipated that two (2) separate projects will be under construction at the same time on this general site, the educational project (Avoyelles Parish School Board project) on the western portion of the site closest to LA Hwy 115 and the recreational project (Avoyelles Parish Police Jury (THIS) project) on the eastern portion of the site farthest from LA Hwy 115. The limits of the educational project are as noted on the Plan sheets within the Construction Drawings. Both projects are anticipated to utilize the single aggregate access drive connecting to LA Hwy 115 near the northwest portion of the site as noted on the Site Access and Demolition Plan. The CONTRACTOR for THIS project should anticipate working in close proximity to the contractor for the adjacent project, in addition to sharing the access road as required for the duration of THIS project.

1.5 Drawings and Specifications:

A. Specifications: The Technical Specifications consist of three parts: General, Products and Execution. The General Part contains general requirements which govern the work. The Products and Execution Parts modify and supplement these by detailed requirements of the work and shall always govern whenever there appears to be a conflict.

B. Intent:

1. All work called for in the Specifications applicable to the Contract but not shown on the Drawings or vice versa shall be of like effect as if shown or mentioned in both. Work not specified in either the Drawings or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the work is required and shall be performed by the CONTRACTOR as though it were specifically delineated or described.

2. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

C. Conflict Between Drawings and Specifications: Where an obvious conflict exists between the Drawings and Specifications, the ENGINEER shall decide which governs and the CONTRACTOR shall comply with the decision. Such decision shall not be grounds for additional payment to the CONTRACTOR, i.e. the CONTRACTOR shall include the price of the more expensive alternative in his bid.

1.6 Building Permit: The CONTRACTOR is responsible for obtaining and paying for all local building permits and fees as required for this project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 General: Perform all work within the limits indicated on the Drawings and described herein, all to the ENGINEER'S and OWNER'S satisfaction.

- END OF SECTION -

SECTION 01011

DRAWINGS

PART 1 - GENERAL

1.1 Scope: This Section describes each sheet of the Drawings prepared for this project.

1.2 Drawings: The Drawings referred to in the Contract Documents bears the title:

CONSTRUCTION PLANS

FOR

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

and are numbered and designated as follows:

Sheet No.	Description
BASE BID*	
C1	Title Sheet
C2	Topographic Survey
C3	Access and Demolition Plan
C4	Erosion Control Plan
C5	Site Plan
C6	Grading Plan
C7	Drainage Plan
C8	Utility Plan
C9	Irrigation Plan
C10*	Typical Ballfield Layout
C11	Ballfield Details
C12*	Bleacher and Canopy Details
C13	Canopy Structural Details
C14	Backstop Wall Detail
C15	Backstop Net Detail
C16	Synthetic Details
C17	Synthetic Turf Details
C18	Erosion Control Details
C19	Site Details
C20	Drainage Details
C21	Water Details
C22	Water Details
C23	Irrigation Details
C24	Sewer Details
C25	Chain Link Fence Detail
SE1	Electrical Site Plan

* Aluminum angle framed bleacher assemblies included in Alternate No. 2

ALTERNATE NO. 1

A1	Foundation and Framing
A2	Plans, Elevations and Details
A3	Sections and Details
A4	Schedules and Details
P1	Plumbing Plan
M1	Mechanical Plan
E1	Electrical Plan
TP1	Wastewater Treatment Plant

P.A.E. Job No. 12719, Drawing No. 14672, dated November 2025.

1.3 Drawings and Specifications Issued to Successful Bidder: The successful Bidder for this Contract will be furnished five (5) complete sets of Drawings and Specifications at no cost. If, during the prosecution of the work the CONTRACTOR should deem it necessary to have additional sets of Drawings and Specifications they may be purchased from the ENGINEER at the cost of reproduction.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 The WORK shall conform to the Drawings and Specifications prepared by the ENGINEER. The WORK shall conform to such other Drawings relating to the project as may be exhibited by the OWNER and the ENGINEER prior to the opening of proposal and which are included with the above Drawings and Specifications for the CONTRACTOR'S use in making his bid. The WORK shall also conform to such Drawings and Specifications as may be furnished from time to time during construction, including changes of detail as the ENGINEER may consider necessary because of conditions that are found to exist during construction.

- END OF SECTION -

SECTION 01015

GENERAL CONDUCT OF WORK

PART 1 - GENERAL

1.1 Scope: This Section generally describes the manner in which work shall be conducted.

1.2 Coordination of Work: The CONTRACTOR shall be responsible for the coordination of all work so that the project can be completed within the time stipulated in the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Handling and Storage:

A. The CONTRACTOR shall, at his own expense, handle, haul, and distribute all materials and all surplus materials for the different portions of the work, as necessary. He shall provide suitable and adequate storage room for materials and equipment during the progress of the work and be responsible for loss, or damage to, materials and equipment furnished by him, until the final acceptance of work.

B. All excavated materials, construction equipment, materials and equipment to be incorporated in the work shall be placed so as not to injure the work and so that free access can be had at all times to all parts of the work and to all public utility installations in the vicinity of the work.

C. Storage charges and demurrage charges by transportation companies and vendors, which result from delays in handling, shall be borne by the CONTRACTOR.

3.2 Work on State Highways and Rights-of-Way: (NONE REQUIRED THIS PROJECT)

3.3 Work on Railroad Rights-of-Way: (NONE REQUIRED THIS PROJECT)

3.4 Work on Gas Line Rights-of-Way: (NONE REQUIRED THIS PROJECT)

3.5 Sequence of Work: The WORK shall be carried on in such a manner and in a sequence designed so that work performed during each day shall be cleaned and neatly dressed at the end of that day. The WORK in any one area will be carried out so that interruption or access to and from homes and businesses will be minimized; and so that access to the area for pedestrians, fire protection and other vital services can be maintained at least on a limited basis. The OWNER may order a change in the sequence of the work if it is found that the circumstance of the construction operation, a section of the public or private thoroughfare will be blocked off or unduly inconvenienced. The CONTRACTOR will not be allowed to obstruct private driveways

or approaches or to dig up or occupy public streets and highways with the materials more than is absolutely necessary for the prosecution of the work.

3.6 Layout of Work: The CONTRACTOR shall lay out his work and shall be responsible for all measurements in connection therewith. All detailed construction surveys and aids such as cut stakes, batter boards, etc., shall be developed or provided by the CONTRACTOR. The CONTRACTOR shall verify all grades, lines, levels and dimensions shown on the Drawings or Specifications and report any errors or inconsistencies to the ENGINEER before commencing work.

3.7 Phasing of Work: Refer to Paragraph 1.4 of Section 01010 – Summary of Work.

3.8 Existing Utilities: See Specification Section 01016 - Protection of Existing Utilities.

3.9 Private Property: The CONTRACTOR will at no time use or occupy private property which falls outside of the rights-of-way or servitudes without obtaining authority independently from respective owners. CONTRACTOR shall remove all trash, debris, spoil, etc. that may be left or result from construction and shall not dispose of or leave said material on private property in the general vicinity of the project.

3.10 Preservation of Fences and Existing Vegetation: The CONTRACTOR will preserve and protect all fences and existing vegetation such as trees, shrubs, and grass on or adjacent to the site which do not unreasonably interfere with the construction as may be determined by the ENGINEER. The CONTRACTOR will be responsible for all unauthorized cutting or damaging of fences and trees and shrubs, including damage due to careless operation of equipment. Care will be taken by the CONTRACTOR in cutting fences and in falling trees authorized for removal to avoid any unnecessary damage to fences and vegetation that are to remain in place. Any limbs or branches of trees broken during such operations shall be trimmed with a clean cut and painted with an approved tree pruning compound if required by the ENGINEER. The CONTRACTOR will be liable for and will be required to replace or restore at his own expense all fences and vegetation not protected and preserved as required herein that may be destroyed or damaged. In residential areas, lawns shall be excavated only after the sod or turf has been carefully removed before commencement of trenching operations. Sod or turf will be wetted as required and stored until backfill is complete. Upon completion of backfill the turf and fences shall be replaced in a strictly neat and workmanlike manner, and lawn areas shall be restored as near as possible to their original condition prior to excavation.

3.11 Removal of Ground Water: Any pumping or bailing required to construct the WORK will be done at no extra cost to the OWNER.

- END OF SECTION -

SECTION 01016

PROTECTION OF EXISTING UTILITIES

PART 1 - GENERAL

1.1 Scope: This Section describes the work required to allow for the location and protection of existing underground utilities in the project work area.

1.2 General: The locations of existing underground utilities shown on the Drawings are approximate. The location of the existing utilities shown on the Drawings have, in part, been determined by information compiled and furnished by others.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 General: It shall be the responsibility of the CONTRACTOR to locate all underground utilities that may conflict with the proposed work. The CONTRACTOR shall be responsible for repairing all damage to underground utilities as a result of construction activities, at no cost to the OWNER. The CONTRACTOR shall contact Louisiana One Call by phone at 811 or at 1-800-272-3020 so that those utilities who participate in the Louisiana Once Call System may mark the field locations of their underground facilities. CONTRACTOR shall also contact owners of other underground facilities that may be affected for information as to their location.

3.2 Existing Utilities: The WORK will be located in the vicinity of existing water, sewer, gas, telephone and electric lines. The CONTRACTOR shall handle his work in a manner so as not to damage the existing utilities. The CONTRACTOR shall support by shoring, ties, or other means, the existing lines as necessary to prevent damage to them; and shall be responsible for any damage his work does to them. The CONTRACTOR shall repair or pay for any repairs to them occasioned by damage done to them by his work. The CONTRACTOR shall notify the proper office when his work is near their facilities so that they may send persons to advise about the work which may affect their facilities. It will be the CONTRACTOR'S responsibility to locate the utilities in advance of his work, and plan his work ahead so as to best carry on his work in a manner to insure no damage to the existing facilities.

3.3 Owner’s Utilities: The City of Pineville/Ward 9 Recreation District is the owner of the existing water and sewer mains and secondary electric lines and can assist in identifying the locations of the existing utilities; however, exact locations may not be able to be determined in all instances. The CONTRACTOR should anticipate that conflicts with existing water, sewer and electric facilities will occur. As such, the CONTRACTOR should include in his base bid, any and all costs related to these conflicts including down time, lack of production, repair costs, disinfection costs, etc.

3.4 Test Pits: Test pits for the purpose of locating existing underground utilities shall be excavated and backfilled in accordance with Section 02222 - Test Pits.

- END OF SECTION -

SECTION 01030

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.1 Scope: This section covers procedures which are special or specific to this project.

1.2 Workmanship, Material and Equipment:

A. When a particular product is specified or called for, it is intended and shall be understood that the CONTRACTOR include those products in his Bid. Should the CONTRACTOR desire to substitute products which he purports to be equal to those specified, the CONTRACTOR shall furnish information as described in the General Conditions and Instruction to Bidders. The alternative product(s) submitted by the CONTRACTOR shall meet the requirements of the specifications and shall, in all respects, be equal to the products specified by name herein.

B. All apparatus, mechanism, equipment, machinery and manufactured articles for incorporation into the WORK shall be new and unused and the standard products of recognized reputable manufacturers.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION-

SECTION 01090

ABBREVIATIONS

PART 1 - GENERAL

1.1 Scope: To identify abbreviations and acronyms used in Contract Documents as referenced standards.

1.2 Quality Assurance:

A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes establish stricter standards.

B. Publication Date: Use the publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified. The revision in effect on the date of Contract Documents will be deemed the necessary and proper standard.

1.3 Abbreviations, Names, and Addresses of Organizations:

A. The following standards are referenced in the Contract Documents. The CONTRACTOR shall obtain copies of reference standards directly from the publication source when needed for proper performance of Work or when required for submittal by Contract Documents.

B. Abbreviation used in these Contract Documents shall refer to and designate the following:

ABBREVIATION	NAME AND ADDRESS	PHONE FAX WEB OR E-MAIL
AA	Aluminum Association 1400 Crystal Dr. Arlington, VA 22202	703-358-2960 www.aluminum.org
AABC	Associate Air Balance Council 2401 Pennsylvania Ave. N.W., Ste. 330 Washington, DC 20037	202-737-0202 info@aabc.com
AASHTO	American Association of State Highway & Transportation Officials 555 12th St. NW, Ste. 1000 Washington, DC 20004	202-624-5800 info@aashto.org

ACI	American Concrete Institute 38800 Country Club Dr. Farmington Hills, MI 48331	248-848-3700 www.aci-int.net
ACPA	American Concrete Pipe Association 5605 N. MacArthur Blvd., Ste. 340 Irving, TX 75038	972-506-7216 972-506-7682 info@concretepipe.org
ADA	Air Duct Council 1901 N. Roselle Rd. Schaumburg, IL 60195	847-706-6750 847-706-6751 info@flexibleduct.org
AF&PA	American Forest & Paper Association 1101 K St. N.W., Ste. 700 Washington, DC 20005	202-463-2700 202-463-2785 info@afandpa.org
AGC	Associated General Contractors of America 2300 Wilson Blvd., Ste. 300 Arlington, VA 22201	703-548-3318 703-548-3119 www.agc.org
AGMA	American Gear Manufacturers Association 1001 Fairfax St., Ste. 500 Alexandria, VA 22314-1587	703-684-0211 703-684-0242 website@agma.org
AI	Asphalt Institute 2696 Research Park Dr. Lexington, KY 40511-8480	859-288-4960 info@asphaltinstitute.org
AIA	American Institute of Architects 1735 New York Ave., N.W. Washington, DC 20006	202-626-7300 202-626-7547 www.aiaonline.com
AISC	American Institute of Steel Construction 130 E. Randolph, Ste. 2000 Chicago, IL 60601	312-670-2400 312-670-5403 www.aisc.org
AISI	American Iron & Steel Institute 25 Massachusetts Ave. N.W., Ste. 800 Washington, DC 20001	202-452-7100 202-463-6573 www.steel.org

AITC	American Institute of Timber Construction 6980 S.W. Varns Tigard, OR 97223	503-639-0651 303-792-0669 webmaster@wclib.org
AMCA	Air Movement and Control Association International, Inc. 30 West University Dr. Arlington Heights, IL 60004-1893	847-394-0150 847-253-0088 communitcation@amca.org
ANLA	American Nurserymen & Landscape Association 525 9th St. N.W., Ste. 800 Washington, DC 20004	202-789-2900 202-789-1893 hello@anmericanhort.org
ANSI	American National Standards Institute 25 W. 43rd St., 4th Floor New York, NY 10036	212-642-4900 212-398-0023
APA	APA - The Engineered Wood Association 7011 S. 19th St. Tacoma, WA 98466-5333	253-565-6600 253-565-7265
ARI	Air-Conditioning & Refrigeration Institute 2311 Wilson Blvd., Ste. 400 Arlington, VA 22201	703-524-8800 703-562-1942 www.ari.org
ASCE	American Society of Civil Engineers 1801 Alexander Bell Dr. Reston, VA 20191-4400	800-548-2723 703-295-6300 www.asce.org
ASHRAE	American Society of Heating, Refrigerating & Air Conditioning Engineers 1791 Tullie Cir., N.E. Atlanta, GA 30329	800-527-4723 404-321-5478 www.ashrae.org
ASME	American Society of Mechanical Engineers Three Park Ave. New York, NY 10016-5990	212-591-7722 212-591-7674 www.asme.org
ASPA	American Sod Producers Association 1855-A Hicks Rd. Rolling Meadows, IL 60008	

ASTM	American Society for Testing & Materials 100 Barr Harbor Dr. W. Conshohocken, PA 19428	610-832-9500 610-832-9555 www.astm.org
AWI	Architectural Woodwork Institute 1952 Isaac Newton Square W. Reston, VA 20190	571-323-3636 www.awinet.org
AWPA	American Wood Preservers' Association P. O. Box 361784 Birmingham, AL 35236-1784	205-733-4077 205-733-4078 www.awpa.com
AWS	American Welding Society 8669 N.W. 36th St., #130 Miami, FL 33166-6672	800-443-9353 www.aws.org
AWWA	American Water Works Association 6666 West Quincy Ave. Denver, CO 80235	303-794-7711 303-347-0804 www.awwa.org
BIA	Brick Institute of America 12007 Sunrise Valley Dr., Ste. 430 Reston, VA 20191	703-620-0010 703-620-3928 gobrick.com
CDA	Copper Development Association, Inc. 7918 Jones Branch Dr., Ste. 300 McLean, VA 22102	212-251-7200 703-506-3266 www.copper.org
CLFMI	Chain Link Fence Manufacturers Institute 10015 Old Columbia Rd., Ste. 8215 Columbia, MD 21046	301-596-2583 301-596-2594 www.chainlinkinfo.org
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Rd. Schaumburg, IL 60173-4758	847-517-1200 847-517-1206 www.crsi.org
CSI	Construction Specifications Institute 123 N. Pitt St., Ste. 450 Alexandria, VA 22314	800-689-2900 csiresources.org

CSSB	Cedar Shake & Shingle Bureau P.O. Box 1178 Sumas, WA 98295	604-820-7700 604-820-0266 www.cedarbureau.org
DHI	Door & Hardware Institute 2001 K St. N.W. Washington, DC 20006	202-367-1134 202-367-2134 www.dhi.org
DIPRA	Ductile Iron Pipe Research Association P. O. Box 190306 Birmingham, AL 35219	205-402-8700 www.dipra.com
EJCDC	Engineers' Joint Contract Documents Committee American Consulting Engineers Council 1015 15th St., N.W., #802 Washington, DC 20005-2279	202-347-7474 202-898-0068 acec.org
FGMA	Flat Glass Marketing Association 3310 S.W. Harrison St. Topeka, KS 66611-2279	
FM Global	FM Global - Corporate Headquaters 270 Central Ave. Johnston, RI 02919	401-275-3000 401-275-3029 www.fmglobal.com
GSA	GSA, Federal Supply Service Specification Section 470 E. L'Enfant Plaza, S.W., Ste. 8100 Washington, DC 20407	202-619-8925 202-619-8978
Gypsum	Gypsum Association 962 Wayne Ave., Ste. 620 Silver Spring, MD 201910	301-277-8686 301-277-8747 www.gypsum.org
ICBO	International Conference of Building Officials 5360 Workman Mill Rd. Whittier, CA 90601	562-699-0541 562-692-3853 www.icbo.org
IEEE	Institute of Electrical & Electronics Engineers 3 Park Ave., Ste. 620 Silver Spring, MD 20910	212-419-7900 212-752-4929 www.ieee.org

IMIAC	International Masonry Industry All-Weather Council - International Masonry Institute 17101 Science Dr. Bowie, MD 20715	301-280-1302 301-261-2855 www.imiweb.org
LDOTD	Louisiana Department of Transportation and Development 1201 Capital Access Rd. Baton Rouge, LA 70802	225-379-1232 www.dotd.state.la.us
MBMA	Metal Building Manufacturer's Association 1300 Sumner Ave. Cleveland, OH 44115-2851	216-241-7333 216-241-0105 www.mbma.com
MFMA	Maple Flooring Manufacturer's Association 1425 Tri State Pkwy., Ste. 110 Gurnee, IL 60031	888-480-9138 www.maplefloor.org
MIL	Military Specification Naval Publications & Forms Center 5801 Tabor Ave. Philadelphia, PA 19120	215-697-3321 215 -697-4834
ML/SFA	Metal Lath/Steel Framing Association 221 N. Lasalle St. Chicago, IL 60601	312-346-1862
NAAMM	National Association of Architectural Metal Manufacturers 800 Roosevelt Rd., Bldg. C, Ste. 312 Glen Ellen, IL 60137	630-942-6591 630-790-3095
NCMA	National Concrete Masonry Association 13750 Sunrise Valley Dr. Herndon, VA 20171	703-713-1900 703-713-1910 www.ncma.org
NCSCI	National Center for Standards & Certification Information National Institute of Standards & Technology 100 Bureau Dr., Stop 2150 Gaithersburg, MD 20899-2150	301-975-2000 nist.gov

NEBB	National Environmental Balancing Bureau 8575 Grovemont Cir. Gaithersburg, MA 20877	301-977-3698 301-977-9589 www.nebb.org
NEMA	National Electrical Manufacturer's Association 1300 N. 17th St., Ste. 1847 Arlington, VA 22209	703-841-3200 www.nema.org
NFPA	National Fire Protection Association 1 Battery March Park Quincy, MA 02169	800-344-3555 www.nfpa.org
NSPE	National Society of Professional Engineers 1420 King St. Alexandria, VA 22314-2794	800-344-3555 www.nspe.org
NTMA	National Terrazzo & Mosaic Association 209 N. Crockett St., Ste. 2 Fredricksburg, TX 78624	800-323-9736 888-362-2770 www.ntma.com
PCA	Portland Cement Association 5420 Old Orchard Rd. Skokie, IL 60077	800-868-6733 847-966-9666 www.portcement.org
PCI	Precast/Prestressed Concrete Institute 8770 W. Bryn Mawr Ave., Ste. 1150 Chicago, IL 60631	312-786-0300 www.pci.org
RCSHSB	Red Cedar Shingle & Handsplit Shake Bureau P. O. Box 1178 Somas, WA 98295	604-820-7700 604-820-026 cedarbureau.org
RIS	Redwood Inspection Service 1500 S.W. First Ave., Ste. 870 Portland, OR 97201	503-224-3930 503-224-3935 wwpa.org
SDI	Steel Door Institute 30200 Detroit Rd. Cleveland, OH 44145-1967	440-899-0010 440-892-1404 www.steeldoor.org
SDI	Steel Deck Institute P. O. Box 426 Glenshaw, PA 15116	412-487-3325 412-487-3326 www.sdi.org

SIGMA	Sealed Insulating Glass Manufacturers Association 1900 E. Golf Rd., Ste. 1250 Schaumburg, IL 60193	847-303-5664 www.sigmaonline.org
SJI	Steel Joist Institute 140 W. Evans St., Ste. 203 Florence, SC 29501	843-407-4091 www.steeljoist.org
SMACNA	Sheet Metal & Air Conditioning Contractors National Association 4201 Lafayette Center Dr. Chantilly, VA 20151-1209	703-803-2980 703-803-3732 www.smacna.org
SSPC	Steel Structures Painting Council 800 Trumball Dr. Pittsburg, PA 15205	412-281-2331 www.sspc.org
SWANA	Solid Waste Association of North America 1100 Wayne Ave., Ste. 650 Silver Spring, MO 20910	800-467-9262 301-589-7068 swana.org
TCA	Tile Council of America, Inc. 100 Clemson Research Blvd. Anderson, SC 29625	864-646-8453 864-646-2821 tcnatile.com
UL	Underwriter's Laboratories, Inc. 333 Pfingsten Rd. Northbrook, IL 60062-2096	847-272-8800 www.ul.com
UNI-BELL	Uni-Bell PVC Pipe Association 201 E. John Carpenter Freeway, Ste. 750 Irving, TX 75062	972-243-3902 972-243-3907 unibell.org
WCLIB	West Coast Lumber Inspection Bureau 6980 S.W. Varns Road, Box 23145 Tigard, OR 97223	503-639-0651 www.wclib.org
WWPA	Western Wood Products Association 1500 S.W. First Ave., Ste. 870 Portland, OR 97201	503-224-3930 503-224-3934 www.wwpa.org

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01150

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 Scope: This Section defines the means by which the Contract Bid items will be measured for payment. This project is a LUMP SUM Job. CONTRACTOR's Partial Pay Estimates will be based upon estimated percent of actual field work completed and accepted by the ENGINEER for the established Schedule of Value (SOV) items at the time the CONTRACTOR's partial pay estimate is submitted for approval.

The LUMP SUM price included in the Bid Form shall constitute full compensation for all work, labor, materials, tools, equipment and incidentals necessary to complete the items to be performed under this Contract, as shown on the DRAWINGS, as specified and or as directed by the ENGINEER. .

1.2 Definitions: For listed quantities throughout the Contract Documents, the following abbreviations shall have the following definitions:

C.Y.	Cubic Yard or Yards
Ea. or EA.	Each
L.F.	Linear Foot or Feet
L.S.	Lump Sum
S.F.	Square Foot or Feet
S.Y.	Square Yard or Yards

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01300

CONSTRUCTION PROGRESS AND SCHEDULES

PART 1 - GENERAL

1.1 Scope: This Section covers the establishment of a Pre-Construction Conference to discuss matters relating to the construction of the project prior to actual construction.

1.2 Pre-Construction Conference:

A. Prior to issuance of the Notice to Proceed for the work, a conference will be held to review the proposed construction schedule, to establish procedures for handling vendor drawings and other submissions, for processing applications for payment and to establish a working understanding between the parties as to the project.

B. Present at the Pre-Construction Conference will be the ENGINEER, the ENGINEER'S Project Representative, the CONTRACTOR and his Superintendent, and a Representative of the OWNER.

C. Submission of a detailed schedule indicating starting and completion dates of various stages of the work shall be prepared in accordance with Paragraph 2.5 and 2.7 of the EJCDC General Conditions of the Construction Contract. This progress schedule shall be approved by the ENGINEER prior to beginning work.

1.3 Submittals: CONTRACTOR shall submit the detailed schedule, prepared in accordance with Paragraphs 2.5 and 2.7 of the EJCDC General Conditions, indicating starting and completion dates of the various stages of the work.

1.4 Notice to Proceed: The OWNER will submit to the CONTRACTOR a written Notice to Proceed, stating a date on which the CONTRACTOR shall start the work. Contract time shall commence on the date specified in the Notice to Proceed.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01330

SURVEY DATA

PART 1 - GENERAL

1.1 Scope: This Section covers the extent of survey data that will be available to the CONTRACTOR during the project and the requirements for construction layout.

1.2 Information Provided by the Engineer:

A. The ENGINEER shall establish two (2) temporary bench marks (TBM's) for vertical control.

1.3 Lines, Grades and Measurements:

A. The CONTRACTOR is responsible for all horizontal and vertical control.

B. The CONTRACTOR shall be responsible for installing the improvements to the grades and alignment and within the sites as shown on the Drawings.

C. All construction surveys and aids such as construction stakes, batter boards, etc., shall be developed or provided by the CONTRACTOR.

D. The accuracy of any method of staking shall be the responsibility of the CONTRACTOR.

E. The CONTRACTOR shall make measurements and check all dimensions necessary for the proper construction of the work. During the prosecution of the work, he shall make all necessary measurements to prevent misfitting in said work, and he shall be responsible thereof, and for the accurate construction of the work.

F. The CONTRACTOR shall be responsible for the preservation of all stakes and marks. If any stakes are disturbed, the CONTRACTOR shall not proceed with work until he has reestablished such points, marks, lines and elevations as may be necessary for the prosecution of the work. The reference marks shall be replaced at the CONTRACTOR'S expense if damaged or destroyed.

1.4 Dimensions of Existing Structures: Where the dimensions and locations of existing structures are of critical importance in the installation or connection of new work, the CONTRACTOR shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

1.5 Project Survey Requirements for Installations Within Apparent Rights-of-Way: (NONE REQUIRED THIS PROJECT) The CONTRACTOR shall be responsible for determining the actual or "apparent" rights-of-way of the D.O.T.D. maintained routes and the City/Parish maintained routes, as applicable. The CONTRACTOR shall be responsible for installing the improvements within the distances from the rights-of-way, property lines or baselines as shown on the Drawings, using public records of filing plats, fences, and other monument locations.

1.6 Project Survey Requirements for Installations Within LDOTD Rights-of-Way: (NONE REQUIRED THIS PROJECT)

A. The CONTRACTOR shall provide a Louisiana registered land surveyor to determine and stake the location of the LDOTD rights-of-way prior to construction.

B. The CONTRACTOR shall provide the distance from the highway centerline to the new utility at 100 foot intervals. The CONTRACTOR shall provide top of pipe elevations on the new utility at 100 foot intervals. New mains and service lines crossing the roadways shall be identified and recorded by pipe size, pipe type and distance to nearest intersection. Additionally, the top of pipe elevation of the new mains and service lines crossing existing roadways shall be determined and recorded on both sides of the roadway.

C. The above noted information shall be certified by the land surveyor as to correctness and completeness with a tabulation of elevation locations by station or by notations on a set of Project blueline Drawings noted as “Record Drawings”.

1.7 Submittal: Submit marked “Record Drawings” in accordance with Section 01340 - Shop Drawings, Samples and Project Data.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01340

SHOP DRAWINGS, SAMPLES AND PRODUCT DATA

PART 1 - GENERAL

1.1 Scope: This Section covers the submission and approval of shop drawings, samples, and other relevant product data.

1.2 Materials: Unless otherwise indicated on the Drawings or specified, only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the CONTRACTOR to be incorporated in the work shall be subject to the inspection and approval of the ENGINEER. No material shall be processed for, fabricated for, or delivered to the work without prior approval of the ENGINEER.

1.3 Submission Schedule: The CONTRACTOR shall submit data relating to the materials and equipment he proposes to incorporate into the work, in sufficient detail to enable the ENGINEER to identify the particular product in question and to form an opinion as to its conformity to the contract requirements. Such data shall be submitted in a manner similar to that specified for shop drawings.

1.4 Samples:

A. If the OWNER so requires, either prior to beginning or during the progress of the work, the CONTRACTOR shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the Specifications. Such samples, including concrete test cylinders, shall be furnished, taken, stored, packed, and shipped as directed, at the expense of the OWNER. Except as otherwise specified, the OWNER shall make arrangements for, and pay for, the tests. Any subsequent tests required due to failure of samples to meet specifications shall be at the expense of the CONTRACTOR.

B. When required, the CONTRACTOR shall furnish to the OWNER triplicate sworn copies of manufacturer's shop or mill test (or reports from independent testing laboratories) relative to materials, equipment performance ratings and concrete data.

C. After approval of the samples, data, etc. the materials and equipment used on the work shall correspond therewith.

1.5 Shop Drawings/Submittals:

A. The CONTRACTOR shall submit for approval five (5) print copies of shop drawings of materials fabricated especially for this contract, and of equipment and materials of which such drawings are specifically requested. Two (2) copies will be returned to the CONTRACTOR.

B. Such drawings shall show the principal dimensions, weight, structural and operating features, performance characteristics and wiring diagrams, space required, clearances, type and/or brand of finish or shop coat, grease fittings, etc., depending on the

subject of the drawings. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for this contract.

C. When so specified or if considered by the ENGINEER to be acceptable, manufacturer's specifications, catalog data, descriptive matter, illustrations, etc. may be submitted for approval in place of shop drawings. In such case the requirements shall be as specified for shop drawings, insofar as applicable.

D. No material shall be purchased or fabricated especially for this contract until the requirement shop drawings have been submitted and reviewed as conforming to the contract requirements. All materials and work involved in the construction shall then be as represented by said drawings.

E. Prior to submitting shop drawings to the OWNER, the CONTRACTOR shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the drawings and specifications in all respects.

F. The ENGINEER'S review of shop drawings will follow a general check made to ascertain conformance with the design concept and functional result of the project and compliance with the information given in the contract documents. The CONTRACTOR shall be responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.

G. The CONTRACTOR shall make any corrections required by the ENGINEER and shall return the required number of corrected copies of shop drawings. The CONTRACTOR shall resubmit shop drawings until approved.

H. At the time of each submission or resubmission, the CONTRACTOR shall direct specific attention, in writing, to deviations that the shop drawings or samples may have from the requirements of the contract documents or corrections required by the OWNER on previous submissions.

I. The ENGINEER'S approval of shop drawings and samples shall not relieve the CONTRACTOR from his responsibility for any deviations from the requirements of the contract documents, unless the ENGINEER has been notified, in writing, and has given his written approval to such deviation, nor shall any approval by the ENGINEER relieve the CONTRACTOR from responsibility for errors and omissions in shop drawings.

J. The CONTRACTOR shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by ENGINEER of the necessary Shop Drawings.

K. The CONTRACTOR shall utilize a Sequential Numbering System for submittals (1-999). Resubmittals or confirming material shall be assigned a letter next to the submittal number, i.e., A - second submittal, B - third submittal, etc.

L. Resubmittals will be handled in the same manner as first submittals. The CONTRACTOR shall direct specific attention to revisions other than the corrections

requested by the ENGINEER on previous submissions by written details or markings on the resubmitted Shop Drawings. The CONTRACTOR shall make any corrections required by the ENGINEER.

M. If the CONTRACTOR considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the CONTRACTOR shall give written notice thereof to the ENGINEER.

1.6 Record Documents: Refer to Section 01720 - Record Drawings.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01400

MOBILIZATION

PART 1 - GENERAL

1.1 Scope: This work consists of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; the establishment of all offices, building, and other facilities necessary for work on the project and the costs of bonds and any required insurance, and any other pre-construction expense necessary for the start of the WORK excluding the cost of construction materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01435

GEOTECHNICAL INVESTIGATION REPORT

PART 1 - GENERAL

1.1 Scope: This Section includes the results of a geotechnical investigation of the project site performed by a geotechnical testing laboratory.

1.2 Applicable Publications: A geotechnical investigation was conducted by Geotechnical Testing Laboratory, Inc. of Louisiana for this project entitled "Geotechnical Investigation Services, Recreation Comple – Concessions/Restrooms Building, 5197 LA Highway 115, Bunkie, Avoyelles Parish, Louisiana, Report Number 11-25-117" dated November 19, 2025 and is included herein. The investigation consisted of one (1) exploratory boring to determine subsurface stratigraphy, classification, strength and compressibility characteristics of the foundation strata, and construction requirements for the placement of fill for building foundation and concrete foundation.

1.3 Subsurface Investigations: Soil borings and soil analysis have been made for the OWNER by Geotechnical Testing Laboratory, Inc. of Louisiana, at the request of the ENGINEER for development of subsurface information for this project. This data is included herein for informational purposes. Boring information represents subsurface characteristics to the extent indicated, and only for the point location of the boring. The CONTRACTOR shall make his own interpretation of the character and condition of the materials which will be encountered between boring locations. The CONTRACTOR may, at his own expense, make additional surveys and investigations as he may deem necessary to determine conditions which will affect performance of the Work. No additional compensation will be allowed to the CONTRACTOR if soil material is of a different character from that described herein.

1.4 Limits of Liability: The CONTRACTOR may rely upon the general accuracy of the "technical data" contained in the Geotechnical Investigations Report. 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 the completeness of such reports 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 other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings, or any CONTRACTOR interpretation of or conclusion drawing from any "technical data" or any such data, interpretations, opinions or information.

1.5 Reports: The Geotechnical Investigation Report is included at the end of this Section.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

-END OF SECTION-

Geotechnical Testing Laboratory, Inc.

Engineering and Construction Materials Testing Services

November 19, 2025

Pan American Engineers, LLC
P.O. Box 8599
Alexandria, Louisiana 71306

Attention: Mr. Jim Verzwyvelt, Jr., P.E.

RE: Geotechnical Investigation Services
Avoyelles Parish School Board
Recreation Complex – Concessions/Restroom Building
5197 LA Highway 115
Bunkie, Avoyelles Parish, Louisiana
Report Number 11-25-117

Dear Mr. Verzwyvelt:

Geotechnical Testing Laboratory, Inc. is pleased to submit this report of subsurface exploration for the above referenced project. Included in the report are the results of the exploration and recommendations concerning the design and construction of the foundations as well as general site development.

We appreciate the opportunity to have provided you with our geotechnical engineering services. If you have any questions concerning this report, or if we may be of further service, please contact our office.

Respectfully submitted,
Geotechnical Testing Laboratory, Inc.

Samuel "Heath" Carroll, P.E.
Louisiana Registration No. 43348

Ken Gorsha
President

11/19/25
STATE OF LOUISIANA
SAMUEL H. CARROLL
License No. 43348
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHC/krg

Geotechnical Investigation Services
Avoyelles Parish School Board
Recreation Complex – Concessions/Restroom Building
5197 LA Highway 115
Bunkie, Avoyelles Parish, Louisiana
Report Number 11-25-117

Prepared For:

Pan American Engineers, LLC
P.O. Box 8599
Alexandria, Louisiana 71306

Prepared By:

Geotechnical Testing Laboratory, Inc.
226 Parkwood Drive
Alexandria, Louisiana 71301

©November 2025

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APPENDICES

Appendix A – Field and Laboratory Procedures
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Geotechnical Investigation Services
Avoyelles Parish School Board
Recreation Complex – Concessions/Restroom Building
5197 LA Highway 115
Bunkie, Avoyelles Parish, Louisiana
Report Number 11-25-117

Introduction:

This report transmits the findings of a geotechnical investigation performed for the above-referenced project. The purpose of this investigation was to define and evaluate the general subsurface conditions in the immediate vicinity of a proposed new recreational facility. Specifically, the study was planned to determine the following:

- Subsurface stratigraphy within the limits of our exploratory boring.
- Classification, strength, and compressibility characteristics of the foundation strata.
- Suitable foundation systems and allowable soil bearing pressures.
- Construction requirements for the placement of select earth fills.

The purpose of this report is to provide the structural engineer, civil engineer, and other design team professionals with recommendations for the design and construction of the proposed project. This report should not be used by the contractor in lieu of project plans or specifications.

Project Authorization:

Formal authorization to perform the work was provided by Mr. Jim Verzwyvelt, Jr., P.E. with Pan American Engineers, LLC (Client), by accepting our November 5, 2025 written proposal. Written authorization to proceed was provided on the same day. Field procedures were conducted on November 10, 2025. To accomplish the intended purposes, a three-phase study program was conducted which included:

- a field investigation consisting of one exploratory test boring with samples obtained at selected intervals;
- a lab testing program designed to evaluate the expansive and strength characteristics of the subsurface soils; and,
- an engineering analysis of the field and laboratory test data for foundation design recommendations.

No additional analysis was requested. A brief description of the field and laboratory test procedures are provided in the Appendix.

Project Description:

We understand the project will consist of a one (1) story, slab-on-grade structure, with a ground level footprint of approximately 850 square feet. The new concessions/bathroom building will be constructed of CMU walls with a brick exterior veneer.

For the purposes of this report, we have assumed maximum concentrated and load bearing wall loads will not exceed approximately 15 kips and 1.5 kips per linear foot, respectively. Based on the existing site topography, it appears that the building pad area will receive a fill of approximately 12 to 18 inches reach the design grades. If larger grade changes are anticipated, these should be discussed with our geotechnical engineer prior to finalizing design.

If any of this information should change significantly or be in error, it should be brought to our attention so that we may review recommendations made in this report.

Site Conditions:

The project site is at physical address 5197 LA Highway 115 in Bunkie, Avoyelles Parish Louisiana. The site was noted to be relatively level with estimated maximum elevation differences of no more than one (1) foot, and was vegetated with weeds and grass at the time of at the time of drilling. The drilling rig experienced no difficulty moving about the site.

Subsurface Stratigraphy:

The subsurface conditions at the proposed building site were explored by drilling one (1) boring to a depth of approximately 30 feet. The boring was located in the field by the drilling crew as shown on the Plan of Boring included in the Appendix of this report.

The stratification of the soils encountered during field drilling operations is presented on the boring log in the Appendix. The stratification of the subsurface materials shown on the boring log represents the subsurface conditions encountered at the actual boring location and variations may occur across the site. The lines of demarcation represent the approximate boundary between the soil types, but the actual transition may be gradual. The following subsurface descriptions are of a generalized nature to highlight the major stratification features. The boring log should be reviewed for more detailed information.

In order of increasing depth, the boring generally encountered the following soil strata beneath the surface: lean clay (CL), fat clay (CH), and silty sand (SM).

Groundwater Conditions:

Groundwater seepage was not observed during advancement of the test boring and, after a short time lapse, the boring remained dry and un-caved. The subsurface water regime is always subject to change with variations in climatic conditions and will likely coincide with seasonal fluctuations. Future construction activities may also alter the surface and/or subsurface drainage patterns of this site. Therefore, groundwater conditions should be explored at the start of construction by others due to short-term observations by our field crew.

Perched water may be briefly encountered in low quantities during earthwork and is typically due to storage of recent rainfall or by a barrier to capillary evaporation. Where perched water is encountered the contractor should expect to excavate gravity drainage ditches to divert it away from the construction area. The depth of the ditches should be at least two (2) to three (3) feet deeper than the lowest exterior footing elevation. Additionally, soft, wet and pumpable soils can be expected below perched water tables. In structural areas, these should be removed to firm ground and replaced with select fill soils compacted to project specifications as defined later in this report.

Foundation Recommendations:

Detailed information on structural systems and planned grading was not available to us at the time this report was prepared. Based on the size and type of structure, as well as the findings from this investigation, a system of shallow footings with an on-grade floor slab, in conjunction with the recommended subgrade preparation is believed to be the most practical and economical means of support.

A Potential Vertical Rise (PVR) value of less than one (1) inch was determined for this site. One (1) inch of PVR is generally accepted as the maximum allowable value for design and construction in the geographical area. The surficial soils encountered by the boring are considered to be

moderately expansive. There should be no requirement for the removal of swelling soils at this site.

Positive drainage away from the structure should be provided at all times, including during construction. If positive drainage is not provided, water will pond around or below the building and excessive total and differential movements may occur. Proper surface drainage should be maintained, and landscape irrigation systems should be located and operated in a manner to minimize wetting of building foundations. After installation, the irrigation system should be pressure tested and any leaks repaired.

Foundation Subgrade Preparation:

To prepare for foundation and soil supported floor slab construction, we recommend that all topsoil, vegetation, roots, and any soft soils in the building area be stripped from the site and either properly disposed or stockpiled for later use in landscaping. Utilities should be located and rerouted as necessary.

To remediate the variable soil conditions in the surficial zone and provide a consistent subgrade for slab support, GTL recommends that a uniform layer of density-approved select fill be provided beneath the floor slab. After stripping the site, the building pad should be cut to an elevation which allows the placement of at least 18 inches of density-approved select fill below the final subgrade elevation for the floor slab. The select fill building pad should extend at least five (5) feet beyond the edge of the building.

After stripping and undercutting as required herein, the building area should be proof-rolled with a heavy, loaded pneumatic-tired vehicle such as a 20 to 25 ton loaded dump truck. It is recommended that all areas beneath the floor slab be proof-rolled to identify loose or soft soils. All proof-rolling and undercutting activities should be witnessed by GTL or authorized representative and should be performed during a period of dry weather. Any weak areas which yield under the proof-roll, or any areas with a tendency to pump should be mitigated. Such mitigation may include over-excavation and backfilling, reprocessing to remove moisture, modification with lime or cement admixture, or using geotextiles. In the event such mitigation is required, the geotechnical engineer should be contacted to design an appropriate procedure.

After proof-rolling but prior to placing fill, the exposed soils should be scarified and then processed to a moisture content between one (1) percentage point below and three (3) percentage points above the Standard Proctor optimum. The subgrade soils should be re-compacted to a dry density of at least 95 percent of the Standard Proctor (ASTM D-698) maximum dry density for a depth of at least eight (8) inches below the surface.

Select Fill:

After the subgrade has been prepared and inspected, fill placement may begin. Select fill material should be free of organic or other deleterious materials, homogeneous mixture, have a maximum particle size of three (3) inches, have a liquid limit less than 40 and plasticity index between 8 and 20, and consist of silty-clayey sands (SM-SC), low plasticity sandy clays (CL), or clayey sands (SC) as defined by the Unified Soil Classification System. In addition to the above requirements, the material should have a minimum of 30 percent retained on the No. 200 sieve. If a fine-grained material is used for fill, very close moisture content control will be required to achieve the recommended degree of compaction.

Fill should be placed in maximum lifts of eight (8) inches of loose materials and should be compacted within the range of one (1) percentage point below to three (3) percentage points above the optimum moisture content value and a minimum of 95 percent of the maximum

density as determined by the Standard Proctor (ASTM D-698) test. If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disking or scarifying.

Each lift of compacted soil should be tested and inspected by the soils engineer or his representative prior to placement of subsequent lifts. As a guideline, it is recommended that field density tests be taken at a frequency of not less than two (2) tests per lift for each tested area for the building.

Shallow Footings:

Perimeter footings should bear at a minimum nominal depth of 24 inches below the planned finished floor elevation or 18 inches below exterior adjacent grade, whichever is deeper. Spread footings for columns and strip footings for walls may be designed for a maximum net allowable soil bearing pressure of 2,000 psf and 1,500 psf, respectively, based on dead load plus design live load. Minimum foundation widths for column and strip footings should be 24 inches and 14 inches, respectively, even if the bearing pressures are less than the recommended values.

The factor of safety for the above bearing values is 3.0. Total settlement is estimated to be on the order of one (1) inch or less for foundation units designed in accordance with recommendations provided herein. Differential settlements are estimated to be on the order of ½ inch or less. Approximately half of this settlement is expected to occur during construction. The remaining long-term settlement of ½ inch (¼ occurring differentially) should be tolerable.

All foundation excavations should be inspected by GTL or an authorized representative prior to steel and concrete placement to assess whether the foundation materials appear consistent with the boring log. Soft or loose soil zones encountered at the bottom of the footing excavations should be removed and the cavity should be backfilled with compacted select fill, flowable grout fill, crushed stone flexible base, concrete, or other approved material and placement control.

Floor Slab and Grade Beams:

Construction of select fill as specified herein beneath the building should result in the development of a modulus of subgrade reaction (k_s) to range between 125 and 150 pounds per cubic inch based upon empirical equations that estimate the results of a plate load test.

A permeable dry subgrade, with a smooth, low friction surface should be provided beneath the slab. The slab should not be constructed on a saturated subgrade or a subgrade with standing water. A few inches of sand may be useful as a level-up course under the slab to facilitate fine grading. If crushed stone is used as a subgrade material, the upper surface of the crushed stone should be choked off with sand or a smaller crushed stone material to provide a smooth surface that will allow the slab on grade to shrink with minimum restraint. The subgrade should be free of frost before concreting begins.

Utilities which project through the slab on grade should be designed with either some degree of flexibility or with sleeves. Such design features will help reduce damage to utility lines if vertical movements occur.

The floor slab may be placed monolithically with the grade beams, or designed and constructed as a floating slab where an isolation joint separates the floor slab from all grade beams and columns. In the former case, a crack or hinge joint may develop in the slab parallel to the exterior grade beams. The floor system type should be selected and designed by the structural engineer after considering the advantages and disadvantages of each.

Membrane Under Slab:

The decision as to whether a synthetic membrane (polyethylene or HDPE sheeting, etc.) is required below the slab should be made by the architect and structural engineer based on planned floor coverings, proximity of groundwater, planned site grading and drainage patterns, tolerance for curling, local custom, weather conditions at the time of construction, and other pertinent considerations.

Seismicity:

Based on Section 1613 of the IBC-2021, a Site Class of D has been estimated for this site due to the lack of subsurface information to a depth of 100 feet. According to the USGS website for Seismic Hazard Design Parameters, the project site has a mapped 0.2 second spectral response acceleration (S_s) of 0.085 g. The project also has a mapped 1.0 second spectral response acceleration (S_l) of 0.060. The design spectral response accelerations, S_{DS} and S_{Dl}, were determined to be 0.091 g and 0.096 g, respectively. Based on Tables 1613.3.5(1) and 1613.3.5(2), the site has an assigned Seismic Design Category of B for structures classified as Risk Categories I, II, and III. For structures classified as Risk Category IV, site has an assigned Seismic Design Category of C.

Construction Considerations:

Excessive movement should not occur if customary measures are taken to minimize moisture variations beneath the structure to preclude loss of shear strength of foundation soils. Proper surface drainage should be maintained, and landscape irrigation systems should be located and operated in a manner to minimize wetting of building foundations. Positive drainage away from the building should be provided at all times, including during construction. If positive drainage is not provided, water will pond around or below the building and excessive total and differential movements may occur.

Secondary Design Considerations:

The following information has been assimilated after examination of numerous problems dealing with soil strata throughout Louisiana. It is presented here for implementation by others. If these features are not incorporated, then performance of the structure may be **"at-risk".**

1. Roof drainage should be **routed via pipe or a hard surface at least 5 feet from the structure.**
2. The **depth of frost penetration** in the vicinity of the project site is estimated to be approximately six inches.
3. Pavements, sidewalks, and the general ground surface should be sloped away from the structure on all sides. Water must not be allowed to pond within 5 feet of the building.
4. Backfill for utility lines should be compacted to at least 95 percent of the standard compaction test (ASTM D-698).
5. Surficial soils of the type encountered at this site are subject to erosion. Therefore, unpaved areas should be protected from erosion by the establishment of a good vegetation cover.
6. Clayey fill has been specified for select fill to reduce the potential migration of water beneath the proposed establishment. Drainage details must focus on routing water away from the structure. Excessive water intrusion can produce undesirable latent vertical movement.
7. Landscaping elements, including irrigation systems must not be allowed to introduce excess water to the structure subgrade. Monitor irrigation controls frequently and adjust to avoid over-watering of plants positioned in close proximity to the structure.

Safety Considerations:

Prior to the commencement of construction, the owner and the contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Association (OSHA) Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our client. Under no circumstances should the information provided herein be construed that GTL is assuming responsibility for construction site safety of the contractor's activities. Such responsibility is not being implied and should not be inferred.

Worker Safety - Excavations and Slopes:

After excavating, footings should be inspected and concrete placed as quickly as possible to avoid exposure of the footing bottoms to wetting and drying. If it is required that footing excavations be left open for more than one (1) day, they should be protected to reduce evaporation or entry of moisture. Adequate protection against sloughing of soil should be provided for workers and inspectors entering the footing excavations and undercut areas.

The contractor should be aware that slope height, slope inclination, or excavation depths (including utility trench excavations) should in no case exceed those specified in local, state, or federal safety regulations, e.g., OSHA Standards for Excavations, Title 29, Part 1926, successor regulations as well as other building code requirements. Such regulations are strictly enforced and, if not followed, the owner, contractor, and earthwork and utility subcontractors could be liable for substantial penalties.

Drainage:

Water should not be allowed to collect near the foundations, floor slab or pavement areas of the project either during or after construction. Undercut or excavated areas should be sloped toward a sump area to facilitate removal of any collected groundwater or surface runoff. Proper drainage should be provided by sloping the ground surface away from the structure.

Weather Considerations:

The soils encountered in the surficial zone at this site are expected to be relatively sensitive to disturbances caused by construction traffic when wet. The contractor should be aware of the importance of proper maintenance of surface drainage. Depending on weather-related ground conditions, contractor’s maintenance of drainage during construction, and other factors, some difficulty may be encountered by the contractor in achieving compaction on initial lifts of fill placed on loose or soft subgrade. This will be exacerbated by wet weather, particularly if the contractor allows surface drainage to enter and pond in the excavations.

Fine-grained soils are expected to be relatively sensitive to disturbances caused by construction traffic and to changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support characteristics. In addition, soil which becomes wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. It will, therefore, be advantageous to perform earthwork and foundation construction activities during dry weather. Earthwork activities performed during cooler, wetter months may certainly offer more difficulties than if performed during warmer, drier periods.

If construction is performed during wet conditions, work platforms can be created for earthwork by mixing fly ash, hydrated lime, cement, or combinations of these additives. Quick lime may also be used in areas where dusting is of concern, if proper worker safety considerations are observed. Pumping subgrades are possible at the site and it is recommended that bid documents incorporate this possibility into the bid schedule.

The use of geotextiles and geogrids may be warranted in situations where the subgrade is very wet and highly unstable, if such use is necessary to maintain a mandatory construction schedule during wet weather.

Groundwater Control:

Due to potential variations in groundwater levels, difficulty during excavation and construction of the proposed foundation is possible. Shallow groundwater was not encountered at this site. However, it is reasonable to anticipate that groundwater conditions may vary as noted previously. It is suggested that contract documents address the need for maintaining controls to preclude water from draining into excavations. Some dewatering through shaping of work areas to shed water, and construction of temporary ditches with sumps and pumping may be necessary to remove the loose soils and allow placement of imported select fill in a dry manner. Excavated soils intended for re-use as select fill may require special methods in order to dry the soil to a suitable moisture content prior to re-placing the soil as select fill.

Protection of Work:

Subgrade areas, base courses, and lifts of fill that have been successfully moisture conditioned, processed, and compacted in lifts to the required density, successfully proof-rolled, and approved must be protected from changes in moisture and other influences. Satisfactorily completed areas may be adversely affected by prolonged exposure to dry weather, precipitation, equipment traffic, or by excavations and uncontrolled backfilling for utilities, and other disturbances rendering such areas unsatisfactory. Such areas should be reworked prior to continuing with subsequent construction.

Geotechnical Risk:

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations presented in the preceding sections constitutes GTL's professional estimate of those measures that are necessary for the proposed structure to perform according to the proposed design based on the information generated and referenced during this evaluation, and GTL’s experience in working with these conditions.

Limitations:

The exploration and analysis of the conditions reported herein are considered sufficient in detail and scope to form a reasonable basis for the foundation design. The recommendations submitted are based on the available soil information and preliminary design details furnished for the proposed project. Any revision of the plans for the proposed facility from those enumerated in this report should be brought to our attention so that we may determine if changes in the foundation recommendations are required. If deviations from the noted

subsurface conditions are encountered during construction, GTL should be retained to determine if changes in foundation recommendations are required. If GTL is not retained to perform these functions, we will not be responsible for the performance of the structure.

The findings, recommendations, specifications, or professional advice contained herein have been made after being prepared in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology. No other warranties are implied or expressed.

The scope of services did not include any environmental assessment for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site. Any statements in this report or on the boring log regarding odors, colors, or unusual or suspicious items or conditions are strictly for the information of the client. Prior to purchase or development of this site, an environmental assessment is advisable.

The scope of services did not include a geologic investigation to address any faults, large scale subsidence, or other macro geologic features not specifically addressed in this report or the agreement between GTL and the client.

After the plans and specifications are more complete, it is recommended that the soils and foundation engineer be provided the opportunity to review the final design and specifications in order that the earthwork and foundation recommendations may be properly interpreted and implemented. At that time, it may be necessary to submit supplementary recommendations.

This report has been prepared for the exclusive use of our client for the specific application to the referenced project. GTL cannot be responsible for interpretations, opinions, or recommendations made by others based on the data contained in this report.

This report was prepared for design purposes only and may not be sufficient for purposes of preparing an accurate bid for construction. Contractors reviewing this report are advised that the discussions and recommendations contained herein were provided exclusively to and for use by the project owner.

END OF REPORT TEXT

SEE FOLLOWING APPENDIX w/BORING LOG & TEST RESULTS

ATTACHMENT A

FIELD AND LABORATORY PROCEDURES

Field and Laboratory Procedures
Avoyelles Parish Police Jury
Recreation Complex - Concessions/Restroom Building
Bunkie, Avoyelles Parish, Louisiana
Report Number 11-25-117

I. Field Operations:

Subsurface conditions were evaluated by advancing one (1) intermittent sample boring on November 10, 2025 within the project area. The boring location was selected and staked in the field by representatives of Geotechnical Testing Laboratory, Inc. An illustration of the approximate boring location is provided on the Plan of Boring herein. Descriptive terms and symbols used on the Boring Logs are in accordance with the Unified Soil Classification System (USCS).

A truck-mounted rotary drilling rig was used to make the test boring. Intermittent undisturbed samples were obtained in the following manner.

Standard penetration tests were performed in accordance with ASTM D-1586 procedures. This test is conducted by recording the number of blows required for a 140-pound hammer falling 30 inches to drive a split-spoon sampler eighteen inches into the substrata. Depths at which split-spoon samples were taken are indicated by two crossed lines in the "Samples" column on the Log of Boring. The number of blows required to drive the sampler for each 6-inch increment were recorded. The penetration resistance is the number of blows required to drive the split-spoon sampler the final 12-inches of penetration. Information related to the penetration resistance is presented under the "Field Data" heading of the Log of Boring as the Standard Penetration (Blows/Foot). These samples were visually examined, logged, and packaged for transport to our laboratory.

The presence of ground water was monitored during drilling operations. Initial water seepage readings are provided under "Groundwater Information" in the right hand column of the Log of Boring. Upon boring completion, water levels were allowed to rise and stabilize for several minutes prior to final water readings. These readings are found under “Groundwater Information”. Soil sloughing from the walls of the boring are also recorded here as depth of cave-in.

II. Laboratory Studies:

Upon return to the laboratory, all samples were visually examined and representative samples were selected for testing. Tests were performed on selected samples recovered from the test boring to verify classification and to determine pertinent engineering properties of the substrata. Individual test and ASTM designations are provided in the following table:

Test	ASTM Designations
Atterberg Limits	ASTM D4318
Moisture Content	ASTM D2216
Percent Minus #200	ASTM D1140

Results for soil classifications are located on the Log of Boring in their respective columns under "Laboratory Data."

Samples obtained during our field studies and not consumed by laboratory testing procedures will be retained free of charge for a period of 30 days. Arrangements for storage beyond that period of time must be made in writing to ***Geotechnical Testing Laboratory, Inc.***

APPENDIX B

PLAN OF BORING

PLAN OF BORING

PROJECT

APPJ Recreation Complex - Concessions / Restroom Building, Bunkie, Avoyelles Parish, LA

SCALE	DATE	FILENAME	
Not to Scale	11/14/2025	11-25-117	***Pan American Engineers, LLC***

N

APPENDIX C

BORING LOG AND SOIL CLASSIFICATION CHART

LOG OF BORING B- 1

Geotechnical Testing Laboratory, Inc.
226 Parkwood Drive
Alexandria, LA 71301
Telephone: (318) 443-7429

CLIENT: **Pan American Engineers, LLC**
PROJECT: **APPJ - Concessions/Restroom Building**
LOCATION: **Bunkie, Avoyelles Parish, Louisiana**
FILE No.: **11-25-117**
DATE DRILLED: **11/10/25**

DRILLING METHOD(S): **CME 45B, 4.5" I.D. Hollow Stem Auger**

LOGGED BY: **K. Book** CHECKED BY: **K. Gorsha**

GROUNDWATER INFORMATION:
No Water Seepage Noted While Drilling
No Water Observed Upon Completion
Boring Walls Remained Open

SURFACE ELEVATION: **Not Determined**

SOIL SYMBOL	DEPTH (FT)	SAMPLES	N: BLOWS/FT P: TONS/SQ FT	MOISTURE CONTENT (%)	ATTERBERG LIMITS LIQUID LIMIT LL	ATTERBERG LIMITS PLASTIC LIMIT PL	ATTERBERG LIMITS PLASTICITY INDEX PI	MINUS NO. 200 SIEVE (%)	DRY DENSITY (Lbs./Cu.Ft.)	COMPRESSIVE STRENGTH (Lb./Sq. Ft.)	DESCRIPTION OF STRATUM
			N = 10	23	42	23	19	97			Stiff Yellowish Brown & Gray LEAN CLAY (CL)
			N = 17	23							- very stiff @ 2.0 feet
			N = 17	23	40	22	18	98			
	5		N = 14	20							- stiff @ 5.0 feet
											6.5'
			N = 12	25	67	26	41	99			Stiff Yellowish Brown FAT CLAY (CH)
											8.5'
			N = 12	20							Stiff Yellowish Brown & Gray LEAN CLAY (CL) w/sand traces
	10										
			N = 16	20	35	22	13	899			- very stiff @ 14.0 feet
	15										
											17.0'
			N = 12	10							Medium Dense Yellowish Brown Silty SAND (SM)
	20										
			N = 26	4	NP	NP	NP	20			
	25										
			N = 25	11							
	30										30.0'
											Boring Terminated @ 30.0 Feet

N - STANDARD PENETRATION TEST RESISTANCE
P - POCKET PENETROMETER RESISTANCE

NOTES:
See Plan of Boring for Location
Stratification Is Not Exact

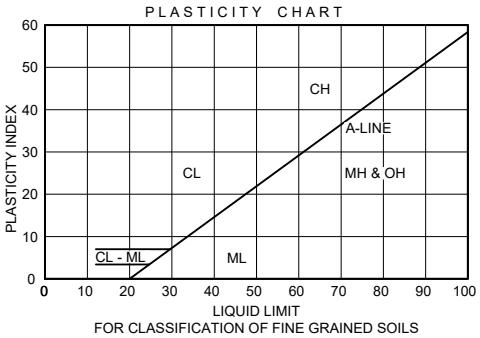
GTL LOG - GINT STD US LAB.GDT - 11/14/25 07:18 - K:\GINT PROJECTS\2025 JOBS\11-25-117.GPJ

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			SYMBOL & LETTER	DESCRIPTION
COARSE-GRAINED SOILS More than half of material larger than No. 200 sieve size	GRAVELS More than half of coarse fraction larger than No.4 sieve size	Clean Gravels (Little or no fines)	GW	WELL GRADED GRAVEL, GRAVEL-SAND MIXTURE
			GP	POORLY GRADED GRAVEL, GRAVEL-SAND MIXTURE
		Gravels with fines (Appreciable amount of fines)	GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURE
			GC	CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURE
	SANDS More than half of coarse fraction smaller than No.4 sieve size	Clean Sands (Little or no fines)	SW	WELL GRADED SAND, GRAVELLY SAND
			SP	POORLY GRADED SAND, GRAVELLY SAND
		Sands with fines (Appreciable amount of fines)	SM	SILTY SAND, SAND-SILT MIXTURE
			SP-SM	SLIGHTLY SILTY SAND
			SC	CLAYEY SAND, SAND-CLAY MIXTURE
FINE-GRAINED SOILS More than half of material smaller than No. 200 sieve size	SILTS AND CLAYS	Liquid limit less than 50	ML	SILT WITH LITTLE OR NO PLASTICITY
			ML	CLAYEY SILT, SILT WITH SLIGHT TO MEDIUM PLASTICITY
			ML	SANDY SILT
			CL	SILTY CLAY, LOW TO MEDIUM PLASTICITY
			CL	SANDY CLAY, LOW TO MEDIUM PLASTICITY (30% TO 50% SAND)
	SILTS AND CLAYS	Liquid limit greater than 50	MH	SILT, FINE SANDY OR SILTY SOIL WITH HIGH PLASTICITY
			CH	CLAY, HIGH PLASTICITY
			OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOIL
SEDEMENTARY ROCK TYPES:			LS	LIMESTONE
			MARL	MARL

TERMS CHARACTERIZING SOIL STRUCTURE

Slickensided	- Clays with polished and striated planes created as a result of volume changes related to shrinking, swelling and/or changes in overburden pressure.
Fissured	- Clays with a blocky or jointed structure generally created by seasonal shrinking and swelling.
Laminated	- Composed of thin alternating layers of varying color and texture.
Calcareous	- Containing appreciable quantities of calcium carbonate.
Parting	- Paper thin (less than 1/8 inch).
Seam	- 1/8 inch to 3 inch thickness.
Layer	- Greater than 3 inches in thickness.



DENSITY AND CONSISTENCY

COARSE-GRAINED SOILS

DENSITY	PENETRATION RESISTANCE, N Blows per Foot
Very loose	0 - 2
Loose	4 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	>50

FINE-GRAINED SOILS

CONSISTENCY	COHESION Kips/Sq. Ft	PENETRATION RESISTANCE, N Blows per Foot
Very Soft	<0.25	0 - 2
Soft	0.25 - 0.50	2 - 4
Firm	0.50 - 1.00	4 - 8
Stiff	1.00 - 2.00	8 - 15
Very Stiff	2.00 - 4.00	15 - 30
Hard	>4.00	>30

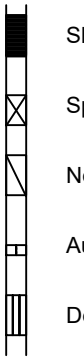
PARTICLE SIZE IDENTIFICATION

Cobbles	- Greater than 3 inches
Gravel	- Coarse - 3/4 inch to 3 inches Fine - 4.76 mm to 3/4 inch
Sand	- Coarse - 2 mm to 4.76 mm Medium - 0.42 mm to 2 mm Fine - 0.074 mm to 0.42 mm
Silt & Clay	- Less than 0.074 mm

RELATIVE COMPOSITION

Slightly	5 - 15%
With	16 - 29%
Sandy (or gravelly)	30 - 50%

SAMPLE TYPES
(Shown in Sample Column)



- Shelby Tube
- Split Spoon
- No Recovery
- Auger
- Dennison Barrel

CLASSIFICATION, SYMBOLS AND TERMS USED ON GRAPHICAL BORING LOGS

SECTION 01500

TEMPORARY FACILITIES

PART 1 - GENERAL

1.1 Scope: This Section covers the installation of temporary facilities for the use of the CONTRACTOR during the construction project.

1.2 Precautions Against Weather: During adverse weather conditions and against the possibility thereof, the CONTRACTOR shall take all necessary precautions so that the work shall be properly done and be satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building paper shelter, or other approved means.

1.3 Water Supply: The OWNER shall provide at the points of use all water necessary for his operations. The CONTRACTOR shall make all arrangements necessary to obtain water. The OWNER will pay for water usage to accommodate CONTRACTOR operations.

1.4 Electrical Energy: The OWNER shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the work during its entire progress. The CONTRACTOR shall provide and pay for all temporary wiring, switches, and connections. There shall be sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

1.5 Sanitary Facilities: The CONTRACTOR shall provide adequate sanitary conveniences for the use of those employed on the work. Such conveniences shall be made available when the first employees arrive on the work, shall be property secluded from public observation, and shall be constructed and maintained in suitable numbers and at such points and in such manner as may be required or approved. The CONTRACTOR shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the work on the land of the OWNER, or on adjacent property. When able to be reasonably accommodated, the existing restroom at the facility will be made available to the CONTRACTOR.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01560

MAINTENANCE OF WORK SITE

PART 1 - GENERAL

1.1 Scope: This Section covers the general overall maintenance of the entire project site to assure the safety and protection of the CONTRACTOR'S employees, general public, materials incorporated into the project, and property within the project limits.

1.2 Safety and Protection:

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

1. All employees involved with the work and other persons who may be affected thereby.

2. All the work and all materials or equipment to be incorporated therein, whether in storage on or off the site.

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

4. Existing site piping, structures, electrical services, water and other underground properties.

B. The CONTRACTOR shall notify owners of adjacent utilities when prosecution of the work may affect them. All damage, injury or loss to any property referred to above, directly or indirectly, in whole or in part, by CONTRACTOR, any part, to the fault or negligence of CONTRACTOR, shall be replaced or restored to at least original condition at CONTRACTOR'S expense. CONTRACTOR'S duties and responsibilities for the safety and 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 as described herein that work is acceptable.

C. The CONTRACTOR shall not load or permit any part of any structure to be loaded with a weight that would endanger its safety.

D. The CONTRACTOR shall provide protection of the work from freezing and from other elements which would be harmful to it. The CONTRACTOR shall furnish heat or protective shelters or temporary buildings as required for the prosecution and protection of the work.

E. The CONTRACTOR shall take all necessary precautions for the safety of employees on the work and shall comply with all applicable provisions of Federal, State and local safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. He shall erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards and barricades for the protection of employees on the work and the safety of others employed near the work and public, and shall post danger signs and warning lights warning against the hazards created by such features of the construction as protruding nails, hoists, excavations, elevator hatchways, scaffoldings, window openings, stairways and falling materials.

F. The CONTRACTOR shall designate a responsible member of its organization on the work whose duty shall be the prevention of accidents.

G. The CONTRACTOR shall immediately report in writing, giving full details, to the OWNER all serious accidents which arise out of or in connection with the performance of the work, whether on or adjacent to the site, which cause death, serious personal injury or substantial property damage is caused, the accident shall be reported immediately by telephone or messenger to the ENGINEER. If a claim is made or suit is filed by anyone against the CONTRACTOR or any Sub-Contractor on account of any accident, the CONTRACTOR shall promptly report the facts in writing to the ENGINEER, with a copy to the OWNER, giving full details of the claim.

H. The CONTRACTOR shall assume all risks of loss damage of any kind to any vehicles, machinery, equipment, materials or supplies which he shall provide in doing the work.

I. The CONTRACTOR shall take all precautions to prevent damage to the work by the elements, storm or by water entering the site of the work directly or through the ground. In case of damage by the elements, storm or water, the CONTRACTOR shall make such repairs or replacements or rebuild such parts of the work as the ENGINEER may require in order that the work may be completed as required.

J. The CONTRACTOR shall post illuminated warning and danger signs so as to alert all persons against any hazards created by the work being done under this contract.

K. The CONTRACTOR shall maintain drainage which may be interrupted by his work and shall provide pumping of necessary to route drainage water around the work.

1.3 Protection of Public: The CONTRACTOR wherever necessary or required, and at his own expense, he shall maintain fences, furnish full-time or part-time watchmen, guards, flagman and or like protective personnel, maintain lights, and take such actions, precautions as may be necessary to protect life and property.

1.4 Dust Control: During the course of the work the CONTRACTOR shall take steps at his cost as necessary to prevent public nuisance on demand of the ENGINEER by holding down the raising of dust or spraying of mud from construction operation, vehicular traffic, wind or other causes.

1.5 Site Maintenance:

A. Minimize discharge of effluent and rainwater runoff into sewers.

1 Control sediment discharge into sewers; filter out construction debris, soil, and contaminants.
2. Comply with regulations and orders of public utilities regarding use of sewers.
3. Where disposal of effluent or rainwater by means of sewers is no lawful or is not possible, provide alternative methods of disposal.

B. Prevent erosion due to rainwater runoff.

C. Prevent flooding of excavations, below-grade construction, and adjacent properties due to rainwater runoff.

D. Protect existing property indicated to remain, including:

1. Plants and trees, as indicated on the drawings and as identified by Owner. Erect fencing around drip lines of trees. Areas within the drip lines of trees shall be off limits to construction activities including but not limited to parking and storage of materials.

2. Existing property, as indicated on the drawings.

E. Keep the site and adjacent public ways free of hazardous and unsanitary conditions and public nuisances.

F. Control rodents and other pests; prevent infestation of adjacent sites and buildings due to pests on this site.

G. Keep public streets free of debris and material storage due to this work.

H. Provide temporary supports as required to prevent movement and structural failures.

I. Install products only during environmental conditions which will ensure the best possible results.

1.6 Sequencing and Scheduling: Install products only at the time and in the sequence which will ensure the best possible results.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 Scope: This section covers requirements for closeout of work.

1.2 Requirements: The CONTRACTOR shall comply with the requirements stated in the General Conditions and in the Specifications for administrative procedures in closing out the Work.

1.3 Substantial Completion:

A. When the CONTRACTOR considers the Work is substantially complete, he shall submit to the ENGINEER:

1. A written notice that the Work or designated portion thereof is Substantially Complete.

2. A list of items to be completed or corrected.

B. Within five (5) working days after receipt of such notice, the ENGINEER will make an inspection to determine the status of completion. The ENGINEER will prepare a punchlist that will include a cost estimate for each particular item of work based upon mobilization, labor, materials, and equipment costs as required by Louisiana Revised Statute 38:2248.B. The dollar amounts so established for uncompleted or unsatisfactory minor work shall be withheld by the OWNER, exclusive of statuary retainage, until the work is satisfactorily completed. Listed items shall be paid for upon expiration of the 45 day lien period. The ENGINEER'S opinion as to the status of completion shall be based on completion of the following, as applicable:

1. Installation of all piping, fittings, specials, valves including pressure, leakage or other required tests.

2. Installation of all buildings, building amenities and furnishings.

3. Installation or construction of structures including all required protective or aesthetic coatings or devices including required tests.

4. Installation of electrical conduits, wiring, load centers, controls, lighting, lighting aiming and all other electrical elements as required including tests, inspections, and approval by local agencies for compliance with ordinances and codes.

5. Backfill and compaction of backfill as indicated by required tests for all pipelines and other subterranean installations.

6. Installation of athletic synthetic turf surfaces and grass field improvements/restoration.

7. Installation or restoration of pavements including required tests for subbase, base and pavement materials. Pavements shall not be individually considered and shall be considered only with other portions of the Work requiring the installation or restoration of pavement.

8. Installation of fencing, gates, backstops, backstop walls, and other ancillary structures.

9. All painting required by the Contract Documents except for touch-up.

10. Topsoiling, final grading, fertilizing, sodding, hydroseeding or landscaping except for growth of vegetation and watering to establish the required ground cover of vegetative growth.

11. Release of all permits whether or not the permit was acquired by the CONTRACTOR.

12. Installation of all doors, windows, louvers, and other building appurtenances including painting, finish hardware, glazing, locks, and other required devices to secure the Work if applicable to this project.

13. All required instructions for the OWNER'S operation and maintenance personnel including submittal of operations and maintenance manuals and warranties and bonds as specified elsewhere, if applicable to this project.

C. Should the ENGINEER determine that the Work is not substantially complete.

1. The ENGINEER will promptly notify the CONTRACTOR in writing, giving the reasons therefore in accordance with the General and Supplemental Conditions.

2. CONTRACTOR shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the ENGINEER.

3. The ENGINEER will reinspect the Work.

D. When the ENGINEER finds that the Work is substantially complete, he will:

1. Prepare and deliver to OWNER a tentative Certificate of Substantial Completion with a tentative list of items to be completed or corrected before final payment in accordance with the General and Supplemental Conditions and in accordance with Louisiana Revised Statute 38:2243.B. as outlined in 1.3.B above.

2. After consideration of any objections made by the OWNER as provided in the General and Supplemental Conditions of the Contract, and when the ENGINEER considers the Work substantially complete, he will execute and deliver to the OWNER and the CONTRACTOR a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected.

1.4 Final Inspection:

A. When CONTRACTOR considers the Work is complete, he shall submit written certification that:

1. Contract Documents have been reviewed.

2. Work has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents.

4. Equipment and systems have been tested in the presence of the ENGINEER and OWNER'S representative and are operational.

5. Work is completed and ready for final inspection.

B. The ENGINEER will make an inspection to verify the status of completion within five (5) working days after receipt of such certification.

C. Should the ENGINEER consider that the Work is incomplete or defective:

1. The ENGINEER will promptly notify the CONTRACTOR in writing, listing the incomplete or defective work.

2. CONTRACTOR shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the ENGINEER that the Work is complete.

3. The ENGINEER will reinspect the Work.

D. When the ENGINEER finds that the Work is acceptable under the Contract Documents, he shall request the CONTRACTOR to make closeout submittals.

1.5 Reinspection Fees: Should the ENGINEER perform reinspections due to failure of the Work to comply with the claims of status of completion made by the CONTRACTOR:

A. OWNER will compensate the ENGINEER for such additional services.

B. OWNER will deduct the amount of such compensation from the final payment to the CONTRACTOR.

1.6 Contractor's Closeout Submittals To Engineer:

A. Evidence of compliance with requirements of governing authorities.

B. Project Record Documents: Requirements of Section 01720 - Record Drawings.

1.7 Final Adjustment of Accounts:

A. Submit a final statement of accounting to the ENGINEER.

B. Statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum.

2. Additions and deductions resulting from:

a. Previous Change Orders.

b. Unit Prices.

c. Deductions for uncorrected Work.

d. Penalties and Bonuses.

e. Deductions for liquidated damages.

f. Deductions for reinspection payments.

g. Other adjustments.

3. Total Contract Sum, as adjusted.

4. Previous payments.

5. Sum remaining due.

C. ENGINEER will prepare a final Change Order reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.8 Application For Payment: Upon receipt of approval of the final Change Order, the CONTRACTOR shall submit an application for Payment in accordance with procedures and requirements stated in the General Conditions.

1.9 Contract Clear Lien Certificate and Payment of Retainage:

A. Upon the OWNER'S acceptance of the work, the ENGINEER shall make filings with the Parish Clerk of Court as required by Louisiana State Public Contract Statute.

B. In accordance with the Louisiana State Public Contract Statute, the Clerk shall issue to the CONTRACTOR a Clear Lien and Privilege Certificate upon expiration of a period of not less that forty-five (45) days, provided no liens are recorded against the Project.

C. Upon receipt of the Clear Lien and Privilege Certificate, the CONTRACTOR shall submit an Application for Payment to the ENGINEER requesting the release of the Project

retainage with the certificate attached as evidence of authority for the OWNER to pay the retainage.

D. The ENGINEER shall review the Application for Payment of the Project retainage and if in order shall transmit the application to the OWNER for payment.

E. In accordance with the General Conditions, the OWNER shall release, the project retainage and make payment to the CONTRACTOR the legal sum of the retainage for which the CONTRACTOR is entitled.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01710

CLEANING

PART 1 - GENERAL

1.1 Scope: This Section covers cleaning. Cleaning shall include daily "policing" of the work and surrounding areas to clear general debris, waste paper, wood scraps, broken concrete, trash and other objectionable material along with the final cleanup of site(s) required for project acceptance.

1.2 Disposal Requirements: Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 General:

A. Execute daily cleaning to keep the Work, the site and adjacent properties, free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.

B. Provide onsite containers for the collection of waste materials, debris and rubbish. All waste materials including containers, food debris and other miscellaneous materials must be disposed of daily in on site containers.

C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.2 Final Cleaning:

A. Employ skilled workmen for final cleaning.

B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.

D. Prior to final completion or OWNER occupancy, CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire Work is clean.

- END OF SECTION -

SECTION 01720

RECORD DRAWINGS

PART 1 - GENERAL

1.1 Scope: This Section covers technical requirements and information for the preparation and submission of Record Drawings.

1.2 General: As part of the contract drawings furnished, the CONTRACTOR will also be furnished with a full size set of Drawings for use in preparation of "Record Drawings". The Record Drawings shall be a record of the construction as installed and completed by the CONTRACTOR. They shall include all the information shown on the contract set of drawings and a record of all deviations, modifications, or changes from those drawings, however minor, which were incorporated in the work, all additional work not appearing on the contract drawings, all changes which are made after final inspection of the contract work and the location and size of all uncharted existing utilities and structures encountered.

PART 2 - PRODUCT (NOT USED)

PART 3 - EXECUTION

3.1 Record Drawings: The CONTRACTOR shall mark up the Drawings to show as-builts conditions, hereafter called Record Drawings. All changes from the contract plans which are made in work or additional information which might be uncovered in the course of construction, including uncharted utilities, shall be accurately and neatly recorded as they occur by means of details and notes. All changes and/or required additions to the Record Drawings shall be clearly identified in a color contrasting to the blue line record drawing prints. The Record Drawings shall show the following information, but not be limited hereto.

A. The location and description of any utility lines or other installation of any kind or description known to or found to exist within the construction area. The location of exterior utilities includes actual measured horizontal distances from utilities to permanent facilities/features. These measurements shall be within an accuracy range or six (6") inches and shall be shown at sufficient points to permit easy location of utilities for future maintenance purposes. Measurements shall be shown for all change of direction points and all surface or underground components such as valves, manholes, drop inlets, cleanouts, meter, etc. The general depth of range of each underground utility line shall be shown (i.e. 3' to 4' depth). The description of exterior utilities includes the actual quantity, size and material of utility lines.

B. Correct grade or alignment of roads, structures or utilities if any changes were made from contract plans.

C. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the CONTRACTOR including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, etc.

D. The topography and grades of all drainage installed or affected as a part of the project construction.

3.2 Record Drawing Review: As a part of the prefinal inspection for each item of work the Record Drawings will be reviewed. They must comply with this specification prior to scheduling the final inspection, and/or prior to substantial completion of the item of work.

3.3 Record Drawing Final Submittal: Prior to scheduling the final acceptance inspection of the remaining work items, the Record Drawings shall be completed and delivered to the ENGINEER for his review and approval. If, upon review, the drawings are found to contain errors and/or omissions, they will be returned to the CONTRACTOR for corrections. Failure of any CONTRACTOR to make timely delivery of the Record Drawings on any/all items of work will be cause for the OWNER to delay final payment.

3.4 Withholding for Record Drawings: Failure by the CONTRACTOR to maintain current and satisfactory Record Drawings in accordance with these requirements will result in withholding from progress payments an amount determined by the ENGINEER as the value of the subject drawings, and will indicate this unearned amount on monthly payment estimates until the CONTRACTOR has fulfilled the contract requirements.

3.5 Drafting: All additions and corrections to the record drawings shall be neat, clean and legible.

3.6 Record Drawing Designation: When final revisions have been completed, each drawing shall be lettered or stamped with the words "RECORD DRAWINGS" in letters at least 3/16" high placed below the title block between the border and the trim line. The date of completion and the words "REVISED RECORD DRAWINGS" shall be placed in the revision block above the latest existing revision notation.

- END OF SECTION -

SECTION 01730

OPERATION AND MAINTENACE MANUALS

PART 1 - GENERAL

1.1 Scope: This Section covers the preparation of an Operation and Maintenance Manual by the CONTRACTOR for equipment provided under this Contract.

1.2 Format:

A. Prepare data in the form of an instructional manual.

B. Binders: Commercial quality, 8½ x 11, three-ring binders with hardback, cleanable, plastic covers; four (4") inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; list title of Project; identify subject matter of contents.

D. Arrange content by section numbers and sequence of Table of Contents of this Project Manual.

E. Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.

F. Text: Manufacturer's printed data, or typewritten data.

G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

1.3 Contents:

A. Table of Contents: Provide title of Project; names, addresses, and telephone number of ENGINEER and CONTRACTOR with name of responsible parties; schedule of products and systems, indexed to content of the volume.

B. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems.

E. Type Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.4 Submittals:

A. Submit one (1) copy of completed volumes in final form fifteen (15) days prior to final inspection. Copy will be returned after final inspection with ENGINEER comments. Revise content of documents as required prior to final submittal.

B. Submit four (4) copies of revised volumes of data in final form within ten (10) days after final inspection.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Required Manual Data: Complete Operations and Maintenance Manuals shall be provided for the equipment/materials included in the following Sections:

A. Section 02790 – Synthetic Turf
Section 02810 - Field Irrigation System
Section 10520 – Fire Extinguishers
Section 11480 – Athletic Field Equipment
Section 15100 – Packaged Wastewater Treatment Plant

- END OF SECTION -

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 Scope: This Section includes preparation and submittal of product warranties and bonds.

1.2 Format:

A. Bind in commercial quality, 8½ x 11 inch three-ring side binders with hardback, cleanable, plastic covers.

B. Label cover of each binder with typed or printed title WARRANTIES AND BONDS, list title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible principal.

C. The Table of Contents shall be neatly typed, in the sequence of the Table of Contents of the Operation and Maintenance Manual, with each item identified with the number and title of the specification Section in which specified, and the name of the product or work item.

D. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address and telephone number of responsible principal.

1.3 Preparation of Submittals: Obtain warranties and bonds, executed in triplicate by responsible Subcontractors, suppliers and manufacturers, within ten (10) days after completion of the applicable item or work. Except for items put into use with OWNER'S permission, leave date of beginning of time of warranty until the date of Substantial Completion is determined. Verify that documents are in proper form and contain full information. Co-execute submittals when required. Retain warranties and bonds until time specified for submittal.

1.4 Time of Submittals: Make submittal within ten (10) days after Date of Substantial Completion, prior to final Application for Payment.

1.5 Applicable Equipment and Services: Warranties and Bonds shall be provided for as specified, including but not limited to, the following services:

Section 02790 - Synthetic Turf
Section 02810 - Field Irrigation System
Section 10140 - Wayfinding Signage
Section 11480 - Athletic Field Equipment

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

DIVISION 2 – SITE WORK

Section 02101	-	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
Section 02102	-	CLEARING, GRUBBING AND STRIPPING
Section 02103	-	TOPSOIL MANAGEMENT
Section 02202	-	REMOVAL OF STRUCTURES AND OBSTRUCTIONS
Section 02203	-	EXCAVATION, FILLING AND BACKFILLING
Section 02220	-	EXCAVATION, BACKFILL AND COMPACTION FOR TRENCHES
Section 02222	-	TEST PITS
Section 02240	-	FILLING AND GRADING
Section 02530	-	DEWATERING
Section 02701	-	STORM DRAINAGE PIPE AND CATCH BASINS
Section 02703	-	HDPE/PVC DRAINAGE PIPE AND PVC CATCH BASINS
Section 02706	-	CONCRETE WALKS AND INCIDENTAL PAVING
Section 02717	-	EROSION CONTROL AND SOIL STABILIZATION
Section 02724	-	ATHLETIC FIELD DRAINAGE BASE CONSTRUCTION
Section 02726	-	BEDDING MATERIAL
Section 02790	-	SYNTHETIC TURF
Section 02810	-	FIELD IRRIGATION SYSTEM
Section 02820	-	CHAIN LINK FENCE AND GATES (VINYL COATED)

SECTION 02101

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PART 1 - General

1.1 Scope: This Section covers the preparation and implementation of the Storm Water Pollution Prevention Plan which includes the installation of temporary erosion controls, slope protection systems, etc. to prevent sediment from leaving the work site and/or entering existing/newly constructed facilities installed and required documentation.

1.2 Environmental Requirements:

A. Protect adjacent properties, prevent soil and sediment erosion and minimize water quality degradation in receiving waters throughout life of Contract in conformance with LDEQ's Storm Water General Permit for Construction Activities Five (5) Acres or More available at the web address below:

http://www.deq.state.la.us/permits/lpdes/lpdesgenpermits.htm

B. The LPDES Notice of Intent (NOI) to Discharge Stormwater Associated with Construction Activity Greater Than Five (5) Acres (copy attached as Appendix A) shall be completed by the CONTRACTOR and submitted to the LDEQ at least 48 hours prior to planned start of construction.

C. The Notice of Termination (NOT) of Coverage Under LPDES General Permit for Stormwater Discharges Associated with Construction Activity Greater Than Five (5) Acres (copy attached as Appendix B) shall be completed by the CONTRACTOR and submitted to the LDEQ once construction and stabilization measures have been satisfactorily completed.

1.3 Reference Standard: State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges," 2006 Edition.

Section 204	-	Temporary Erosion Control
Section 716	-	Vegetative and Fiber Mulch
Section 720	-	Erosion Control Systems

All references made therein to measurement and payment are deleted.

1.4 SWPPP File: The CONTRACTOR shall establish and maintain a SWPPP file which shall include all completed inspection reports, certification forms, notices, permits, etc. The file shall be made available for review by the OWNER, ENGINEER and/or regulatory agencies. This file shall be maintained by the CONTRACTOR for at least three (3) years from the date of completion of the project.

1.5 Submittals: Submit product data in conformance with Section 01340 – Shop Drawings, Samples and Product Data.

1.6 Inspections: The CONTRACTOR shall inspect site stormwater controls at least once every 7 days, or at least once every 14 calendar days, before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours after a storm event of 0.5 inches or greater.

PART 2 - PRODUCTS

2.1 Silt Fence: Silt fence for siltation control shall be as specified on the Drawings. Silt fence stakes shall be minimum of 54" in length and be either metal stakes or 2-inch x 2-inch hardwood stakes driven 1'-6' (12" Min.) into ground. Wire support shall consist of 14-gauge (Min.) woven livestock wire, with maximum wire spacing of 6 inches securely attached to posts.

2.2 Seed: Grass shall be an approved quick-growing species suitable to the area, providing a temporary cover, which will not compete with permanent grasses. Rye grass is the only acceptable grass for winter cover. See Section 02717 - Erosion Control and Soil Stabilization.

2.3 Fertilizer: Fertilizer shall comply with Subsection 1018.16 of the Reference Standard. See Section 02717 - Erosion Control and Soil Stabilization.

2.4 Mulches: (None Required this Project) Mulch shall comply with Subsection 1018.19 of the Referenced Standard. Emulsified Asphalt shall conform to Section 1002 of the Reference Standard.

2.5 Erosion Control Blankets: Erosion control blankets by Erosion Control Systems, Inc., American Excelsior Co. or approved equal and in accordance with 1018.23 of the Reference Standard.

2.6 Hay Bales: Hay or straw bales shall consist of rectangular bales bound by baling twine and shall be 34" in length, minimum.

2.7 Temporary Construction Entrance: (None Required this Project) Material shall be 2"-3" diameter clean stone over filter fabric as specified in Section 1019.01 (Class D) of the Reference Standard.

PART 3 - EXECUTION

3.1 Preparation: The CONTRACTOR shall review the Drawings and implement Storm Water Pollution Prevention Plan.

3.2 General:

A. The CONTRACTOR shall neatly dress and prepare areas designated for erosion control work as specified in the appropriate sections of these Specifications.

B. Prepare only those areas that will be planted presently.

C. Allow for sod thickness in areas to be sodded; if applicable.

D. Preparation of stripped areas: Till subgrade to a depth of at least four inches (4”).

E. Fine-grade, roll, rake and drag lawn areas cutting down high spots and filling low spots, leaving a smooth, even surface of fine-textured soil complying with required grades.

3.3 Erosion Control and Slope Protection Implementation:

A. Place erosion control systems in accordance with Drawings and Storm Water Pollution Prevention Plan conforming to Section 720 of the Reference Standard and as may be dictated by site conditions in order to maintain the intent of the Specifications and Permits at no additional cost to OWNER.

B. Deficiencies or changes on Drawings or Storm Water Pollution Prevention Plan shall be implemented as site conditions change conforming to Section 204 of the Reference Standard.

C. OWNER has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and embankment operations and to direct CONTRACTOR to provide immediate permanent or temporary pollution control measures at no additional cost to the OWNER.

D. Maintain temporary erosion control systems as directed by OWNER or governing authorities to control siltation during life of contract. CONTRACTOR shall respond to maintenance or additional work ordered by OWNER or governing authorities within 48 hours or sooner if required at no additional cost to the OWNER.

E. The CONTRACTOR will be required to incorporate permanent erosion control features into project at earliest practical time to minimize need for temporary controls.

F. Newly constructed storm drainage pipes and inlets shall be protected as required to ensure storm water sediment does not leave the site during rain events

G. Slopes that erode easily or that will not be graded for a period of 14 days or more shall be temporarily seeded as work progresses.

H. All non-paved areas disturbed due to construction shall be temporarily seeded and fertilized as applicable to prevent soil and sediment erosion. Matting shall be installed at the locations shown on the Drawings and all areas shall receive water daily as directed to establish healthy, temporary vegetation.

3.4 Final Vegetative Cover: All non-paved areas disturbed due to construction (excluding areas to be landscaped with beds/plantings, as applicable) shall receive topsoil and be hydroseeded/sodded, as applicable, in accordance with the Erosion and Sedimentation Control Plan and/or the Landscape Plan (if applicable).

3.5 Clean-up: All temporary measures, not directed by the ENGINEER to remain, shall be removed and disposed of in an environmentally sound manner. All areas redisturbed due to clean up shall receive permanent measures as specified herein.

-END OF SECTION-

APPENDIX A

LPDES NOTICE OF INTENT (NOI) TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY GREATER THAN 5 ACRES

(7 PAGES)

To: **Prospective Applicants for a Stormwater General Permit Associated with Construction Activity Greater than 5 Acres**

Attached is a **Stormwater General Permit Associated with Construction Activity Greater than 5 Acres Notice of Intent (NOI) CSW-G,** for a Louisiana Pollutant Discharge Elimination System (LPDES) permit, authorized under EPA's delegated NPDES program under the Clean Water Act. To be considered complete, every item on the form must be addressed and the last page signed by an authorized company agent. If an item does not apply, please enter "NA" (for not applicable) to show that the question was considered.

Two copies (one original and one copy) of your **completed NOI** should be submitted to:

Mailing Address:
Department of Environmental Quality
Office of Environmental Services
Post Office Box 4313
Baton Rouge, LA 70821-4313
Attention: Water Permits Division

Physical Address (if NOI is hand delivered):
Department of Environmental Quality
Office of Environmental Services
602 N Fifth Street
Baton Rouge, LA 70802
Attention: Water Permits Division

Please be advised that completion of this NOI may not fulfill all state, federal, or local requirements for facilities of this size and type.

According to L. R. S. 48:385, any discharge to a state highway ditch, cross ditch, or right-of-way shall require approval from:

Louisiana DOTD
Office of Highways
Post Office Box 94245
Baton Rouge, LA 70804-9245
(225) 379-1927

AND

Louisiana DHH
Office of Public Health
Center for Environmental Services
Post Office Box 4489
Baton Rouge, LA 70821-4489
(225) 342-7395

A copy of the LPDES regulations may be obtained from the Department's website at **http://www.deq.louisiana.gov/portal/tabid/1674/Default.aspx**.

After the review of the NOI, this Office will issue written notification to those applicants who are accepted for coverage under this general permit.

For questions regarding this NOI please contact the Water Permits Division at (225) 219-9371. For help regarding completion of this NOI please contact DEQ, Small Business/Small Community Assistance at 1-800-259-2890.

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Environmental Services, Permits Division
Post Office Box 4313
Baton Rouge, LA 70821-4313
PHONE#: (225) 219-9371

LPDES NOTICE OF INTENT (NOI) TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY GREATER THAN 5 ACRES

(Attach additional pages if needed.)

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by an LPDES permit issued for stormwater discharges associated with construction activity in Louisiana. In order to be automatically authorized under General Permit LAR100000 you must submit a complete and accurate NOI to LDEQ.

EVERY ITEM MUST BE COMPLETED.

Submission of this Notice of Intent also constitutes that implementation of the Storm Water Pollution Prevention Plan required under the general permit will begin at the time the permittee commences work on the construction project identified in Section II below.

SECTION I - FACILITY INFORMATION

A. Permit is to be issued to the following: (must be a party having operational control over construction plans and specifications and /or a party having day-to-day operational control over those activities at a project site which are necessary to ensure compliance with the storm water pollution prevention plan or other permit conditions LAC 33:IX.2501.B and LAC 33:IX.2503.A and B).

1. Legal Name of Applicant
(Company, Partnership, Corporation, etc.) _____

Project Name Avoyelles Parish Recreation and Education Complex

(NOTE: Only one NOI needs to be submitted to cover all of the permittee's activities on the common plan of development or sale (e.g., you do not need to submit a separate NOI for each separate lot in a **residential subdivision** or for two separate buildings being constructed on the same property, provided your SWPPP covers each area for which you are the operator.)

Mailing Address _____

Email: _____ Zip Code: _____

If the applicant named above is not also the owner, state owner name, phone # and address.

Avoyelles Parish Police Jury,

318-253-9208, 312 N Main Street, Marksville, LA 71351

Check status: ☐ Federal ☐ Parish ☐ Municipal ☐
☐ State ☐ Public ☐ Private ☐ Other: _____

2. Location of project. Provide a specific address, street, road, highway, interstate, and/or River Mile/Bank location of the project for which the NOI is being submitted.

5197 LA Highway 115

City Bunkie Zip Code 71322 Parish Avoyelles

SECTION I - FACILITY INFORMATION

Front Gate Coordinates:

Latitude- 31 deg. 00 min. 34.4 sec. Longitude- 92 deg. 08 min. 41.4 sec.

Method of Coordinate Determination: Google Earth

(ex:http://terraserver-usa.com/Quad Map, Previous Permit, website, GPS)

Is the facility located on Indian Lands? [ ] Yes [X] No

B. Stormwater Pollution Prevention Plan Information.

1. Has the Stormwater Pollution Prevention Plan (SWPPP) been prepared? (NOTE: The SWPPP must be prepared prior to submittal of the NOI. Do **not** submit SWPPP with this NOI.)

   [X] Yes [ ] No

2. Indicate address of location of SWPPP if different from Project Location. **(N/A if SWPPP is located at the construction site.)**

   Address _____

   City _____ State _____ Zip _____

C. Location Information

1. Estimated Construction Start Date: (mo/day/yr) 4/6/2026
2. Estimated Construction Completion Date: (mo/day/yr) 4/2/2027
3. Estimate of area to be disturbed (to nearest acre) 7
4. Describe the project or facility being constructed, such as a subdivision, single home, business, road project, or retail development (**be specific, if clearing land indicate if there are future plans to build a facility, subdivision, or retail development**):

   New 4-ballfield complex with associated amenities, cable tension backstops, dugouts, fencing, concrete walks, field lighting, bleacher canopies, concessions/restrooms building, utilities, signage, etc.

5. Is the project part of a larger development or subdivision? (5 acres or greater) [X] Yes [ ] No

   If yes, provide the name of the development or subdivision. Same as project listed above

D. Discharge Information

1. Indicate how the storm water run-off reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your discharge will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Maps can also be obtained online at http://map.deq.state.la.us/ or www.topozone.com. Private map companies can also supply you with these maps. If you cannot locate a map through these sources you can contact the Louisiana Department of Transportation and Development at the address on the first page of this form.

   By On-site storm drain pipes (effluent pipe, ditch, etc.);

   thence into ditch (effluent pipe, ditch, etc.);

   thence into N/A (Parish drainage ditch, canal, etc.);

   thence into Lake Pearl (Bayou Du Lac) (named bayou, creek, stream, etc.)

2. Based on Appendix C, the Outstanding Natural Resource Water (ONRW) list, does your stormwater run-off flow directly into a waterbody listed as an ONRW?

[ ] Yes [X] No

NOTE: If the discharge will ultimately enter a scenic stream, contact the Louisiana Department of Wildlife and Fisheries (LDWF) Scenic Stream Division at 318-343-4044 for direction regarding how to comply with their requirements.

3. Based on Appendix A, Endangered Species Guidance, are there any listed endangered or threatened species in the project area?

[ ] Yes [X] No (Awaiting confirmation by USFWS)

NOTE: Use the Endangered Species Guidance in Appendix A to determine if there are listed endangered or threatened species in the project area. Applicants should contact the U. S. Fish and Wildlife Service (address is in Appendix A) for guidance if they need assistance in making a determination.

4. Based on Appendix B, Historic Properties Guidance, are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or in proximity to the discharge?

[ ] Yes [X] No (Awaiting confirmation by Office of Cultural Development)

5. Was the State Historic Preservation Office (see Part I.A.3.f of the permit) involved in your determination of eligibility?

[X] Yes [ ] No

E. Additional Discharge Information

1. Will the project or facility expansion, post-construction, result in a discharge that will require a wastewater discharge permit such as treated sanitary wastewater from a subdivision or apartment complex, industrial storm water or process wastewater?

[X] Yes [ ] No (e.g. direct to city POTW or no post-construction discharge)

2. If yes, does the subdivision, complex, or facility have an LPDES water discharge permit?

[ ] Yes [X] No

If yes, what is the LPDES permit number? N/A

3. If the facility has an LPDES water discharge permit, will the construction activity result in an increase to the permitted discharge?

[ ] No [ ] Yes – Please Explain:_____

4. If the facility **does not** have an LPDES permit or if the construction will result in an **increased discharge,** the party or developer responsible for construction plans and specifications must provide a Request for Preliminary Determination (RPD), Notice of Intent (NOI), or a request for permit modification within **14 days** of submittal of the Construction NOI to: DEQ, OES, P.O. Box 4313, Baton Rouge, LA 70821-4313, Attn: Water Permits Division**.** Failure to submit this information may result in denial of this and/or any future applications for discharge of wastewater to waters of the state. The "Request for Preliminary Determination of LPDES Permit Issuance Form" requests the information referenced above and can be accessed on our web page http://www.deq.louisiana.gov under DIVISIONS, Water Permits, LPDES Permits, LPDES forms.

SECTION II – LAC 33.I.1701 REQUIREMENTS

A. Does the company or owner have federal or state environmental permits in other states that are identical to, or of a similar nature to, the permit for which you are applying? (This requirement applies to all individuals, partnerships, corporations, or other entities who own a controlling interest of 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.)

☐ Permits in Louisiana. List Permit Numbers: _____

☐ Permits in other states (list states): _____

☐ No environmental permits.

B. Do you owe any outstanding fees or final penalties to the Department? ☐ Yes ☐ No

If yes, please explain.

_____

C. Is your company a corporation or limited liability company? ☐ Yes ☐ No

If yes, is the corporation or LLC registered with the Secretary of State? ☐ Yes ☐ No

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I also certify that a storm water pollution prevention plan, including both construction and post construction controls, has been prepared for the site in accordance with the permit and that such plan complies with approved State, Tribal and/or local sediment and erosion plans or permits and/or storm water management plans or permits. I am aware that signature and submittal of the NOI is deemed to constitute my determination of eligibility under one or more of the requirements of Permit Part I.A.3.e(1), related to the Endangered Species Act requirements. To the best of my knowledge, I further certify that such discharges and discharge related activities will not have an effect on properties listed or eligible for listing on the National Register of Historic Places under the National Historic Preservation Act, or are otherwise eligible for coverage under Part I.A.3.f of the permit. I am also aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NOTE: **SIGNATURE MUST COMPLY WITH REQUIREMENTS STATED ABOVE IN SECTION III.**

Signature _____

Printed Name _____

Title _____

Company _____

Date _____

Telephone _____

*****ANY NOI THAT DOES NOT CONTAIN ALL OF THE REQUESTED INFORMATION WILL BE CONSIDERED INCOMPLETE. NOI PROCESSING CANNOT PROCEED UNTIL ALL REQUIRED INFORMATION HAS BEEN SUBMITTED**.

SECTION III - SIGNATURE

According to the Louisiana Water Quality Regulations, LAC 33:IX.2503, the following requirements shall apply to the signatory page in this application:

Chapter 25. Permit Application and Special LPDES Program Requirements

2503. Signatories to permit applications and reports

A. All permit applications shall be signed as follows:

1. For a corporation - by a responsible corporate officer. For the purpose of this Section responsible corporate officer means:

   (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

   (b) The manager of one or more manufacturing, production, or operating facilities provided: the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to ensure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken together complete and accurate information for permit application requirements; and the authority to sign documents has been assigned or delegated to the manager in accordance with corporation procedures.

NOTE: LDEQ does not require specific assignments or delegations of authority to responsible corporate officers identified in the Permit **Standard Permit Conditions, Part VI.G.1.a(1)** The agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the state administrative authority to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Permit **Standard Permit Conditions, Part VI.G.1a.(2)** rather than to specific individuals.

2. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively; or

3. For a municipality, state, federal or other public agency – by either a principal executive officer or ranking elected official. For the purposes of this section a principal executive officer of a federal agency includes:

   (a) The chief executive officer of the agency, or

   (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

APPENDIX A
ENDANGERED SPECIES GUIDANCE – LARGE CONSTRUCTION GP

I. INSTRUCTIONS

A list of endangered and threatened species that EPA has determined may be affected by the activities covered by the Construction General Permit is available under OTHER LPDES DOCUMENTS in http://www.deq.louisiana.gov/portal/Default.aspx?tabid=243. These species are listed by parish. In order to be eligible for coverage under this permit, operators must:

Determine whether any species listed in this Guidance or critical habitat are in proximity to the facility,

Pursuant to Permit Part I.A.3.e follow the procedures found in this Guidance to protect listed endangered and threatened species and designated critical habitat and determine that the stormwater discharges and BMPs to control stormwater run off covered under this permit meet one or more of the eligibility requirements of Part I.A.3.e.(1) of this permit. Signature and submittal of the Notice of Intent form is deemed to constitute the Operator's compliance with eligibility requirements for permit coverage.

To determine permit eligibility and to avoid unauthorized impacts upon threatened or endangered species or on the critical habitat for those species, you must follow steps 1 through 4 (and 5 if applicable), below when completing the NOI form and when developing the pollution prevention plan.

NOTE: At any step in the determination, applicants may contact the U.S. Fish and Wildlife Service (FWS) for guidance. That request should be in writing and should include a description of the facility and a topographic map depicting the locations of the facility, the proposed construction activities, and the associated stormwater discharges.

U.S. Fish and Wildlife Service
646 Cajundome Blvd.
Suite 400
Lafayette, LA 70506
(337) 291-3108

STEP 1: DETERMINE IF THE CONSTRUCTION SITE OR ASSOCIATED STORMWATER DISCHARGES ARE WITHIN THE VICINITY OF FEDERALLY LISTED THREATENED OR ENDANGERED SPECIES, OR THEIR DESIGNATED CRITICAL HABITAT.

If either the proposed site or the path of stormwater from the site to the receiving stream is in a parish included on the Endangered Species List, the applicant should proceed to Step 2 below. If, however, neither is located in a listed parish, then the applicant should enter “no” in Section I.D.3 of the NOI, and move on to the next item.

If no species are listed in the site’s parish or if a facility’s parish is not found on the list, the applicant is eligible for permit coverage and may indicate in the Notice of Intent that no species are found in the project area and certify that it is eligible for permit coverage by marking “No” on the NOI. Where a project is located in more than one parish, the lists for all parishes shall be reviewed.

STEP 2: DETERMINE IF ANY SPECIES MAY BE FOUND "IN PROXIMITY" TO THE CONSTRUCTION ACTIVITY'S STORMWATER DISCHARGES:

A species is in proximity to a construction activity's stormwater discharge when the species is:

- Located in the path or immediate area through which or over which contaminated point source stormwater flows from construction activities to the point of discharge into the receiving water; or

- Located in the immediate vicinity of, or nearby, the point of discharge into receiving waters; or

- Located in the area of a site where stormwater BMPs are planned or are to be constructed.

The area in proximity to be searched/surveyed for listed species will vary with the size and structure of the construction activity, the nature and quantity of the stormwater discharges, and the type of receiving waters. Given the number of construction activities potentially covered by the permit, no specific method to determine whether species are in proximity is required for permit coverage. Instead, operators should use the method or methods which best allow them to determine to the best of their knowledge whether species are in proximity to their particular construction activities. These methods may include:

- Conducting visual inspections: This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.

- Contacting the nearest State or Tribal Wildlife Agency or U.S. Fish and Wildlife Service (FWS) offices. Many endangered and threatened species are found in well-defined areas or habitats. That information is frequently known to State, Tribal, or Federal wildlife agencies.

- Contacting local/regional conservation groups. These groups inventory species and their locations and maintain lists of sightings and habitats.

- Conducting a formal biological survey. Larger construction sites with extensive stormwater discharges may choose to conduct biological surveys as the most effective way to assess whether species are located in proximity and whether there are likely adverse effects.

- Conducting an Environmental Assessment Under the National Environmental Policy Act (NEPA). Some construction activities may require environmental assessments under NEPA. Such assessments may indicate if listed species are in proximity. (Construction General Permit coverage does not trigger NEPA because it does not regulate any dischargers subject to New Source Performance Standards under Section 306 of the Clean Water Act. See CWA 511(c). However, some construction activities might require review under NEPA because of Federal funding or other Federal nexus.)

If no species are in proximity, an operator is eligible for Construction General Permit coverage under Permit Part I.A.3.E.(1)(a).

If listed species are found in proximity to a facility, operators must indicate the location and nature of this presence in the stormwater pollution prevention plan and follow step 3 below.

STEP 3: DETERMINE IF SPECIES OR CRITICAL HABITAT COULD BE ADVERSELY AFFECTED BY THE CONSTRUCTION ACTIVITY'S STORMWATER DISCHARGES OR BY BMPs TO CONTROL THOSE DISCHARGES.

Scope of Adverse Effects: Potential adverse effects from stormwater include:

- Hydrological. Stormwater may cause siltation, sedimentation or induce other changes in the receiving waters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.

- Habitat. Stormwater may drain or inundate listed species habitat.

- Toxicity. In some cases, pollutants in stormwater may have toxic effects on listed species.

The scope of effects to consider will vary with each site. Operators must also consider the likelihood of adverse effects on species from any BMPs to control stormwater. Most adverse impacts from BMPs are likely to occur from the construction activities. However, it is possible that the operation of some BMPs (for example, larger stormwater retention ponds) may affect endangered and threatened species.

If adverse effects are determined to be not likely, then the operator is eligible for permit coverage under Part I.A.3.e(1)(a).

If adverse effects are likely, operators should follow step 4 below.

STEP 4: DETERMINE IF MEASURES CAN BE IMPLEMENTED TO AVOID ANY ADVERSE EFFECTS:

If an operator determines that adverse effects cannot be ruled out or are likely, it can receive coverage if appropriate measures are undertaken to avoid or eliminate any actual or potential adverse effects prior to applying for permit coverage. These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating BMPs, or limiting the size of construction activity that will be subject to stormwater discharge controls.

At this stage, operators must contact the FWS (or the National Marine Fisheries Service if referred to that Service by FWS) to see what appropriate measures might be suitable to avoid or eliminate adverse impacts to listed species and/or critical habitat. (See 50 CFR 402.13(b)). This can entail the initiation of informal consultation with the FWS (and/or NMFS, if appropriate) which is described in more detail below at step 5.

If operators adopt measures to avoid or eliminate adverse effects, they must continue to abide by them during the course of permit coverage. These measures must be described in the stormwater pollution prevention plan and may be enforceable as permit conditions.

If appropriate measures to avoid the likelihood of adverse effects are not available to the operator, the operator should follow step 5 below.

STEP 5: DETERMINE IF THE ELIGIBILITY REQUIREMENTS OF PART I.A.3.E.(1)(b)-(e) CAN BE MET.

Where adverse effects are likely, the operator must contact FWS. Operators may still be eligible for permit coverage if any likelihood of adverse effects is addressed through meeting the criteria of Part I.A.3.e.(1)(b)-(e) of the permit if:

- I.A.3.e.(1)(b). The operator's activity has received previous authorization through an earlier Section 7 consultation or issuance of a Endangered Species Act (ESA) Section 10 permit (incidental taking permit) and that authorization addressed stormwater discharges and/or BMPs to control stormwater runoff (e.g., developer included impact of entire project in consultation over a wetlands dredge and fill permit under Section 7 of the ESA).

OR

- I.A.3.e.(1)(c). The operator's activity was previously considered as part of a larger, more comprehensive assessment of impacts on endangered and threatened species and /or critical habitat under Section 7 or Section 10 of the Endangered Species Act which accounts for stormwater discharges and BMPs to control stormwater runoff (e.g., where an area-wide habitat conservation plan and Section 10 permit is issued which addresses impacts from construction activities including those from stormwater or a NEPA review is conducted which incorporates ESA Section 7 procedures).

OR

- I.A.3.e.(1)(d). Consultation with the FWS (or NMFS, if appropriate) for the operator's stormwater discharges and BMPs to control stormwater runoff results in either: 1) FWS/NMFS written concurrence with a finding of no likelihood of adverse effects (see 50 CFR 402.13) or 2) issuance of a biological opinion in which FWS (or NMFS) finds that the action is not likely to jeopardize the continued existence of listed endangered or threatened species or result in the adverse modification or destruction of critical habitat (see 50 CFR 403.14(h)).

Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the pollution prevention plan. As noted above, operators must initiate consultation during Step 4 above (upon becoming aware that endangered and threatened species are in proximity to the facility).

OR

- I.A.3.e.(1)(e). The operator's activity was considered as part of a larger, more comprehensive site-specific assessment of impacts on endangered and threatened species by the owner or other operator of the site when it developed a SWPPP and that permittee met the eligibility requirements stated in items I.A.3.e.(1)(a), (b), (c), or (d) of the permit (e.g., owner was able to determine there would be no adverse impacts for the project as a whole under item (a), so contractor meets the eligibility requirements stated in item (e)). Utility companies applying for area-wide permit coverage meet the eligibility requirements stated in item (e) since authorization to discharge is contingent on a principal operator of a construction project having been granted coverage under this, or an alternative LPDES permit for the areas of the site where utilities installation activities will occur.

The determination of eligibility under the conditions of permit Parts I.A.3.e.(1) (b)-(e) shall be documented in the facility's SWPPP and copies of all applicable documents, such as FWS approval letters, included in the SWPPP. The operator must comply with any terms and conditions imposed under the eligibility requirements of permit Parts I.A.3.e.(1)(a), (b), (c), (d), (e) to ensure that stormwater discharges or BMPs to control stormwater runoff are protective of listed endangered and threatened species and/or critical habitat. Such terms and conditions must be incorporated in the operator's stormwater pollution prevention plan.

If the eligibility requirements of Part I.A.3.e.(1)(a)-(e) cannot be met then the operator may not receive coverage under this permit. Operators should then consider applying to LDEQ for an individual permit.

This permit does not authorize any taking (as defined under Section 9 of the Endangered Species Act) of endangered or threatened species unless such takes are authorized under Sections 7 or 10 the Endangered Species Act. Operators who believe their construction activities may result in takes of listed endangered and threatened species should be sure to get the necessary coverage for such takes through an individual consultation or Section 10 permit.

This permit does not authorize any stormwater discharges or BMPs to control stormwater runoff that are likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the Endangered Species Act or result in the adverse modification or destruction of designated critical habitat.

II. ENDANGERED SPECIES PARISH LIST

See http://www.deq.louisiana.gov/portal/. Click on Info About **Water**, then "LPDES Permits, Information, . . ." under Permits, then "Current Endangered Species Listing" under **Other LPDES Documents**.

APPENDIX B
HISTORIC PROPERTIES GUIDANCE

Applicants must determine whether their facility's stormwater discharge has the potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places.

For existing dischargers who do not need to construct BMPs for permit coverage, a simple visual inspection may be sufficient to determine whether historic properties are affected. However, for facilities which are new stormwater dischargers, applicants should conduct further inquiry to determine whether historic properties may be affected by the stormwater discharge or BMPs to control the discharge. In such instances, applicants should first determine whether there are any historic properties or places listed on the National Register or if any are eligible for listing on the register (e.g., they are “eligible for listing”).

Due to the large number of entities seeking coverage under this permit and the limited number of personnel available to the State Historic Preservation Officer to respond to inquiries concerning the location of historic properties, it is suggested that applicants first access the “National Register of Historic Places” information listed on the Louisiana Office of Cultural Development’s web page at the address listed below. The address for the Louisiana State Historic Preservation Officer is also listed below. Applicants may also contact city, parish or other local historical societies for assistance, especially when determining if a place or property is eligible for listing on the register.

The following scenarios describe how applicants can meet the permit eligibility criteria for protection of historic properties under this permit:

(1) If historic properties **are not identified** in the path of a facility’s stormwater discharge or where construction activities are planned to install BMPs to control such discharges (e.g., diversion channels or retention ponds), or

if historic properties **are identified** but it is determined that they will not be **affected** by the discharge or construction of BMPs to control the discharge

then the applicant has met the permit eligibility criteria under Part I.A.3.f.

(2) If historic properties **are identified** in the path of a facility’s stormwater discharge or where construction activities are planned to install BMPs to control such discharges, and it is determined that **there is the potential** to adversely affect the property, the applicant can still meet the permit eligibility criteria if he/she obtains and complies with a written agreement with the State Historic Preservation Officer which outlines measures the applicant will follow to mitigate or prevent those adverse effects. The contents of such a written agreement must be included in the facility's stormwater pollution prevention plan.

In situations where an agreement cannot be reached between an applicant and the State Historic Preservation Officer, applicants should contact the Advisory Council on Historic Preservation listed below in this addendum for assistance.

The term “adverse effects” includes but is not limited to damage, deterioration, alteration or destruction of the historic property or place. LDEQ encourages applicants to contact the Louisiana State Historic Preservation Officer as soon as possible in the event of a potential adverse effect to a historic property.

Applicants are reminded that they must comply with all applicable State and local laws concerning the protection of historic properties and places.

I. Internet Information on the National Register of Historic Places

An electronic listing of the “National Register of Historic Places,” as maintained by the Louisiana Office of Cultural Development, Division of Historic Preservation, can be accessed on the Internet at http://www.crt.state.la.us/hp/historicplacesprogram.asp. Remember to use small case letters when accessing Internet addresses.

II. Louisiana State Historic Preservation Officer (SHPO)

Louisiana, SHPO, Office of Cultural Development, P.O. Box 44247, Baton Rouge, LA 70804-4247. For questions contact the Section 106 Review Coordinator, Telephone: (225) 342-8170.

III. Advisory Council on Historic Preservation

Advisory Council on Historic Preservation, 12136 W. Bayaud Ave., Suite 330, Lakewood, CO 80228, Telephone (303) 969-5110, Fax: (303) 969-5115, Email: achp@achp.gov

APPENDIX C
Outstanding Natural Resource Waters

ATCHAFALAYA RIVER BASIN:

None

BARATARIA BASIN:

Bayou Des Allemands – from Lac Des Allemands to old US 90
Bayou Des Allemands – fro Hwy. 90 to Lake Salvador

CALCASIEU RIVER BASIN:

Calcasieu River – from LA Highway 8 to the Rapides/Allen Parish line
Calcasieu River – from Rapides-Allen Parish line to Marsh Bayou
Calcasieu River – from Marsh Bayou to saltwater barrier
Whiskey Chitto Creek – from the southern boundary of Fort Polk Military Reservation to the Calcasieu River
Six Mile Creek – East and West Forks from the southern boundary of Fort Polk Military Reservation to Whiskey Chitto Creek
Ten Mile Creek – from headwaters to Whiskey Chitto Creek

LAKE PONTCHARTRAIN BASIN:

Comite River – from Wilson-Clinton Highway to entrance of White Bayou
Amite River – from Mississippi State Line to LA Highway 37
Blind River – from the Amite River Diversion Canal to the mouth at Lake Maurepas
Blind River – from headwaters to Amite River Diversion Canal
Tickfaw River – from the Mississippi State Line to LA Highway 42
Tangipahoa River – from the Mississippi State Line to I-12
Chappepeela Creek – from Louisiana Highway 1062 to Tangipahoa River
Tchefuncte River – from headwaters to Bogue Falaya River, includes tributaries
Lower Tchefuncte River – from Bogue Falaya River to LA Highway 22
Bogue Falaya River – from headwaters to Tchefuncte River
Bayou Lacombe – from the headwaters to U.S. Highway 190
Bayou Lacombe – from U.S. Highway 190 to Lake Pontchartrain
Bayou Cane – from the headwaters to U.S. Highway 190
Bayou Cane – from U.S. Highway 190 to Lake Pontchartrain
Bayou Labranche – from headwaters to Lake Pontchartrain
Bayou Trepagnier – from Norco to Bayou Labranche
Bayou St. John
Bayou Chaperon
Bashman Bayou – from headwaters to Bayou Dupre
Bayou Dupre – from Lake Borgne Canal to Terre Beau Bayou
Lake Borgne Canal – from the Mississippi River siphon at Violet to Bayou Dupre; also called Violet Canal
Pirogue Bayou – from Bayou Dupre to New Canal
Terre Beau Bayou – from Bayou Dupre to New Canal
Bayou Bienvenue – from Bayou Villere to Lake Borgne

MERMENTAU RIVER BASIN:

None

VERMILION-TECHE RIVER BASIN:

Spring Creek – from headwaters to Cocodrie Lake

Bayou Cocodrie – from U.S. Highway 167 to the Bayou Boeuf-Cocodrie Diversion Canal

MISSISSIPPI RIVER BASIN:

None

OUACHITA RIVER BASIN:

Bayou Bartholomew – from Arkansas State Line to Ouachita River

Bayou de L'Outre – from the Arkansas State Line to the Ouachita River

Bayou D'Arbonne – from Bayou D'Arbonne Lake to the Ouachita River

Corney Bayou – from the Arkansas State Line to Corney Lake

Corney Bayou – from Corney Lake to Bayou D'Arbonne Lake

Middle Fork of Bayou D'Arbonne – from headwaters to Bayou D'Arbonne Lake

Little River – from Bear Creek to Catahoula Lake

Fish Creek – from headwaters to Little River

Trout Creek – from headwaters to Little River

Big Creek – from the headwaters to Little River

PEARL RIVER BASIN:

Holmes Bayou – from Pearl River to West Pearl River

West Pearl River – from headwaters to Holmes Bayou

West Pearl River – from Holmes Bayou to The Rigolets; includes the east and west mouths)

Morgan River – from Porters River to West Pearl River

Wilson Slough – from Bogue Chitto to West Pearl River

Bradley Slough - from Bogue Chitto to West Pearl River

Pushepatapa Creek – from headwaters and tributaries at Mississippi State Line to Pearl River flood plain

Bogue Chitto River – from Mississippi State Line to Pearl River Navigation Canal

RED RIVER BASIN:

Bayou Dorcheat – from Arkansas State Line to Lake Bistineau

Black Lake Bayou – from one mile north of Leatherman Creek to Black Lake

Saline Bayou – from headwaters near Arcadia to Saline Lake

Kisatchie Bayou – from its Kisatchie National Forest to Old River

Saline Bayou – from Larto Lake to Saline Lake

Bayou Cocodrie – from Little Cross Bayou to Wild Cow Bayou

SABINE RIVER BASIN:

Pearl Creek – from headwaters to Sabine River

TERREBONNE BASIN:

Bayou Penchant – from Bayou Chene to Lake Penchant

APPENDIX B

LPDES NOTICE OF TERMINATION (NOT) OF COVERAGE UNDER LPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY GREATER THAN 5 ACRES

(1 PAGE)

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Environmental Services, Water Permits Division
Post Office Box 4313
Baton Rouge, La 70821-4313
Phone#: (225) 219-9371

LPDES NOTICE OF TERMINATION (NOT) OF COVERAGE UNDER LPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY GREATER THAN 5 ACRES

SECTION I –PERMIT INFORMATION

Facility's Storm Water General Permit Authorization Number LAR10 ___ ___ ___ ___

Check here if you are no longer the Operator of the Facility OR if the facility has been sold ☐ Date: _____

Check here if the Storm water discharge associated with the construction activity is Being Terminated ☐ Date: _____

SECTION II – FACILITY OPERATOR INFORMATION

Name _____

Address _____

City _____

State _____ Zip _____ Phone _____

SECTION III – FACILITY/SITE LOCATION INFORMATION

Name of Project Avoyelles Parish Recreation and Education Complex

Location of Project 5197 LA Highway 115

City Bunkie State LA Zip 71322

Parish Avoyelles

SECTION IV – CERTIFICATION

I certify under penalty of law that all storm water discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or that I am no longer an operator at the construction site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under this general permit, and that discharging pollutants in storm water associated with construction activity to waters of the State is unlawful under the Clean Water Act where the discharge is not authorized by a LPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violation of this permit or the Clean Water Act.

Print Name _____ Date _____

Signature _____

SECTION 02102

CLEARING, GRUBBING AND STRIPPING

PART 1 - GENERAL

1.1 Scope: This Section covers all clearing, grubbing and stripping work required for the construction of the project.

1.2 Clearing and Grubbing:

A. The CONTRACTOR shall clear and grub areas as designated on the Drawings or required by the ENGINEER dependent upon existing field conditions as required to construct the project.

B. Care shall be taken to leave nothing of material size or accumulated mass which thereafter may float or obstruct any pipe or waterway.

C. The CONTRACTOR shall not cut or injure any trees or other vegetation outside the limits of the areas on which work is to be done without permission and he shall guard against like action by his employees.

1.3 Stripping: The CONTRACTOR shall strip areas which are designated by the ENGINEER for the proposed location of any aboveground utility improvements. The limits of the stripping shall be within the area so designated.

PART 2 - PRODUCTS

2.1 Equipment:

A. Equipment used for clearing and grubbing shall be at the CONTRACTOR'S option.

B. Blasting will not be permitted.

PART 3 - EXECUTION

3.1 Clearing:

A. The CONTRACTOR shall cut or otherwise remove all trees, saplings, brush and vines, (except those trees and other vegetation marked for retention by the OWNER); windfalls, logs and trees lying on the ground; dead trees and stubs more than one foot high above the ground surface, but not their stumps; trees which have been partially uprooted by natural or other causes, including their stumps; and other matter such as snags, leaves, sawdust, bark and refuse.

B. Except where clearing is done by uprooting with machinery or where stumps are left longer to facilitate subsequent grubbing operations, trees, stumps, and stubs to be cleared shall be cut as close to the ground surface as practicable, with no more than six (6) inches remaining above the ground surface in the case of small trees, and twelve (12") inches in the case of large trees. Saplings, brush, and vines shall be cut off close to the ground.

3.2 Grubbing: The CONTRACTOR shall remove all stumps within the servitude or designated project area completely, remove all roots larger than three (3") inches in diameter to a depth of 18 inches, and remove all roots larger than 1/2 inch in diameter to a depth of six (6) inches. Such depths shall be measured from the existing ground surface or the proposed finished grade, whichever is lower.

3.3 Stripping: Topsoil shall be removed to its full depth where it occurs in areas to be filled or excavated and shall be stockpiled for use in finish grading. All precautions shall be taken to avoid contamination of topsoil by other excavated material and to prevent washing of topsoil by other excavated material and to prevent washing of topsoil into excavations, drainage or watercourses.

3.4 Depressions: Except in areas to be excavated, depressions caused by grubbing operations shall be filled with suitable material which shall be compacted to conform to the surrounding ground.

3.5 Disposal:

A. All material collected in the course of the clearing and grubbing that will not remain shall become the property of the CONTRACTOR and shall be disposed of in a manner satisfactory to the OWNER. Such disposal shall be carried on after removal of the materials in the clearing and grubbing operations and shall not be left until the final clean up period.

B. Burning shall not be done except at locations and in conformity with the regulations and requirements of the governing air pollution control and fire authorities. The CONTRACTOR shall make all necessary arrangements and pay for all necessary permits. The CONTRACTOR shall take all precautions necessary to prevent the spread of fire outside the immediate areas where burning is being done.

C. Prior to depositing surplus material at any off site location, the CONTRACTOR shall obtain a written agreement between himself and the owner of the property on which the disposal is proposed giving permission for the CONTRACTOR to enter and deposit the material at no expense to the project OWNER. A copy of the agreement shall be furnished to the OWNER.

- END OF SECTION -

SECTION 02103

TOPSOIL MANAGEMENT

PART 1 - GENERAL

1.1 Scope: This Section includes the location, removal, stockpiling, protection and re-use of existing topsoil to be used for this project.

1.2 Application Publications:

A. United States Department of Agriculture Soil Conservation Service and Forest Services - Soil Survey of Rapides Parish, Louisiana, issued March 1980.

1.3 Location and Determination of Topsoil: The Contractor will be responsible locating and determining characteristics of available on-site topsoil to be managed for re-use on this project.

PART 2 - PRODUCTS

2.1 Topsoil: Available on-site topsoil is defined as non-plastic silty loam located in the upper 8" – 10" of the natural surface, having a pH of 5.9 to 6.6 and an organic matter content greater than two percent (2%) by weight. Generally, the upper part of the soil that is richest in organic matter is most valuable. Topsoil shall be free of debris, noxious weeds, toxic substances, muck, and rocks one half (½") inch and larger, clay, debris and any other undesirable matter that would be detrimental to the intended use of the topsoil for this project.

2.2 Soil Amendments: Refer to Section 02717 – Erosion Control and Soil Stabilization for Fertilizer and Agricultural Lime.

PART 3 - EXECUTION

3.1 Spreading Thickness: Topsoil shall be respread not less than four inches (4") thick or as directed on the Drawings. The thickness specified herein is compacted thicknesses.

3.2 Stripping: Strip topsoil from those areas that will be disturbed by excavation and filling operations. Stripping shall progress as earthwork demands. Stripping depths varies, refer to Grading Plans. Contractor shall be responsible for determining the depth of stripping for removal of topsoil and/or organic materials.

3.3 Stockpiling: Topsoil for re-use shall be stockpiled (as required) in areas to be determined by the Contractor and/or as shown on the Drawings. Generally, respreading is easier and more economical when topsoil is stock-piled in small piles near the area(s) where it will be re-used. Stockpiles shall not exceed slopes of 2:1 and shall not be higher than five feet (5') to prevent compaction. Stockpiles shall contain similar type soils. Do not mix topsoils from different areas where they are to be returned.

A. Stockpile Maintenance: All Stockpiles shall be protected with silt fences regardless of storage time.

3.4 Installation: The top six inches (6") of the subgrade or area to receive topsoil shall have a pH of 5.1-7.1 to support adequate vegetation. CONTRACTOR shall provide soil amendments in conformance with Section 02717 – Erosion Control and Soil Stabilization. This is a requirement for all areas disturbed due to construction whether the site yields sufficient quantities of topsoil or not. In general, any areas requiring topsoil and sprigging shall be prepared accordingly. Once the area meets the aforementioned requirements and immediately prior to spreading the topsoil, loosen the subgrade a minimum of two inches (2") by disking and/or scarifying to ensure bonding of the prepared subgrade and topsoil. Spread the topsoil to the thicknesses specified in Paragraph 3.2 of this Section. Compact the topsoil enough to ensure good contact with the prepared subgrade, but avoid excessive compaction as it increases run off and inhibits germinations. Do not install topsoil in areas that are wet, muddy, frozen, compacted and/or dried hard. Lightly disk immediately prior to seeding.

3.5 Sodding: Refer to Section 02717 – Erosion Control and Soil Stabilization.

3.6 Hydroseeding: Refer to Section 02717 – Erosion Control and Soil Stabilization.

3.7 Watering: Refer to Section 02717 – Erosion Control and Soil Stabilization.

- END OF SECTION -

SECTION 02202

REMOVAL OF STRUCTURES AND OBSTRUCTIONS

PART 1 - GENERAL

1.1 Scope: This Section covers the work required to remove those existing structures and other obstructions not designed or permitted to remain for construction. Existing structures and obstructions to be removed, demolished or partially demolished include, but are not limited to aggregate/gravel surfacing, trees, stumps, drainage pipe, etc.

1.2 Referenced Standard: Conform to the following Section of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2006 Edition, except as modified herein:

Section 202 - Removal of Structures and Obstructions
Section 723 - Granular Material

All references made therein to measurement and payment are deleted.

PART 2 - PRODUCTS

2.1 Non Shrink Cement Grout: Non-shrink cement grout shall consist of cement, aggregate and additives formulated to meet the following volume change requirements. Early volume change (within 24 hours) as tested by ASTM C 827 shall be limited to zero (0) percent shrinkage and four (4) percent maximum expansion. Long term volume change of hardened non-shrink cement grout (after 1 day for cure) shall conform to the Corps of Engineers Specification for Non-Shrink Grout, CRD-C621-82B. Shrinkage shall be zero (0) percent and expansion limited to a maximum of 0.4 percent volume change. Cement additives required to meet this specification shall be recommended by the grout manufacturer but shall be non-staining and non-metallic. Grout shall be equal to "Five Star" cement products manufactured by the U.S. Grout Corporation, Quikrete Companies, or approved equal.

2.2 Granular Backfill: Granular Backfill shall be fine aggregate or sandy material as specified in Section 1003.07 of the Reference Standard.

2.3 Select Fill: Select fill shall have a unified soil classification (ASTM D2487) as silty-clayey sands (SM-SC), low plasticity sandy clays (CL) or clayey sands (SC) with a plasticity index (PI) range of eight (8) to twenty (20), with a minimum 30 percent retained on the No. 200 sieve.

PART 3 - EXECUTION

3.1 General: The CONTRACTOR shall remove and dispose of all structures and obstructions designated for demolition, etc. that would interfere with construction or are required to permit construction as designed. It shall include backfilling resulting trenches, holes, pits, etc. Debris or excess material shall be disposed of off the project site.

3.2 Material Difference in Conditions: If structures or obstructions are encountered which differ materially from those ordinarily encountered, said conditions shall be immediately reported to the ENGINEER and the scope of work determined and appropriate costs negotiated for a change order.

3.3 Salvageable Material: CONTRACTOR shall meet with OWNER prior to beginning work to determine which materials shall be salvaged. CONTRACTOR shall be responsible for delivering designated salvageable material to the OWNER.

3.4 Compaction: Compaction shall conform to Paragraphs 3.8 – 3.9 of Section 02220 - Excavation, Backfill and Compaction for Trenches.

- END OF SECTION -

SECTION 02203

EXCAVATION, FILLING AND BACKFILLING

PART 1 - GENERAL

1.1 Scope: This Section covers all excavation, filling and backfilling as required for the proposed project.

1.2 Reference Standard: Work shall conform to the following Section of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2006 Edition, except as may be modified herein:

Section 203 - Excavation and Embankment

1.3 Applicable Publications: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Testing and Materials (ASTM) Publications.

D 698 Test Methods for Moisture - Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb. (2.49 kg) Rammer and 12 inch (304.8 mm) Drop

1.4 Submittals: Submit product data under provisions of Section 01340 – Shop Drawings, Samples and Product Data.

PART 2 - PRODUCTS

2.1 Suitable Fill Materials: Suitable fill materials shall conform to the following:

A. Usable Soils (Imported): "Usable Soils" shall be as defined in Paragraph 203.06(a.) of the Reference Standard.

B. Select Fill Material (Imported): Select fill material shall be free of organic or other deleterious materials, homogeneous mixture, have a maximum particle size of three (3) inches, have a liquid limit less than 40 and plasticity index between 8 and 20, and consist of silty-clayey sands (SM-SC), low plasticity sandy clays (CL) or clayey sands (SC) as defined by the Unified Soil Classification System. The material shall have a minimum of 30% retained on the 200 mesh sieve.

PART 3 – EXECUTION

3.1 General: All excavation, embankment and backfill work shall be in accordance with the Reference Standard except as modified herein.

3.2 Stripping: Topsoil shall be stockpiled for future use in final grading.

3.3 Filling and Embankment:

A. Imported fill to complete the required grading at the site may consist of "Usable Soils" or "Select Fill" as described in Paragraph 2.1.A and 2.1.B above. Fill shall be placed in horizontal layers not exceeding eight (8") inches in loose thickness, or six (6") inches when hand operated compactors are used. After placing, each layer shall be plowed, disked, or otherwise broken up, moistened or aerated as necessary, thoroughly mixed and compacted as specified using rubber-tired, and/or pneumatic rollers using strict moisture control.

B. Embankment shall not begin until construction below finish grade has been approved, underground utilities systems have been inspected, tested and approved, forms removed, and the excavation cleaned of trash and debris. Embankment shall not be placed in wet areas. Fill shall not be placed against structures prior to seven (7) days after completion of the structures. As far as practicable, backfill shall be brought up evenly on each side of the structure and sloped to drain away from the structure.

3.4 Compaction: Compaction requirements as set forth in the Reference Standard are hereby deleted. Fill and embankment shall be compacted the following maximum dry density as determined by the Standard Proctor (ASTM D698) test within one percentage point (1%) below to three percentage points (3%) above optimum moisture content:

A. Structure and Paved Areas: 95% (Min.)

B. Synthetic Turf Areas: 92% (Min.)

C. Other Areas: 90% (Min.)

If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disking or scarifying.

3.5 Subgrade Preparation for Concrete Pavements:

A. After stripping and undercutting operations, exposed soils at finished subgrade in the paving areas should be proof-rolled with a heavy, loaded pneumatic vehicle such as a 20-25 ton loaded dump truck. Existing soils that yield (or have tendency to pump) under the proof-roll shall be mitigated by over-excavation and backfilling with "Usable Soils" or "Select Fill" Material, reprocessing to remove moisture, modification with lime or cement admixture, or using geotextiles.

B. After stripping and proof-rolling but prior to placing fill, the exposed soils should be scarified and then processed to a moisture content between one (1) percentage point below and three (3) percentage points above the Standard Proctor optimum. The subgrade soils should be re-compacted to a density of at least 95 percent of the Standard Proctor (ASTM D-698) maximum dry density for a depth of at least eight (8) inches below the surface.

Contractor shall include the cost for removal of weak/yielding soils encountered at proposed subgrade elevations and replacement with Suitable Fill Material (native or imported), as directed by the Engineer, for the following quantities:

Base Bid: 100 cubic yards (in-place)

Note: Each cubic yard (C.Y.) of quantity listed above shall include the complete removal and replacement of one (1) C.Y. of in-place weak/yielding soils (i.e. 1 C.Y. = 1 C.Y. removed + 1 C.Y. replaced).

3.6 Excavation Near Existing Structures:

A. Excavation near an existing structure shall not be allowed closer to the structure than the depth of the excavation below the bottom of the structure without shoring the excavation with sheeting.

B. The CONTRACTOR'S attention is directed to the fact that storm drains and other underground utilities may exist within or immediately adjacent to the areas of proposed construction. Some of these utilities are indicated on the Drawings; however, no attempt has been made to show all of the services, and the completeness and accuracy of the information is supplied for the purpose of providing the CONTRACTOR with an indication as to the approximate locations of utilities at the work areas so that the he will be made aware of their presence.

C. All utility lines shall be located on the ground with pipe locator equipment well ahead of the work at all times. All such locations shall be plainly marked by coded paint symbols on pavement or by marked stakes in the ground. Such locations shall be established at least 50 feet in advance of all excavation. All such location work shall be provided by the CONTRACTOR, to the satisfaction of the ENGINEER.

D. As the excavation approaches pipe, conduits, or other underground structures, digging by conventional trenching machine methods shall be discontinued. Only manual methods of excavating shall be employed around buried utilities. The CONTRACTOR shall include manual excavation in the work to be done under this contract.

3.7 Protection of Existing Structures:

A. All existing pipes, poles, wires, fences, walls, curbing, property line markers, and other structures which in the opinion of the OWNER must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from damage by the CONTRACTOR. In case of damage, the CONTRACTOR shall notify the property Owner so that the proper steps may be taken to repair any and all damage done. When the property Owners do not wish to make the repairs themselves, all damage shall be repaired by the CONTRACTOR; or, if not promptly done by him, the Owner may have the repairs made at the expense of the CONTRACTOR.

B. All utility services shall be supported by suitable means so that the services do not fail when tamping and settling occurs.

3.8 Sheeting and Bracing:

A. The CONTRACTOR shall furnish, place, and maintain such sheeting and bracing as may be required to support the sides of excavation, to prevent any movements which might in any way diminish the width of the excavation below that necessary for proper construction, and to protect adjacent structures from undermining or other damage.

B. Wherever possible, sheeting shall be driven ahead of the excavation to avoid loss of material from behind the sheeting. If it is necessary to excavate below the sheeting, care shall be taken to avoid trimming behind the face along which the sheeting shall be driven. Care shall be taken to prevent voids outside the sheeting; but, if voids are formed, they shall be filled immediately with sand and compacted.

C. The ENGINEER may direct that any timber used for sheeting and bracing be cut off at any specified elevation.

D. Sheeting and bracing not left in place shall be removed carefully so as not to endanger the work or other structures, utilities, or property. All voids left or caused by withdrawal of sheeting and bracing shall immediately be backfilled with sand and compacted by ramming with tools especially adapted to that purpose, or by other means as may be directed.

E. Sheeting and bracing that is ordered to be left in place by the ENGINEER shall be separately paid at a negotiated price and a change order issued for the work. Sheeting and bracing not left in place will not be measured and paid.

3.9 Drainage:

A. At all times during construction, the CONTRACTOR shall temporarily provide, place and maintain ample means and devices with which to remove promptly, and dispose properly of, all water entering trenches and other excavations, or water that may flow along or across the site of the work. Excavations shall be kept dry until the structures, pipes and appurtenances to be built therein have been completed, to such extent that they will not be damaged. At that time, the CONTRACTOR may remove such temporary means and devices.

B. All water pumped or drained from the work shall be disposed of in a manner satisfactory to the ENGINEER, without undue interference with other work or damage to pavements, other surfaces, or property.

3.10 Grading:

A. Grading of filled and unfilled areas shall be to the lines and grades indicated on the Drawings or as specified by the ENGINEER. Grading shall be performed in conjunction with all the necessary clearing, grubbing, stripping, filling and compacting operations to the satisfaction of the ENGINEER. Grading shall be performed to such lines and grades as may be necessary to allow for the addition of loam, if required, to the proposed finished grade.

B. Grading shall be done by bulldozer or other approved means. Areas adjacent to structures and other areas inaccessible to heavy grading equipment shall be graded by manual methods.

C. Final grading shall be performed in such manner as to provide proper drainage from the project site. Finished grades shall be pitched to drain away from structures completed under this contract as indicated on the Drawings or as directed by the ENGINEER. In no case shall drainage from the project site be so alert or controlled as to result in damage, or the potential for damage, to adjacent property or to any portion of the work executed under this contract from erosion or flooding.

3.11 Finishing: The surface of all excavations, fills, embankments, and raw subgrades shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown. The degree of finish for all graded areas shall be within 0.1 foot of the grade and elevations indicated. Ditches shall be finished in a manner that will result in effective drainage. The surface of areas to be seeded shall be furnished to a smoothness suitable for the application.

3.12 Protection: Settlement or washing that occurs in graded, topsoiled, or embankment areas prior to acceptance of the work shall be repaired and grades reestablished to the required elevations and slopes.

3.13 Field Density Testing: Each lift of compacted soil should be tested by geotechnical engineer/laboratory prior to placement of subsequent lifts. Field density test shall be taken at a frequency of not less than one (1) test per 5,000 square feet of surface area per lift or a minimum of four (4) per lift for each tested area for the pavement field. Costs for required field density testing shall be borne by the OWNER.

- END OF SECTION -

SECTION 02220

EXCAVATION, BACKFILL AND COMPACTION FOR TRENCHES

PART 1 - GENERAL

1.1 Scope: This Section covers excavation, backfill and compaction associated with the installation of all underground utility piping including domestic water, sanitary sewer, irrigation (water), storm drainage, electrical conduit, etc.

1.2 General:

A. Work specified under this section shall be satisfactorily executed, regardless of subsurface materials encountered, as shown on the Drawings or as otherwise directed by the ENGINEER.

B. Although it is the intention to adhere to the Drawings, the CONTRACTOR is informed that the locations of proposed utilities and other structures shown on the Drawings are approximate. The ENGINEER reserves the right to make changes in location, lines, and grades where such adjustments may be necessary or advantageous.

C. Excavation, dewatering, sheeting, and bracing shall be carried out in such a manner as to eliminate any possibility of undermining or disturbing the foundations of any existing structure or any work previously completed under this contract.

1.3 Care and Restoration of Property:

A. Excavating machinery and all other heavy equipment shall be operated with care to prevent damage to trees that are not designated for removal. Where required, trees not designated for removal within or adjacent to the work site shall be braced by suitable means at the ENGINEER'S direction.

B. Branches, limbs, trunks and roots of remaining vegetation shall not be cut except by permission of the ENGINEER. All cutting shall be smoothly and neatly done without splitting or crushing. In case of cutting or unavoidable damage to branches, limbs and trunks of trees, the cut or damaged portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.

C. Cultivated hedges, shrubs, and plants not designated for removal which might be injured by the CONTRACTOR'S operations shall be protected by suitable means or shall be dug up and temporarily replanted and maintained. After the construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of kind and quality at least equal to the kind and quality existing at the start of the work.

D. On paved surfaces, the CONTRACTOR shall not use or operate tractors, bulldozers, or other power operated equipment of which the treads of which are so shaped as to cut or otherwise damage such surfaces.

E. All lawns, paved surfaces, roadways, and structures which have been damaged by the CONTRACTOR'S operations shall be restored to a condition at least equal to that in which they were found immediately prior to the beginning of operations. The restoration of existing property and structures shall be done as promptly as practicable and shall not be left until the end of the construction period.

1.4 Applicable Publications: The publication listed below forms a part of this specification to extent referenced. The publication is referred to in the text by the basic designation only:

American Society for Testing and Material (ASTM) Publications

D 698 Test Methods for Moisture - Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb. Rammer and 12 in. Drop

PART 2 - PRODUCTS

2.1 Backfill Materials for Trenches: Backfill materials for utility trenches shall be “Suitable Material” in accordance with Section 02240 - Filling and Grading.

PART 3 - EXECUTION

3.1 General Preparation:

A. The CONTRACTOR shall make excavations in such a manner and to such a width as will give suitable room for or laying and adjoining pipe; shall furnish and place all sheeting, bracing, and supports; shall do all pumping, and draining; and shall render the bottom of the excavation firm and dry and in all respects acceptable.

B. In no case shall the earth be plowed, scraped, or dug by machinery so near to the finished grade at the bottom of the excavations as to result in disturbance of material below said grade. The last of the material to be excavated shall be removed with pick and shovel just before placing pipe. All loose materials shall be removed from the bottom of the excavation so that the bottom shall be in an undisturbed condition.

3.2 Separation of Surface Materials:

A. From areas within which excavations are made, loam and topsoil shall be carefully removed and separately stored to be used again as directed. When excavations are made in paved surfaces, the pavement shall be saw-cut and removed so as to provide a straight, clean uniform edge with a minimum disturbance of remaining pavement.

3.3 Drainage:

A. At all times during construction, the CONTRACTOR shall temporarily provide, place and maintain ample means and devices with which to remove promptly, and dispose properly of, all water entering trenches and other excavations, or water that may flow along or across the site of the work. Excavations shall be kept dry until the pipes and appurtenances to be built therein have been completed, to such extent that they will not be damaged. At that time, the CONTRACTOR may remove such temporary means and devices.

B. All water pumped or drained from the work shall be disposed of in a manner satisfactory to the ENGINEER, without undue interference with other work or damage to pavements, other surfaces, or property.

3.4 Trench Excavation in Fill: Before laying pipe or conduit in areas of fill, the following procedure shall be required:

A. Fill material shall be placed and properly compacted to final grade or to three feet above the top elevation of the pipe, whichever is less. Under certain circumstances the CONTRACTOR may request modification of this requirement. Any modification must be detailed in writing and approved by the ENGINEER.

B. Particular care shall be taken to ensure maximum consolidation of material under the pipe location.

C. The pipe trench shall then be excavated in the prescribed manner as though in undisturbed soil.

3.5 Excavation Near Existing Structures:

A. Excavation near an existing structure shall not be allowed closer to the structure than the depth of the excavation below the bottom of the foundation without shoring the excavation with sheeting.

B. The CONTRACTOR'S attention is directed to the fact that site piping and other underground utilities may exist within or immediately adjacent to the areas of proposed construction. Some of the site piping is indicated on the Drawings; however, no attempt has been made to show all piping, and the completeness and accuracy of the information is supplied for the purpose of providing the CONTRACTOR with an indication as to the approximate locations of site piping at the work areas so that he will be made aware of their presence.

C. All utility lines shall be located by the CONTRACTOR on the ground with pipe locator equipment and by means of test pits well ahead of the work at all times. All such locations shall be plainly marked by coded paint symbols on pavement or by marked stakes in the ground. Such locations shall be established at least 24 hours in advance of all excavation. All such location work shall be provided by the CONTRACTOR, to the satisfaction of the ENGINEER, at no extra cost.

D. As the excavation approaches pipe, conduits, or other underground structures, digging by conventional trenching machine methods shall be discontinued. Manual methods of excavating shall be employed around buried structures. The CONTRACTOR shall include manual excavation in the work to be done under this contract. No additional compensation shall be paid to the CONTRACTOR for excavations by hand.

3.6 Protection of Existing Structures:

A. All existing pipes, poles, wires, fences, curbing, property line markers, and other structures which, in the opinion of the OWNER, must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from damage by the CONTRACTOR. In case of damage, the CONTRACTOR shall notify the property owner so that the proper steps may be taken to repair any and all damage done. When the property owners do not wish to make the repairs themselves, all damage shall be repaired by the CONTRACTOR; or, if not promptly done by him, the owner may have the repairs made at the expense of the CONTRACTOR.

B. All existing piping shall be supported by suitable means so that the piping does do not fail when tamping and settling occurs. No separate item is provided for timber piping supports.

C. The CONTRACTOR shall not be compensated for any additional work involved if existing piping or underground structures cross the trench line transversely above or below the utility line.

3.7 Relocation and Replacement of Existing Structures:

A. If, in the course of construction, the CONTRACTOR encounters existing piping and/or structures of any kind not indicated on the Drawings, or otherwise provided for, which encroach upon or are encountered near and substantially parallel to the edge of the excavation and which, in the opinion of the ENGINEER, will impede progress to such an extent that satisfactory construction cannot proceed, they shall be relocated, removed (later to be restored), or replaced as follow:

1. Whenever the CONTRACTOR encounters any of the conditions as described above and is so ordered in writing, he shall do the whole of or such portions of the work as directed; change the location of, remove and later restore, or replace such structures; or assist the OWNER thereof in so doing. For such work the CONTRACTOR shall be issued a change order for extra work.

2. In removing existing pipes or structures as described above, the CONTRACTOR shall use care to avoid damage to materials, and the OWNER shall include for payment only those new materials which, in his judgement, are necessary to replace those unavoidably damaged.

3.8 Backfilling and Compaction - General:

A. Backfilling shall be done as promptly as is consistent with non-injury to the work but no backfilling shall be done without the ENGINEER'S permission.

B. A bulldozer or other blade shall not be used in placing backfill; however, placement of backfill by mechanical equipment with various type buckets may be permitted at the ENGINEER'S approval.

C. The backfill material shall be free from cinders, ashes, refuse, boulders, rocks or stones, unsuitable organic material or other material which in the opinion of the ENGINEER is unsuitable. Where excavated material or any portion thereof is deemed unsuitable for backfilling material, the CONTRACTOR shall procure and place approved materials, as ordered by the ENGINEER.

D. Where the excavation is in a paved area, an area to be paved, an unpaved vehicular traveled way, or the shoulder of a paved roadway, a suitable pavement base shall be provided if shown on/specified within the Drawings.

3.9 Backfilling in Open Trench:

A. As soon as practicable after the pipe has been placed and the pipe joints have been properly made, the backfilling shall begin, and shall continue without delay. If bedding material is not used, the backfill material shall be placed simultaneously on both sides of the pipe, so that there will be no displacement of pipe alignment in strict conformance with manufacturers recommendation. In placing the material, care shall be taken that stones do not strike the pipe.

B. The backfill at the sides of the pipe up to the top of the pipe shall be hand placed and thoroughly compacted using approved hand tampers.

C. The backfill up to a level of one foot above the top of the pipe shall be placed in four inch (4") layers, leveled along the length and width of the trench and thoroughly compacted with approved hand tampers.

D. Care shall be taken in the use of mechanical tampers not to injure or move the pipe or to cause the pipe to be supported unevenly. Mechanical tampers shall not be used within one foot of the top of the pipe.

E. The backfill in the remainder of the excavation above the tamped backfill, or above the top of the bedding material, if used, shall be placed in appropriate machine methods. Tamping will not be required in earth surface areas not subject to vehicular traffic. Backfilling or tamping with trenching machines is prohibited.

F. No large masses of backfilling material shall be dropped into the tamped layers of backfill until one foot of earth backfill has been placed over the top of the pipe.

G. Compaction by water jetting will not be permitted.

H. Whatever method of compacting backfill is used, care shall be taken that stones and lumps shall not become nested and that all voids between stones shall be completely filled with fine material.

I. No compacting shall be done when the material is too wet to be compacted properly; at such times the compacting work shall be suspended until the previously placed materials have dried out sufficiently to permit proper compacting, or such other precautions shall be taken as necessary to obtain proper compacting.

J. All backfilled trenches in traveled areas shall be thoroughly surface tamped with a kinetic energy tamping machine approved by the ENGINEER.

K. All backfilled trenches shall be compacted in eight inch (8") maximum loose lifts to within 1% below to 3% above optimum moisture content and as follows:

1. Paved Areas – at least 95% Standard Proctor Density (ASTM D698).

2. Synthetic Turf Areas – at least 92% Standard Proctor Density (ASTM D698).

3. Grassed Areas - at least 90% Standard Proctor Density (ASTM D698).

3.10 Excavated Material:

A. General:

1. Excavated material shall be placed so as minimize the inconvenience to occupants traveling on streets and driveways or adjoining properties. Excavated material shall not be deposited on private property unless written consent of the owner or owners thereof has been filed with the ENGINEER.

2. Suitable excavated material will be used as backfill, fill for embankments, or other parts of the work in accordance with the appropriate sections of the Specifications.

3. Surplus excavated material, if any, shall be disposed of by the CONTRACTOR in a legal and environmentally sound manner.

B. Clean Up and Restoration of Work Site:

1. Upon completion of the backfilling, the streets or property shall be cleaned, surplus material removed, and the surfaces restored to the condition existing before ground was broken. If the CONTRACTOR fails to promptly remove such surplus material, the ENGINEER may have the same done, and charge the cost thereof as money paid to the CONTRACTOR.

2. Material excavated from private property shall be disposed of by the CONTRACTOR at his own expense. If the CONTRACTOR fails to remove

such surplus material, the ENGINEER may have the same done, and charge the cost thereof as money paid to the CONTRACTOR.

3.11 Borrow: Should material excavated under the work of this Contract be unsuitable or of insufficient quantity for completion of the necessary backfilling operations, the CONTRACTOR shall furnish approved backfill material. Approved backfill to supplement insufficient quantity for completion shall not be paid for separately and shall be considered as a subsidiary obligation under this Contract.

- END OF SECTION -

SECTION 02222

TEST PITS

PART 1 - GENERAL

1.1 Scope: This Section covers all operations necessary to dig test pits in order to determine the exact location of existing utilities.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 Test Pits: Test pits for the purpose of locating underground utilities which may interfere with installation of the Work shall be excavated in advance of the Work and backfilled by the CONTRACTOR. For the purpose of bidding, the CONTRACTOR shall include fifteen (15) test pits. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the ENGINEER. Backfill shall comply with Section 02220 - Excavation, Backfill and Compaction for Trenches.

- END OF SECTION -

SECTION 02240

FILLING AND GRADING

PART 1 - GENERAL

1.1 Scope: This Section covers filling and grading as required to achieve final site contours indicated on the Drawings or as authorized by the ENGINEER.

1.2 Applicable Publications: The publications listed below form a part of this Specification to the extent referenced. The publication may be referred to in the text by basic designation only:

A. American Society for Testing and Materials

D698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort
D2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)

1.3 Submittals: Submittals shall be provided in accordance with Section 01340 - Civil Shop Drawings, Samples and Product Data.

PART 2 - PRODUCTS

2.1 Suitable Materials:

A. Approved suitable materials available from excavations and not required for backfill under, around or against structures may be used for filling except as otherwise specified. Surplus excavated materials to be used as fill shall meet the requirements of these Specifications, as appropriate for intended use.

B. All fill materials, whether from the excavations or from borrow, shall be of such nature as to provide a dense, stable fill after placement and compaction by accepted procedures. Fill shall be essentially free of organic and porous materials, shall contain no visible vegetation, masses of roots, or individual roots longer than 18 inches or more than ½ inch in diameter, and shall be free of stones greater than three (3") inches in longest dimension.

C. Borrow material for filling and grading shall be approved by the ENGINEER for any type of work.

D. Unless otherwise noted on the Drawings, all fill material for filling and grading shall have a Unified Soil Classification of “ML”, "SC" or “CL” with a maximum liquid limit of 45 and P.I. range of 6 to 20.

PART 3 - EXECUTION

3.1 Moisture Control:

A. Moisture in fill materials shall be equal to that found in the natural unexcavated condition insofar as is practicable. If the ENGINEER determines that the fill material to be used is excessively wet, the CONTRACTOR shall spread the material on the areas to be filled and fill shall be permitted to dry to an allowable moisture content. The drying process shall be assisted by harrowing where necessary.

B. If, in the opinion of the ENGINEER, additional moisture is required, water shall be applied by sprinkler tanks or other sprinkling devices in such a way as to provide uniform distribution over the area to be treated with accurate control of the rate and quantity of water applied. If excessive amounts of water are added or if rain should cause excessive wetness, the area shall be allowed to dry as provided above.

C. The moisture content of the fill shall be sufficient to permit proper compaction but not so great as to cause loss of soil stability.

3.2 Preparation of Subgrade: The CONTRACTOR shall remove loam and topsoil, loose vegetable matter, stumps, large roots, etc., from all areas which are to receive placement of fill. The subgrade shall be prepared by forking, furrowing, or plowing in order that the new material to be placed thereon shall be well bonded to the subgrade (refer to Section 02102 - Stripping)

3.3 Filling and Compaction:

A. After the subgrade has satisfactorily been prepared, the fill material shall be placed thereon and built-up in successive layers until the required elevation is reached.

B. The filling operation shall begin in the deepest part of the area to be filled, and fill shall be brought up in essentially level lifts.

C. Fill shall be placed in layers by bulldozer or other approved method. The entire surface of the work shall be maintained free from ruts and in a condition that will permit construction equipment to travel over any section readily.

D. During the spreading process, all roots, debris, and stones greater in size that those specified in Paragraph 2.1 shall be removed from the fill areas. The CONTRACTOR shall assign a suitable number of persons to this work to guarantee satisfactory compliance with this requirement.

E. Layers of fill shall not exceed eight inches (8") in depth before compaction.

F. The top surface of each layer shall be made level or slightly sloped away from the center of the filled area. In general, the finer and less pervious materials shall be placed toward the center and the coarser and more pervious materials toward the outer limits of the filled area.

G. Each spread layer of material shall be compacted by the use of rollers, rubber-tire equipment, or other approved means so as to secure a dense, stable, and thoroughly compacted mass. The ENGINEER may require that compaction be provided by a minimum of four (4) complete coverages of the area to be compacted by the tire treads in contact with the flat earth surface.

H. Area adjacent to structures and other area inaccessible to mobile compaction equipment shall be compacted with suitable power driven tampers or other approved devices. Compaction by the latter method shall be done in six (6) inch layers, unless otherwise directed by the ENGINEER or shown on the Drawings.

I. Previously placed or new materials shall be moistened by sprinkling, if required, to ensure proper bond and compaction. No compaction shall be done when the material is too wet. If the compaction surface of the fill layer is determined to be too smooth to provide and adequate bond with the succeeding layer, the surface shall be loosened by harrowing or by some other approved method of compaction used.

J. If at any time the ENGINEER judges that the degree of compaction being obtained is insufficient, he may halt operations. Areas found deficient in degree of compaction shall be recompacted and regraded, if required, at the sole expense of the CONTRACTOR.

3.4 Grading:

A. Grading of filled and unfilled area shall be to the lines and grades indicated on the Drawings or as specified by the ENGINEER. Grading shall be performed in conjunction with all of the necessary stripping, filling, and compacting operations to the satisfaction of the ENGINEER. Grading shall be performed to such lines and grades as may be necessary to allow for the addition of loam, if required, to the proposed finished grade.

B. Grading shall be done by bulldozer or other approved means. Areas adjacent to structures and other areas inaccessible to the listed grading equipment shall be graded by manual methods.

C. Final grading shall be performed in such manner as to provide proper drainage from the project site. Finished grades shall be pitched to drain away from structures completed under this contract as indicated on the Drawings or as directed by the ENGINEER. In no case shall drainage from the project site be so altered or controlled as to result in damage, or the potential for damage, to adjacent property or to any portion of the work executed under this contract from erosion or flooding.

- END OF SECTION -

SECTION 02530

DEWATERING

PART 1 - GENERAL

1.1 Scope: This Section covers all work required to install and maintain drainage systems for handling groundwater and surface water encountered during construction of the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Dewatering:

A. The CONTRACTOR shall, at all times during construction, provide and maintain proper equipment and facilities to promptly remove and dispose of all water entering excavations and keep such excavations dry so as to obtain a satisfactory undisturbed subgrade foundation condition, until the fill, structure, or pipes to be built thereon are installed or constructed.

B. Dewatering shall at all times be conducted in such a manner as to preserve the natural undisturbed bearing capacity of the subgrade soils to proposed bottom of excavation.

C. The CONTRACTOR shall furnish all materials and equipment and perform all work required to install and maintain the drainage systems he proposes for handling groundwater and surface water encountered during construction of structures, pipelines, and compacted fills.

D. Any dewatering methods must meet the approval of the ENGINEER.

- END OF SECTION -

SECTION 02701

STORM DRAINAGE PIPE AND CATCH BASINS

PART 1 - GENERAL

1.1 Scope: This Section covers the installation of reinforced concrete storm drainage pipe and reinforced concrete catch basins to be constructed on this project.

1.2 Reference Standard: Work shall conform to the following Section of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2006 Edition, except as may be modified herein:

Section 701 - Culverts and Storm Drains
Section 702 - Manholes, Junction Boxes, Catch Basins and End Treatments
Section 901 - Portland Cement Concrete
Section 1016 – Precast Reinforced Concrete Drainage Units

1.3 Applicable Publications: The publication listed below form a part of this Specification to the extent referenced. The publication may be referred to in the text by basic designation only:

American Society for Testing and Materials

A123 Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

1.4 Submittals: Submittals consisting of product data sheets and manufacturer's certifications shall be provided in accordance with Section 01340 – Shop Drawings, Samples and Product Data.

PART 2 - PRODUCTS

2.1 General: Materials related to reinforced concrete piping and catch basins shall conform to the following Sections or Subsections of the Reference Standard as specifically listed herein:

(1)	Brick	1004.01
(2)	Asphaltic Varnish	1008.03
(3)	Manhole Frames, Grates and Covers	1018.04
(4)	Portland Cement Concrete	901
(5)	Reinforcing Steel	1009.01
(6)	Reinforced Concrete Pipe	1006.03
(7)	Geotextile Fabric (Plastic Filter Cloth)	1019
(8)	Preformed Joint Filler	1005.01
(9)	Gasket Material	1006.06

2.2 Reinforced Concrete Pipe: Reinforced concrete pipe shall be in accordance with ASTM C76, Class III with flexible plastic, bitumen gaskets.

2.3 Reinforced Concrete Pipe Joints: Joints for reinforced concrete pipe shall be Type 3.

2.4 Bedding Material: Refer to Section 02726 - Bedding Material.

2.5 Backfill: Backfill material required for the drainage system shall be in conformance with Section 02220 - Excavation, Backfill and Compaction for Trenches.

2.6 Catch Basin Grate and Frame: Grate and frame area inlets shall be East Jordan Iron Works V-5724-1 or V-5736-1, as applicable, or approved equal. Grate and frame curb inlets, if applicable, shall be East Jordon Iron Works V-4066-1. Finishing shall be in conformance with paragraph 2.1 of this Section and Section 1008.03 of the Reference Standard.

2.7 Sidewalk Trench Drain: (None Required This Project) Cover and anchoring frame for sidewalk trench drain shall be Model 654-18 as manufactured by Brown Manufacturing of Alexandria, Louisiana with countersunk screws. Finishing for cover and frame shall be galvanized in conformance with ASTM A123.

PART 3 - EXECUTION

3.1 Reinforced Concrete Pipe: Reinforced concrete pipe shall be installed in conformance with Section 701 of the Reference Standard and in accordance with Section 02220 - Excavation, Backfill and Compaction for Trenches.

3.2 Reinforced Concrete Pipe Joints: Joints of reinforced concrete pipe shall be wrapped a minimum of eighteen (18") inches on each side of the joint with approved filter cloth.

3.3 Bedding Material: Refer to Section 02726 - Bedding Material.

3.4 Catch Basins: Catch basins shall be installed in conformance with Section 702 of the Reference Standard, and as detailed on the Drawings, except as may be modified herein below.

A. The bottoms of all catch basins shall contain benches and they shall be constructed to allow smooth flow through the system. Grout shall extend to a height of six (6") inches for fifteen (15") inches and eighteen (18") inches diameter pipe and a height of 1/3 diameter of pipe for twenty-four (24") inches pipe and larger at all outside edges and shall slope to the invert of the catch basin.

B. On all masonry constructed catch basins, both the interior and exterior walls shall be coated with a half inch (½") thick layer of mortar.

C. Precast concrete catch basins can be utilized in lieu of the brick or poured in place walls. The precast concrete catch basins shall meet the requirements of Sections 702 and 1016 of Louisiana Standard Specifications for Roads and Bridges, 2006 edition.

D. Rings and covers, frames and grates shall be delivered unpainted and after installation shall be coated with asphaltic varnish in accordance with Section 702.04 and 1008.03 of the Reference Standard.

3.5 Backfill and Compaction: Refer to Section 02220 - Excavation, Backfill and Compaction for Trenches.

- END OF SECTION -

SECTION 02703

HDPE/PVC DRAINAGE PIPE AND PVC DRAIN BASINS

PART 1 - GENERAL

1.1 Scope: This Section covers the requirements for High Density Polyethylene (HDPE) and Polyvinyl Chloride (PVC) drainage conduits and PVC drain basins including all related appurtenances in conformance with the lines and grades as shown on the Drawings, as outlined within this Specification, and to the satisfaction of the OWNER.

1.2 Quality Assurance: To ensure unity of responsibility, all drainage conduit, pipe fittings, connectors, catch basins risers, joints, etc. shall be the standard product of a single manufacturer having a minimum of five (5) years experience in the manufacturing of plastic drainage systems conforming to this Specification.

1.3 Submittals: Submit product data in accordance with provisions of Section 01340 – Shop Drawings, Samples and Project Data.

1.4 Reference Standard: Work shall conform to the following Section of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2006 Edition, except as may be modified herein:

Section 701 - Culverts and Storm Drains

1.5 Applicable Publications: The publications listed below form a part of this Specification to the extent referenced. The publications may be referred to in the text by basic designation only.

A. American Association State Highway Transportation Officials (A.A.S.H.T.O.)

M252	Corrugated Polyethylene Drainage Tubing
M294	Corrugated Polyethylene Pipe, 300 mm to 1,200 mm
MP7-97	Corrugated Polyethylene Pipe 1,350 mm to 1,500 mm

B. American Society for Testing and Materials (A.S.T.M.)

F477	Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
F810	Specification for Smooth Wall Polyethylene (PE) Pipe
F405	Specification for Corrugated Polyethylene (PE) Tubing and Fittings

F667	Specification for Large Diameter Corrugated Polyethylene (PE) Tubing and Fittings
D1149	Test Method of Rubber Deterioration - Surface Ozone Cracking in a Chamber
D2321	Practice for Underground Installation of Flexible Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
D3350	Specifications for Polyethylene Plastic Pipe and Fittings Materials

PART 2 - PRODUCTS

2.1 HDPE Drain Pipe and Fittings:

A. Pipe (Solid or Perforated): HDPE drain pipe of all sizes and lengths shown on the Drawings shall have smooth interior ("Smooth Lined") and annular exterior corrugations. HDPE pipe shall meet the requirements of AASHTO M252 or M294. Material must be high density polyethylene meeting ASTM D 3350 minimum call classification 335420 C. HDPE drain pipe shall be N–12 (dual wall) as manufactured by ADS (Advanced Drainage System) of Lafayette, Louisiana (337) 981-0898, Hancor, or approved equal.

B. Fittings: HDPE fittings shall meet the requirements of paragraph 2.1.A and conform to AASHTO M252 or M294. Fabricated fittings shall be factory welded at all accessible interior and exterior junctions. Drain pipe fittings shall be by the same manufacturer as specified herein for drain pipe as manufactured by ADS, Hancor, or approved equal.

C. Joints: Pipe shall be joined with integral bell and spigot joints meeting AASHTO M252, M294 or MP7-97. The joint shall be rated soiltight for perforated pipe and watertight for solid pipe. Rubber gaskets shall meet the requirements of ASTM 477 and be omni directional. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to insure the gasket is free from debris. A joint lubricant shall be supplied by the pipe manufacturer to be used on the gaskets at the time of installation. The sealing area of the pipe bell shall be reinforced with a 2" polymer composite collar. The joint design shall meet the requirements of ASTM D3212 and ASTM F1417. Drain pipe joints shall be N-12 ST IB Soiltight Joint or N-12 WT IB Watertight Joint (as applicable) as manufactured by ADS, Hancor, or approved equal.

2.2 PVC Drain Pipe and Fittings:

A. Pipe (Solid and Perforated): PVC pipe shall be in accordance with ASTM D3034, SDR 26.

B. Joints: PVC pipe joints shall be in accordance with ASTM D3212 using restrained gasket conforming to ASTM F477.

C. Fittings: PVC pipe fittings shall match pipe material, classification and thickness as specified in Paragraph 2.2.A herein.

2.3 Perforated Pipe Sleeve: Perforated pipe (where noted on the Drawings) shall be installed with a water-permeable sleeve (sock) to allow storm drainage flow and prohibit infiltration of soil particles.

2.4 Plastic Filter Cloth: Plastic filter cloth for HDPE pipe joints shall be in conformance with Section 1019 of the Reference Standard.

2.5 PVC Drain Basins: Plastic catch basins shall be factory fabricated AASHTO H-20 heavy duty PVC one piece units of the size and geometrics as shown on the Drawings. The catch basins shall be custom fitted for this project and shall be provided by the HDPE drain pipe manufacturer to ensure a single source of responsibility for the plastic drainage system. Catch basins shall be constructed to specifically adapt to frame and grate sizes shown on the Drawings. Catch basins that require separate transitions to fit the frame and grate will not be acceptable. Catch basins shall be the "Drain Basin" type as manufactured by ADS, Hancor, or approved equal.

2.6 Drain Basin Grates: Drain basin grates shall be a one (1) piece unit factory fabricated and provided by and specifically designed to instantly install on the exposed end of the vertical pipe drain basin. Type and size are as indicated on Drawings.

2.7 Backfill: Backfill material required for the drainage system shall be in conformance with Section 02220 - Excavation, Backfill and Compaction for Trenches.

2.8 Bedding Material: Refer to Section 02726 - Bedding Material.

2.9 Stone Drainage Backfill: Stone drainage backfill to be installed just below the surface of perforated PVC drain basins shall conform to the following gradation:

U.S. Sieve	Percent Passing
1½"	95-100
No. 4	0-15
No. 200	0-2

PART 3 - EXECUTION

3.1 General: Install drainage facilities as recommended by the manufacturer and in conformance with the grades designated on the Drawings.

3.2 Deflections: The maximum deflection of any drain pipe either solid or perforated shall be one and one half (1 ½°) degrees at each joint. The maximum radius of the deflections combined is seven hundred sixty five (765') feet. Any turns, bends, angles, etc., in the drainage system that exceed this criteria shall be constructed using fittings. The plastic drainage system (HDPE pipe and fittings) shall be installed in conformance with the manufacturer's recommendations.

3.3 Installation: HDPE/PVC pipe and PVC drain basin installation shall be in accordance with Section 02220 - Excavation, Backfill and Compaction for Trenches and as detailed on the Drawings.

- END OF SECTION -

SECTION 02706

CONCRETE WALKS AND INCIDENTAL PAVING

PART 1 - GENERAL

1.1 Scope: The CONTRACTOR shall furnish all labor, materials, tools and equipment, and perform operations necessary for the construction of Portland Cement concrete walks and incidental paving in accordance with these Specifications and in conformity with the lines and grades as shown on the Drawings or established by the ENGINEER.

1.2 Reference Standard: Conform to the following sections of the State of Louisiana, Department of Transportation and Development, Standard Specifications for Roads and Bridges, 2006 Edition, except as modified herein:

Section 706 - Concrete Walks, Drives, and Incidental Paving
Section 1005 - Joint Materials for Pavements and Structures
Section 1009 - Reinforcing Steel and Wire Rope
Section 1011 - Concrete Curing Materials, Admixtures and Special Finishes

All references made therein to Measurement and Payment are deleted.

1.3 Submittals: Submit product data in accordance with provisions of Section 01340 – Shop Drawings, Samples and Project Data.

PART 2 - PRODUCTS

2.1 Portland Cement Concrete: Portland Cement concrete for walkways, sidewalks, sidewalk ramps, step landings and incidental concrete pavement shall be Minor Structural Class “M” as specified in Section 03330 - Cast-in-Place Concrete.

2.2 Joint Materials:

A. Joint Material: Material shall conform to Section 1005.01 (a) of the Reference Standard.

1. Walk and Pavement Isolation and Butt Joints: Closed cell polypropylene joint filler (1/2” thickness) with removable strip to allow for sealant reservoir.

2. Walk and Pavement Expansion Joints: Redwood (3/4” thickness) with removable strip to allow for sealant reservoir.

2.3 Steel Reinforcing: Steel reinforcing shall be grade 60 ksi and shall conform to Section 1009.01 of the Reference Standard.

2.4 Curing Compound: This material shall conform to AASHTO Designation: M148 and be on the LDOTD Qualified Products list and conform to Subsection 1011.01. The curing compound shall be white pigmented.

PART 3 - EXECUTION

3.1 General: Concrete walks and incidental paving shall be constructed by the CONTRACTOR in the best workmanlike manner. The underlying subgrade as well as the finish surface shall conform to the requirements of these Specifications and of the Drawings.

3.2 Paving work shall be performed in accordance with Section 706 - "Concrete Walks, Drives and Incidental Paving" of the Reference Standard.

3.3 Walks shall be constructed on compacted subgrade as shown on the Drawings. Subgrade shall be compacted in conformance with Section 02240 - Filling and Grading.

3.4 Finishing concrete by either machine or hand may be used, conforming to Section 706.03(d).

3.5 Expansion, longitudinal and dummy joints shall be constructed as detailed on the Drawings.

3.6 Pavement surface shall be finished with a broom finish.

3.7 All pavement shall receive white pigmented spray sealant curing compound upon completion of finish work.

3.8 Concrete Cylinder Testing: The Portland Cement concrete used for walks and incidental paving shall be tested for seven (7) and 28 day compressive strength by a geotechnical engineer/laboratory. Concrete cylinders shall be molded at a frequency of three (3) cylinders per 50 cubic yards of concrete placed or portion thereof. Costs for required concrete cylinder testing shall be borne by the OWNER.

- END OF SECTION -

SECTION 02717

EROSION CONTROL AND SOIL STABILIZATION

PART 1 - GENERAL

1.1 Scope: This Section covers the installation of erosion control and soil stabilization materials consisting of temporary seeding and permanent sodding, sprigging, hydroseeding and fertilizing in disturbed or designated areas. Refer to Drawings for limits of sodding, sprigging and hydroseeding.

1.2 Reference Standard: Work shall conform to the following Sections of the State of Louisiana, Department of Transportation and Development, Standard Specifications for Roads and Bridges, 2006 Edition; except as modified herein:

Section 714 - Sodding
Section 718 - Fertilizer and Agricultural Lime

All references made therein to Measurement and Payment are deleted.

1.3 Submittals: Submittals shall be provided in accordance with Section 01340 - Civil Shop Drawings, Samples And Product Data.

1.4 Planting Time: Place lawns during normal planting seasons of the project locale. If project finish out occurs during weather conditions that are not suitable to planting, planting shall be deferred until suitable and sustained weather conditions exist. This deferment shall have no effect on the substantial completion of other work.

1.5 Replacement Provisions:

A. Lawns: Warrant lawns until the date of acceptance at the end of the specified maintenance period.

B. Replace unsatisfactory landscape materials (those dead or lacking vigor) with healthy, vigorous materials. Plant only during next occurring specified planting season.

1.6 Maintenance: Maintain lawns from immediately after planting until the latest of: substantial completion of the project, or 60 days after date when hydroseeding is substantially complete, or until an acceptable lawn is established.

PART 2 - PRODUCTS

2.1 General:

A. Materials related to erosion control and soil stabilization shall conform to the following subsections of the Reference Standard:

1) Sodding ..... Common Bermuda
2) Sprigging..... Tifway 419 Bermuda

3) Seed.....Common Bermuda
4) Water..... 714.07
5) Fertilizer..... 1018.16
6) Agricultural Lime..... 1018.17

B. Topsoil:

1. Provide friable clay loam surface soil.

2. Satisfactory Topsoil: Fertile agricultural soil, typical for locality, capable of sustaining vigorous plant growth; free of subsoil, rocks larger than 2" in diameter, clay, toxic mater, plants, weeds and roots.

3. Unsatisfactory Soil Material: silty soils, clayey soils, peat.

PART 3 - EXECUTION

3.1 General:

A. The CONTRACTOR shall neatly dress and prepare areas designated for erosion control work as specified in the appropriate sections of these Specifications.

B. Prepare only those areas that will be planted presently.

C. Preparation of stripped areas: Till subgrade to a depth of at least two inches (2").

D. Fine-grade, roll, rake and drag lawn areas cutting down high spots and filling low spots, leaving a smooth, even surface of fine-textured soil complying with required grades.

E. The CONTRACTOR shall be required to furnish and apply water on the newly placed sod and hydroseeding as necessary to maintain a healthy stand of vegetation until Paragraph 1.6 of this Section is satisfied.

3.2 Seeding: Seeding for temporary and permanent erosion control work shall be in conformance with Reference Standard (LDOTD – Section 717). There will be no separate measurement or payment for watering.

3.3 Sodding: Sodding work shall be in conformance with the Reference Standard (Section 714) and these Specifications. Areas to receive sod shall be graded to allow for two inches (2”) of sod thickness. Finished sod elevation shall generally match elevation of adjacent pavement/surface.

3.4 Sprigging: Sprigging work for ballfields shall be implemented as follows:

A. Complete surface smoothing and grading operations prior to sprig installation. The surface conditions should be approved by the ENGINEER prior to proceeding with sprigging operations.

B. The area to be sprigged should be tilled lightly with a rotary tiller to a depth of 1" – 2". Eliminate any existing weeds and rocks before sprigging.

C. Sprigs should be delivered to the site the same day as harvested and planted immediately. If planting is delayed, the sprigs should be stored in a shaded, cool area and periodically turned to keep the temperature in the pile from getting too warm.

D. Sprigs should be planted in rows or furrows uniformly over the entire plant bed area with row spacing typically being 2" apart. Immediately after the planting, the sprigs should be tamped or rolled with one-third (1/3) of the sprig remaining above the surface.

E. The planting rate shall be 400 bushels per acre.

F. Sprigs shall be watered within 30 minutes of planting and shall be irrigated at least 2 times per day for 10 days after planting to keep the soil moist and facilitate plant growth. A regular cycle of watering shall be performed thereafter to promote a healthy, full stand of vegetation.

G. Apply a starter fertilizer with a ratio of 1:1:1 (nitrogen:phosphorous:potassium) after sprigging at a rate of one (1) pound of nitrogen per 1,000 square feet. Apply fertilizer at the above rate every month thereafter, thoroughly watering in for each application until Paragraph 1.6 of this Section is satisfied.

H. Mowing shall begin once sprigs reach 2" tall. Care shall be taken to ensure that not more than one-third (1/3) of the leaf blade is removed in a single mowing.

I. Watering, fertilizing and mowing operations shall continue on the newly turfed field until Paragraph 1.6 of this Section is satisfied.

3.5 Hydroseeding: Hydroseeding for permanent erosion control work shall be in conformance with the Reference Standard (LDOTD – Section 739).

3.6 Fertilizer: Fertilizer shall be installed in conformance with the Reference Standard (LDOTD - Section 718) and these Specifications.

3.7 Agricultural Lime: The top six (6) inches of embankment material shall have a pH between seven (7) and eight (8) which will support adequate vegetation. If required, the material shall be treated with agricultural lime to promote support of adequate vegetation.

3.8 Water: Water for irrigation purposes may be obtained from any source, except that chemically contaminated or oily water shall not be used.

3.9 Maintenance:

A. Apply a starter fertilizer with a ratio of 1:1:1 (nitrogen:phosphorous:potassium) after grass seed has germinated and growth has begun (or sod has sufficiently rooted), at a rate of one (1) pound of nitrogen per 1,000 square feet. Apply fertilizer at the above rate every month thereafter, thoroughly watering in for each application until Paragraph 1.6 of this Section is satisfied.

B. Mowing shall begin once grass reach 3” tall, if applicable for the required maintenance period. Care shall be taken to ensure that not more than one-third (1/3) of the leaf blade is removed in a single mowing.

C. Watering, fertilizing and mowing operations shall continue on the newly sodded and hydroseeded areas until Paragraph 1.6 of this Section is satisfied.

- END OF SECTION -

SECTION 02724

ATHLETIC FIELD DRAINAGE BASE CONSTRUCTION

PART 1 – GENERAL

1.1 Scope:

A. This section includes construction of a prepared base and subsurface drainage for the synthetic turf portions of the Baseball and Softball fields (and bullpens) and Covered Practice Facility, including the following components:

1. Impermeable polyethylene liner.

2. Subsurface drainage components.

3. Prepared aggregate drainage base.

4. Prepared aggregate finish/leveling course.

B. Related items include (but are not limited to) the following:

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Division One Specifications.

a. Cast-in-Place Concrete

b. Earthwork

c. Utilities

d. Synthetic Turf

1.2 Standards And References:

A. CONTRACTOR shall be familiar with the following standards pertaining to the work described in this Section:

1. American Association of State Highway and Transportation Officials (AASHTO):

a. Standard Specifications for Transportation Materials and Methods of Sampling and Testing – 24th Edition

2. American Society for Testing and Materials (ASTM):

a. C136-04 – Standard Test Method for Sieve Analysis of Coarse and Fine Aggregates

b. C1107-02 – Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-shrink)

c. D1621 - Standard Test Methods for Compressive Properties of Rigid Cellular Plastics

d. D1876 – Standard Test Method for Peel Resistance of Adhesives (T-Peel Test).

e. D2321-00 – Standard Practice for Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

f. D2412-02 – Standard Test Method for Determining External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

g. D3350-02a – Standard Specification for Polyethylene Plastics Pipe and Fittings Materials

h. D3665-02 – Standard Practice for Random Sampling of Construction Materials

i. D4491 Standard Test Method for Water Permeability of Geotextiles by Permittivity

j. D4632 – Standard Test Method for Grab Breaking Load and Elongation of Textiles

k. D4716 – Standard Method for Constant Head Hydraulic Flow Transmissivity (in-plane flow) of Geotextiles and Geotextile Related Products

l. D4751 Standard Test Method for Determining Apparent Opening Size of a Geotextile

m. D4833-00e1 – Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products.

1.3 Submittals:

A. General: Submit the following in accordance with Section 01340 – Shop Drawings, Samples and Product Data.

1. Impervious Liner

2. Subdrainage Pipe and Fittings (Perimeter)

3. Composite Flat Drains

4. Gradation of stone aggregates

B. Following installation, and prior to Final Approval, CONTRACTOR shall submit a certification to the OWNER stating the following:

1. The subdrainage system was installed according to the Construction Documents, and any deviations from the Construction Documents are noted in the as-built drawings.

2. The CONTRACTOR has verified that water moves freely through the system.

C. CONTRACTOR shall submit As-Built drawings after final installation and prior to Final Acceptance.

1.4 Installer Qualifications:

A. The CONTRACTOR for this scope of work shall have been actively engaged in installation of storm water systems for a minimum of five years.

1.5 Quality Control Testing Procedures:

A. OWNER shall pay for initial testing fees. The CONTRACTOR shall pay any re-testing fees incurred due to non-conforming submittals.

B. The OWNER'S Representative shall periodically check delivered material and if visual analysis of the material shows any irregularity, the material may be sampled by the OWNER'S Representative and tested by the OWNER'S Agent for verification of consistent material.

1.6 Project Conditions:

A. CONTRACTOR shall verify all existing conditions prior to any construction activities. Any additional costs incurred by the CONTRACTOR due to a failure to verify existing conditions and coordinate with other installations and Construction activities shall be borne by the CONTRACTOR at no additional cost to the OWNER.

B. Do not perform trenching or installation of any materials during freezing or wet conditions.

1.7 Delivery, Storage And Handling:

A. Deliver piping with factory-applied end caps. Maintain caps through shipping, storage and handling to prevent pipe-end damage and to prevent entrance of debris.

B. Store bulk materials in location approved by the OWNER or OWNER'S Representative. Coordinate material delivery to minimize on-site stockpile size.

1. Provide a temporary pad for stockpile to prevent contamination with dirt and debris if storage location is not an existing paved surface.

2. Bulk material contaminated with site debris or soil will be rejected and replaced by the CONTRACTOR at no additional cost to the OWNER.

C. Store pipe and fittings in a neat and organized fashion in a location approved by the OWNER or OWNER'S Representative. Provide temporary wood supports and stacking materials if necessary to limit the size of the pipe storage area.

D. Liner rolls shall be shipped to the job site in a manner not to damage the rolls. The rolls shall be stored and protected from puncture, dirt, grease, excessive heat, or other damage. They shall be stored on a prepared smooth surface (not wooden pallets) and shall be stacked no more than two rolls high.

E. Store water-absorbing materials (such as grout) in a weatherproof location.

1.8 Sequencing And Scheduling:

A. Obtain approval from the OWNER'S Representative prior to commencing any trenching operations.

B. Subdrainage installation as specified herein cannot commence until playing field subgrade has been approved. CONTRACTOR will be responsible for maintaining the approved subgrade elevations.

1. Use of equipment with low-displacement tires or tracks is recommended to prevent disturbing playing field subgrade or damage to impervious liner.

2. CONTRACTOR shall be responsible for repairing any damage to the subgrade caused during subdrainage installation at no additional cost to the OWNER. Any costs associated with re-surveying or additional review of the approved subgrade required due to damage caused during construction shall be borne by the CONTRACTOR.

C. Coordinate installation of impervious liner with curb strip installation to prevent damage to liner.

D. Coordinate with all other Construction activities to avoid any potential conflicts.

E. Obtain location for on-site storage of bulk material from the OWNER or OWNER'S Representative.

1.9 Protection Of Installed Work:

A. CONTRACTOR shall provide any and all temporary protective measures to prevent contamination of installed drainage fill, including, but not limited to:

1. Erosion Control devices to prevent siltation.

2. Temporary covers to prevent dust settlement.

B. CONTRACTOR shall be responsible for removing any construction trash or debris falling into open trenches or structures during construction.

PART 2 – PRODUCTS

2.1 General:

A. All materials shall be new and without flaws and defects, and a quality and performance as specified. Overages at completion are the property of the CONTRACTOR, to be removed from the site.

2.2 Impermeable Liner:

A. The impermeable, polyethylene, smooth finish liner shall be manufactured from virgin polymer material and shall have a minimum average thickness of 20 mils as specified. The liner shall be manufactured to be suitable for use in buried conditions.

B. Subject to compliance with requirements and OWNER approval, manufacturers offering products which may be incorporated into the Work include, but are not limited to, those listed below:

1. Acceptable Manufacturers:

a. Titan

b. Geochem, Inc.

c. GSE Lining Technology, Inc.

d. Inland Tarp and Liner

e. Nilex, Inc.

f. Poly-Flex Geomembrane Lining Systems

g. Raven Industries, Inc.

h. US Fabrics, Inc.

C. Fabricate impervious liner panels from sheets with dielectric fusion-welded seams to the largest size possible, consistent with limitations of weight and installation procedures.

D. Manufacturer shall clearly label each roll as to the size of the panel and indicating the width of the panel when unfolded and the length of the panel when unrolled.

E. Deliver material on rolls wrapped with a UV protective wrap and with the ends of the core plugged.

F. Material Properties:

PROPERTY	TEST	UNIT	VALUE
Thickness (Min. Avg.)	ASTM D-15199	mils	20.0
Sheet Density	ASTM D-1505	g/ml	0.939
Carbon Black Content	ASTM D-4218	%	2.0-3.0
Tensile Strength at Break	ASTM D-7003	Lb/In	133
Elongation at Break	ASTM D-6693	%	700
Tear Resistance	ASTM D-5844	Lb	60
Puncture Resistance	ASTM D-4833	Lb	113
Mullen Burst	ASTM D-751	PSI	375
Hydrostatic Resistance	ASTM D-6241	Lb	922

G. Adhesive Materials: Provide types of adhesive primers, compounds, solvents, and tapes recommended by liner manufacturer for bonding to structures if required, for sealing of seams, and for sealing penetrations.

2.3 Aggregate Drainage Base and Finish/Leveling Material:

A. Aggregate drainage base shall be a washed, processed aggregate meeting the following physical characteristics:

1. Base Course Equivalent to AASHTO #57

Sieve Size – US Standard	Allowable Ranges
1 1/2”	100% Passing
1”	95-100% Passing
1/2”	25-60% Passing
U.S. #4 (4.75 mm)	0-10% Passing
U.S.#8 (2.36 mm)	0-5% Passing
U.S. #200 (75 µm)	0-2% Passing

2. 2” Finish/Leveling Course Material (Equivalent to AASHTO #8)

Sieve Size – US Standard	Allowable Ranges
½”	100% Passing
3/8”	85-100% Passing
U.S. #4 (4.75 mm)	10-30% Passing
U.S. #8 (2.36 mm)	0-10% Passing
U.S. #16 (150 µm)	0-5% Passing

2.4 Drainage Pipe (Solid and Perforated) and Fittings: Subdrainage pipe (solid and perforated) and fittings along/within perimeter drain trench shall be as specified within Section 02703 – HDPE/PVC Drain Pipe and PVC Drain Basins.

2.5 Composite Flat Drains: Drains for internal field drainage (to the perimeter drains) shall be a flat, strip drain consisting of an internal, high-density polyethylene (HDPE) core with a surrounding fusion bonded geotextile filter fabric. The drain width shall be 12” and the drain depth shall be 1”. The drain shall be lightweight, flexible and sufficiently durable to withstand the installation procedures without damage. Fittings/couplings shall be manufactured to the same requirements as the specified flat drain. Geotextile filter fabric shall meet the requirements of Class B Geocomposite as defined by ASTM D7001. HDPE core shall meet the requirements of ASTM D1621, ASTM D4716 and ASTM D1876. Composite flat drain (and related fittings/couplings) shall be AdvanEdge Drain Pipe with external geotextile wrap as manufactured by Advanced Drainage Systems of Hilliard, Ohio, (800-821-6710), www.ads-pipe.com, or approved equal.

2.6 Non-Shrink Grout:

A. Non-shrink Grout shall conform to ASTM C1107-02

PART 3 – EXECUTION

3.1 Preparation:

A. Verify all field conditions prior to beginning Construction activities, including subgrade elevations, locations of all points of connection to storm drainage structures, and locations of adjacent site improvements.

3.2 Subgrade Preparation:

A. Examine substrates for compliance with requirements for soil compaction and grading. Subgrade soil shall be compacted to provide a firm, unyielding foundation for the liner. All surfaces shall be smooth, free of foreign and organic material, rocks larger than 3/8 inch, any angular rocks, and any sharp objects. Standing water or excessive moisture shall not be allowed.

3.3 Perimeter Concrete Turf Curb:

A. Curb and turf attachment nailer: A 2 x 4 HDPE (composite) nailer shall be installed with Tapcon or Hilti fasteners by the Turf CONTRACTOR before the drainage aggregate backfilling is completed at the field perimeter.

1. The concrete turf curb shall be installed in accordance with the Drawings and/or approved Shop Drawings and these Specifications.

3.4 Trenching:

A. Beginning at lowest point, and working upstream, trench all subdrainage lines.

B. The base grade shall be shaped as indicated by the Drawings. The CONTRACTOR shall begin layout and trenching for the drainage network as indicated on the Drainage Plans and all details that apply. Trenching progress shall work upward in elevation to allow for immediate discharge of water from the entire field in the event of a rainfall.

C. No trenches, with or without pipe, shall be permitted to remain unfilled overnight and/or while crews are not working on site.

D. All perimeter trenches must be dug in accordance with the Drawings.

E. All spoils shall be removed and replaced by the CONTRACTOR on-site at the location(s) shown on the Drawings.

3.5 Impervious Liner:

A. Liner rolls shall be shipped to the job site in a manner not to damage the rolls. The rolls shall be stored and protected from puncture, dirt, grease, excessive heat, or other damage. They shall be stored on a prepared smooth surface (not wooden pallets) and shall be stacked no more than two rolls high.

B. Preparation:

1. Prepare enough sand bags in advance of installation to provide at least one (1) 40 pound sandbag for every 100 square feet of cover.

2. Check weather condition projections for wind direction and speed. The liner shall not be deployed during fog, precipitation, in winds greater than 10 m.p.h., or in temperatures less than 50 degrees Fahrenheit.

3. Provide enough personnel to space one (1) person for approximately every 25 feet of length of liner.

4. Remove the protective shipping wrap being careful not to cut so deep as to damage the liner underneath the wrap.

C. Liner Placement:

1. No construction equipment shall be allowed directly on the liner except for light ATVs and generators to power the seaming machines.

2. Liner shall first be loosely laid in full contact with compacted subgrade and in the drainage trenches prior to installation of lateral drain pipe and perimeter collector lines. Place liner to ensure minimum handling with sufficient slack (about 2 percent) to accommodate thermal expansion and contraction encountered during construction. Install to comply with liner manufacturer's written instructions.

3. Each panel shall be laid out and positioned to minimize the number and length of the liner field joints and to be consistent with accepted installation practice. The methods used to place panels shall minimize wrinkles especially along field seams.

4. When necessary, a geosynthetic rub sheet will be used under the liner to prevent damage when dragging or moving the panels.

5. Do not bridge over drainage trenches, voids or low areas in the subgrade. Fit closely and seal around inlets, outlets, valve boxes and other projections through liner.

6. Deploy liner with minimum 24 inch overlaps at joints.

7. After each panel has been fully deployed and tensioned slightly, place sandbags as temporary ballast in a 10 foot by 10 foot grid over the entire liner.

D. Seaming:

1. The primary method of seaming shall be hot shoe fusion welding. Fillet extrusion welding shall be used for repairs, T-seams, and detail work.

2. Before fusion welding or extrusion welding, all areas that are to become seam interfaces shall be cleaned of dust and dirt.

3. Seam joining shall not take place unless the sheet is dry and shall not be attempted when the ambient sheet temperature is below 45 degrees Fahrenheit or above 90 degrees Fahrenheit.

   a. Hot shoe welding—Hot shoe welding shall be accomplished by a double-wedge fusion welder that produces a double track weld. All accessories shall be approved by the liner manufacturer. To produce acceptable seams for the site-specific condition, the welder shall be calibrated at the beginning of each seaming period. Seaming procedures shall be in accordance with liner manufacturer specifications.

   b. Fillet extrusion welding—Extrusion welding equipment and accessories shall be approved by liner manufacturer. To produce acceptable seams for the site-specific condition, the extrusion welder shall be calibrated once per day at the beginning of each seaming period. Seaming procedures shall be in accordance with liner manufacturer specifications.

   c. Seam overlap—Liner panels shall have a minimum overlap of 4 inches for hot shoe welding and 3 inches for extrusion welding. Upslope panels shall overlap downslope to provide a shingle effect for drainage.

4. Seam Testing:

   a. Nondestructive Seam Testing: Air pressure tests shall be performed on all double- wedge fusion seams. The air pressure test equipment and procedures shall conform to this Specification and the liner manufacturer's specifications. Seal both ends of the seam to be tested. Insert the pressure needle into the seam's air channel.

   b. Pressurize the air channel through the needle to 25 to 30 pounds per square inch.

   c. Monitor any pressure drops for 5 minutes. A loss of pressure in excess of 4 pounds per square inch or a continuous loss of pressure is an indication of a leak. Terminate the test by relieving the pressure from the opposing end of the seam. The pressure shall immediately drop to zero upon opening the opposing end of the

seam. If this does not occur, the seam channel shall be checked for obstructions and retested. All defects shall be marked for repair.

d. Vacuum box tests shall be performed on all extrusion welds. The vacuum box equipment and test procedure shall conform to this specification and the liner manufacturer's specifications. Apply soapy water solution to the seam area to be tested. The vacuum box, equipped with a transparent viewing window, shall be centered over the seam area and a vacuum of 3 pounds per square inch shall be drawn. The seam area shall be visually monitored for any soap bubbles for 15 seconds. Seam testing shall continue by overlapping a minimum of 3 inches between each test interval. All defects shall be marked for repair.

5. Repairs:

a. All defective liner areas and bad seams shall be repaired and tested before the installation is completed.

b. Tears, Punctures, Material Defects: All tears, punctures, and material defects in liner shall be repaired by installing a patch over the defective area. Surfaces of the liner to be patched shall be cleaned before the repair. To ensure proper bonding of the extrusion weld, edges of the patch material and the adjacent liner shall be properly abraded by a light grinding. This operation shall be done no more than 15 minutes before the welding operation. The abrasion shall remove no more than 10 percent of the material thickness. All patches shall be of the same liner material and extend a minimum of 6 inches beyond the edges of the defect area. All patches shall have rounded corners and shall be extrusion welded to the liner. Alternatively, a bead of extrudate shall be placed over all holes that are less than 0.25 inch in diameter.

c. Seam Repair: All failed seams shall be repaired by installing a cap strip over the entire length of failed seam. The cap strip shall be of the same liner material and shall extend the failed seam a minimum of 6 inches in all directions. Alternatively, the seam along the upper flap can be extrusion welded to the liner along the entire length of the failed seam.

7. Mechanical Attachments:

a. The liner shall be mechanically attached to perimeter curb with manufacturer-recommended sealant or tape as shown in the Drawings and/or as specified by the liner manufacturer.

b. Pipe Boots: Pipe boots fabricated in the field from the same liner shall be welded and clamped to polyethylene pipe.

3.6 Structures:

A. Clean-out installation: Where indicated on the Drawings, construct clean-out structure at intersections of pipe runs.

B. Construct clean-out structure on geomembrane liner in trench.

C. Pipe penetrations shall be core-drilled and sealed with non-shrink grout.
D. Construct invert in bottom of clean-out using non-shrink grout.

E. Wrap top of clean-out structure with metallic or magnetic tape prior to installation of cap.

3.7 Pipe Bedding:

A. Using approved drainage fill material, install bedding layer for pipe as indicated on the Drawings.

B. Follow manufacturer's recommendations for reductions in bedding material for pipe couplers and fittings.

3.8 Drainage Pipe Installation and Backfilling:

A. Connect to existing storm drainage structures where indicated on Drawings. Core-drill all penetrations into existing structures and seal with non-shrink grout.

B. Install drainage pipe in accordance with ASTM D2321 and manufacturer's recommendations.

C. Install couplers between sections of plain-end pipe in accordance with manufacturer's requirements, using only those products approved by the manufacturer.

D. Wrap end caps and clean-outs with metallic or magnetic tape.

E. Collector lines shall be installed before lateral lines and shall begin with the deepest elevations.

F. Collector lines shall be connected to discharge outlet at the onset of operations.

G. Following installation of subdrainage system, CONTRACTOR shall flush the system with water to demonstrate the free flow of water throughout the system.

H. Using approved drainage fill, install backfill over installed joints to prevent movement.

I. The installation of the aggregate drainage base shall only begin after the drainage pipe and composite flat drains installation has been inspected and approved by ENGINEER. Installation of the free draining base aggregate shall follow procedures that

protect the liner, drainage pipe and composite flat drains. The drainage pipe and composite flat drains shall not be disrupted through ground pressures from trucks, dozers or by any other means.

J. Delivery trucks shall enter the field only from the designated entrance point. Base course stone shall be dumped closest to the entrance first and continuously worked towards the furthest point of the field. Extreme care must be taken not to disturb the sub grade, liner, drainage pipe and composite flat drains.

K. Push out the stone from behind the pile onto and toward the field center. Vehicles shall only traverse the aggregate they are spreading.

L. Final elevation of backfill material shall be equal to adjacent subgrade on either side of trench.

M. Blades shall be equipped with a laser-guided hydraulic system. Care shall be taken not to disturb or contact the base grade soils with blades, tracks or tires. All equipment trafficking over the drainage aggregate shall insure there is a minimum depth of four (4) inches of aggregate between the liner and the dozer track ground contact position.

N. After the drainage stone has been uniformly spread over the surface, the surface shall receive a final laser finished grade. This process shall be accomplished using a turf-type tractor, or lightweight grader, equipped with high flotation tires and a hydraulically-controlled laser blade.

O. The free-draining base aggregate course must be installed to a depth as indicated on Drawings and not less than six (6) inches and shall be graded by means of a laser within 0 to 1/2 inch from design grade. The finished surface tolerance must not exceed ¼ inch over 10 feet in all directions.

P. Finish (leveling) aggregate base must be proof-rolled by means of 2 to 5 ton roller. Compaction of the aggregate (leveling) base shall be 92%, in accordance with ASTM D1557 (Modified Proctor procedure); and the surface tolerance shall not exceed 0-1/4 inch over 10 feet and 0-½" from design grade.

Q. CONTRACTOR must provide a topographical survey with a minimum of 200 shots, demonstrating finished grade meets all written requirements.

3.9 Base Acceptance:

A. The CONTRACTOR and Turf contractor shall visit the site with the ENGINEER and shall approve in writing, the condition of the completed substrate before turf installation can begin (required for each field).

3.10 Clean Up:

A. CONTRACTOR shall provide the labor, materials and equipment as necessary for final cleaning of surfaces and installed items.

B. As phases of the Work are completed, clear the site of all extraneous materials, rubbish, or debris and leave the site in a clean, safe, well-draining, neat condition.

C. Surfaces, recesses, enclosures, etc. shall be cleaned as necessary to leave the work area in a clean condition ready for immediate installation of turf.

3.11 Final Acceptance:

A. Final Acceptance shall be granted when the following conditions are met:

1. Installation has been approved by ENGINEER.

2. All required post-construction submittals are received by the ENGINEER.

- END OF SECTION -

SECTION 02726

BEDDING MATERIAL

PART 1 - GENERAL

1.1 Scope: This Section covers all operations necessary to provide bedding material for all drainage conduits and drainage structures to provide a stable working table.

1.2 Reference Standard: Work shall conform to the following Section of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2006 Edition, except as may be modified herein:

Section 726 - Bedding Material

All references made therein to Measurement and Payment are deleted.

The placement of bedding material in a geotextile envelope will not be used on this project.

PART 2 - PRODUCTS

2.1 Bedding Material: Bedding material shall conform to subsection 1003.08 of the Reference Standard and/or as approved by the ENGINEER.

PART 3 - EXECUTION

3.1 General: Bedding material shall be installed as described in the Reference Standard where authorized by the ENGINEER, except any requirements on the use of geotextile fabric underlayment or envelopes will be deleted.

3.2 Bedding Material: Bedding material shall be compacted to 95% Standard Proctor at plus or minus 3 percent optimum moisture content (ASTM D698). The material shall be shaped to conform to the bottom of the pipe.

- END OF SECTION -

SECTION 02790

SYNTHETIC TURF

PART 1 – GENERAL

1.1 Scope:

A. This section includes requirements for the installation of synthetic turf systems on the project:

Ballfields

1. Infilled, Dual-Fiber (Monofilament–Slit Film) Turf System for Simulated Grass Areas (except Replacement Panels):
   a. Infield border, sidelines.

2. Infilled, Dual-Fiber (Polyethylene-Nylon) Turf System for Simulated Clay Areas (except Replacement Panels):
   a. Infield, catcher's/batter's box area

3. Infilled, Dual-Fiber (Polyethylene-Nylon) Turf System - Replacement Panels:
   a. Batter's boxes, catcher's boxes, mounds, on-deck circles.

Play Area

1. Sand Infilled, Dual-Fiber (Polyethylene-Nylon) Turf System for Simulated Grass Areas:
   a. Play Area (Common Area between Ballfields)

(Note: Play Area turf is deleted under Alternate No. 1)

B. The work shall consist of furnishing all labor, materials, and equipment necessary to install, in place, all synthetic turf and other materials as indicated on the Drawings and as specified herein. The installation of all new materials shall be performed in strict accordance with the Drawings and Specifications, the manufacturer's instructions and in accordance with all details and shop drawings.

C. The Work includes, but is not limited to, the following:

1. Extruded, recycled HDPE (High Density Polyethylene) edge nailer and attachment hardware.

2. Final laser grading of the prepared aggregate drainage and finish/leveling base.

3. Complete synthetic turf system for areas noted in Paragraph 1.1.A, including tufted and inlaid field markings as indicated on Drawings and approved shop drawings, turf inserts for on-deck circles, home plates, batter's boxes, catcher's boxes, pitcher's strips and replacement panels for each of the following:

   a. Batters' boxes on the playing fields.

b. Catchers' boxes on the playing fields and in the bullpens.

c. Pitcher's strips on the playing fields and in the bullpens.

4. A resilient infill system, consisting of processed SBR rubber and sand.

5. Training of OWNER'S field maintenance personnel in maintenance procedures.

1.2 Related Documents:

A. Project Conditions described in the Contract Documents shall apply to this portion of the Work. Other related documents include the following:

1. Cast-in-Place Concrete
2. Earthwork
2. Irrigation
3. Synthetic Turf Drainage Base Construction

1.3 Quality Assurance:

A. Installation shall be completed by factory-trained technicians, skilled in the installation of athletic infilled synthetic turf systems.

B. Provide a colored striping plan detailing lines. Coordinate with OWNER or OWNER'S Representative to get final approval of all designated colors and dimensions.

C. The Turf CONTRACTOR shall meet the following criteria:

1. Manufacturer/Installer's Experience:

a. The Turf Manufacturer and the Turf CONTRACTOR must be experienced in the manufacturing and installation of this type of synthetic turf system, with no fewer than ten (10) completed installations in the United States in the past two years.

b. The Turf CONTRACTOR shall provide competent workmen skilled in this type of synthetic turf installation. The designated supervisory personnel on the project must be certified in writing by the Turf Manufacturer, as competent in the installation of this material, including gluing or sewing seams and proper installation of the infill materials. The Turf Manufacturer shall have a qualified job foreman on site to certify the installation and warranty compliance.

D. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified, shall withstand full climatic exposure in the location of the field, be resistant to insect infestation, rot, fungus and mildew; it shall also withstand ultra-violet rays and extreme heat, it shall

allow the free flow of water horizontally to perimeter areas and vertically to the base materials and into the field drainage system below the surface.

E. The adhesive bonded or sewn seams of all system components shall provide a permanent, tight, secure, and hazard free athletic playing surface, that is not different from adjacent surfaces. All inlaid markings shall remain in place throughout the duration of the warranty period.

1.4 Submittals:

A. The CONTRACTOR shall submit a product data sheet, a 12” x 12” unfilled turf sample, a list of OWNER references for which the turf vendor has installed a synthetic turf of the type and a complete copy of the warranty documentation.

B. Prior to ordering materials, the CONTRACTOR shall submit the following:

1. Product data and testing documents demonstrating that proposed product meets or exceeds all specified requirements.

2. A one (1) square foot boxed, filled turf sample and unfilled synthetic turf carpet for each type of turf and color yarn samples.

3. Field plans indicating seam layout, turf types and colors and markings.

4. Manufacturer’s recommended maintenance equipment cut sheets.

5. Finish grade conformance survey.

6. Turf Manufacturer’s maintenance manual.

1.5 Warranty:

A. The CONTRACTOR shall submit its Manufacturer's Warranty, which warrants the usability and playability of the synthetic turf system for its intended uses for a minimum of a eight (8) year period commencing with the date of Substantial Completion. The warranty coverage shall not be prorated nor place limits on the amount of the field's usage, that is, the full value of repair/replacement remains in effect for the entire duration of the warranty period. A third party insured warranty from a domestic insurance carrier is required in addition to the Manufacturer's warranty.

B. The Synthetic Turf warranty shall have the following characteristics:

1. Provide full coverage for a minimum of eight (8) years from the date of Substantial Completion.

2. The warranty shall include all necessary materials, labor, transportation costs, etc. to complete said repairs.

3. Warrant materials and workmanship in the manufacturing of the materials and in the installation of the system components.

4. Warrant that the materials installed meet or exceed the product specifications.

5. Repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable and playable surface.

6. Be from a single source covering workmanship and all materials.

7. Assure the availability of exact or substantially the same replacement materials for the synthetic turf system installed for the full warranty period.

8. Include general wear and damage caused from UV degradation.

C. The Shock Pad warranty shall be a minimum 16 year Manufacturer's warranty.

PART 2 – PRODUCTS

2.1 Acceptable Manufacturers:

A. Products from the following manufacturers which meet all requirements of this specification including backing type, fiber type, fiber length and warranty shall be acceptable:

1. **Basis of Design:** Astroturf Corporation (800) 723-8873 www.astroturf.com

2. Hellas Construction (800) 233-5714 www.hellasconstruction.com

3. Shaw Sports Turf (866) 703-4004 www.shawsportsturf.com

4. FieldTurf (469) 534-6398 www.fieldturf.com

5. Sprinturf (843) 936-6019 www.sprinturf.com

6. GeoSurfaces ((877) 663-5968 www.geosurfaces.com

B. Proposed product substitution requirements:

1. Interested manufacturers not listed above, whose products meet all requirements of this Specification must provide a complete submittal package as outlined in Article 1.4.A of this section at least 10 days prior to the bid date for review and consideration by the OWNER/ENGINEER Only one (1) copy of documents required.

2. Compliance with Specifications: Acceptance of a bid alternate does not relieve the CONTRACTOR and Turf Manufacturer of the responsibility to comply fully with the requirements of these Specifications. Any deviations

from the Specifications must be clearly stated in the prior approval submittal documents.

2.2 General:

A. The pile surface shall provide good traction in all types of weather with the use of conventional sneaker type shoes, composition mold sole athletic shoes, baseball spikes andscrew-on football spikes.

B. The pile surface shall be suitable for both temporary and permanent line markings using acrylic paint, as per the manufacturer's recommendations.

C. All adhesives used in bonding the seams shall be resistant to moisture, freeze/thaw, bacteria and fungus attacks, and resistant to ultraviolet radiation. The adhesive shall be made especially for the adhesion of synthetic turf seams.

D. The adhesive system shall consist of a factory-made adhesive bed applied to a non- woven fabric seaming tape. The adhesive bed shall be a metered amount suitable for the application. It shall be heat and pressure activated. A special heat application machine andpressure application using weighted rollers is required.

E. Perimeter edge details required for the system shall be as detailed on the Drawings.

2.3 Fabric Surface:

A. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials, as hereinafter specified, shall be able to withstand full climatic exposure in all climates and be resistant to insect infestation, rot, fungus and mildew, ultra-violet light and heat degradation. The materials shall be perorated at 4" – 6" on center, allowing flow through-drainage with free movement of surface run-off through the turf fabric and into the existing drainage aggregate and field drainage system.

B. The finished playing surface shall appear as mowed grass with no irregularities, ridges, humps, undulations or low areas and shall provide excellent traction for conventional athletic shoes of all types. The finished surface shall resist abrasion and cutting from normal use. The installed system shall be suitable for competition baseball and softball use.

C. The pile surface shall be nominally uniform in length.

D. The pile fiber angle shall be 90 degrees ± 15 degrees, measured from the horizontal afterinstallation of the infill material.

E. Each roll shall be a minimum of 15' wide.

2.4 Synthetic Turf Specifications:

A. **Ballfields** Simulated Grass Turf (except Replacement Panel Areas):

1. A complete synthetic turf system consisting of a 1) a 10,800 denier monofilament fiber made from a singularly extruded combination of stabilized polyethylene and nylon polymers with proper compatibilizers; 2) 10,000 denier polyethylene slit film fibers; and 3) an extruded monofilament thatch zone.

2. Basis of Design: **Diamond Series Blend OPS**

3. The fabric shall possess the following minimum physical characteristics.

Average Pile Yarn Weight	ASTM D 5848	52 oz/square yard
Average Total Weight	ASTM D 5848	78.5 oz/square yard
Secondary Backing Weight	ASTM D 5848	20 oz/square yard
Primary Backing	ASTM D 5848	7.0 oz/square yard
Average Tuft Length	ASTM D 5823	1.5”
Tufting Gauge	ASTM D 5793	3/8” maximum
Tuft Bind	ASTM D 1335	> 8 lbs
Yarn Denier (monofilament face)	ASTM D 1577	10,800/6
Yarn Denier (slit film face)	ASTM D 1577	10,000
Yarn Denier (nylon thatch zone)	ASTM D 1577	5,400/8
Surface Flammability	ASTM D 2859	8 of 8 PASS
Permeability	ASTM F 1551	>30 in/hr
Melt Point	ASTM D 789	248 Degrees Fahrenheit

B. **Ballfields** Simulated Clay Turf (except Pitching Mound, Batters/Catchers’ Boxes and Other Replacement Panel Areas):

1. Face yarns shall be a combination of diamond-shaped monofilament polyethylene face fibers; diamond-shaped monofilament nylon face fibers; and along with an extruded monofilament nylon thatch zone.

2. Basis of Design: **Diamond Series *i*-OPS**

3. The fabric shall possess the following minimum physical characteristics.

Average Pile Yarn Weight	ASTM D 5848	52 oz/square yard
Average Total Weight	ASTM D 5848	78.5 oz/square yard
Secondary Backing Weight	ASTM D 5848	20 oz/square yard
Primary Backing	ASTM D 5848	7.0 oz/square yard
Average Tuft Length	ASTM D 5823	1.5”
Tufting Gauge	ASTM D 5793	3/8” maximum
Tuft Bind	ASTM D 1335	> 8 lbs.
Yarn Denier (monofilament face)	ASTM D 1577	10,600/10
Yarn Denier (nylon thatch zone)	ASTM D 1577	6,000/8
Surface Flammability	ASTM D 2859	8 of 8 PASS
Permeability	ASTM F 1551	>30 in/hr
Melt Point	ASTM D 789	248 Degrees Fahrenheit

C. **Ballfields** - Pitching Mound, Batters’/Catchers’ Boxes and Other Replacement Panel Areas:

1. Face yarns shall be a combination of diamond-shaped monofilament polyethylene face fibers; diamond-shaped monofilament nylon face fibers; and along with an extruded monofilament nylon thatch zone.

2. Basis of Design: **Diamond Series OPS ERA**

3. The fabric shall possess the following minimum physical characteristics.

Average Pile Yarn Weight	ASTM D 5848	90 oz/square yard
Average Total Weight	ASTM D 5848	116.5 oz/square yard
Secondary Backing Weight	ASTM D 5848	20 oz/square yard
Primary Backing	ASTM D 5848	7.0 oz/square yard
Average Tuft Length	ASTM D 5823	1.5”
Tufting Gauge	ASTM D 5793	3/16” maximum
Tuft Bind	ASTM D 1335	> 8 lbs.
Yarn Denier (monofilament face)	ASTM D 1577	10,600/10
Yarn Denier (nylon RootZone)	ASTM D 1577	6,000/8
Surface Flammability	ASTM D 2859	8 of 8 PASS
Permeability	ASTM F 1551	>30 in/hr
Melt Point	ASTM D 789	248 Degrees Fahrenheit

D. **Play Area (Common Area between Ballfields)**: **Note: Play Area turf is deleted under Alternate No. 1.**

1. A complete synthetic turf system consisting of a 1) 9,900 denier entangled fibers made from a singularly extruded combination of stabilized polyethylene and nylon polymers with proper compatibilizers; and 2) a polyethylene thatch zone.

2. Basis of Design: **SYNSport**

3. The fabric shall possess the following minimum physical characteristics.

Average Pile Yarn Weight	ASTM D 5848	58 oz/square yard
Average Total Weight	ASTM D 5848	86 oz/square yard
Secondary Backing Weight	ASTM D 5848	22 oz/square yard
Primary Backing	ASTM D 5848	6.0 oz/square yard
Average Tuft Length	ASTM D 5823	1”
Tufting Gauge	ASTM D 5793	3/8” maximum
Tuft Bind	ASTM D 1335	> 8 lbs
Yarn Denier (nylon + polyethylene face)	ASTM D 1577	9,900/9
Yarn Denier (polyethylene thatch zone)	ASTM D 1577	5,000/8
Surface Flammability	ASTM D 2859	PASS
Permeability	ASTM F 1551	>1,000 in/hr

E. Turf Color(s):

Area Type	Field/Area	Location	Color
Grass	**All Ballfields**	Sidelines, Infield Perimeter	Dark Green
Clay (Skinned)	**All Ballfields**	Infield, Batter’s Boxes, On-Deck Circles	Red Clay
Grass	**Play Area (Common area between Ballfields)**	All	Dark Green

F. Field Markings: All sports field markings shall be tufted or permanently inlaid at 4” width in accordance with current LHSAA or NFHS rules as appropriate for each field and as indicated on Drawings and approved shop drawings.

G. Perforations: Unless the system is permeable by design with adequate drainage, factory-installed perforations through all the backing coatings shall provide for adequate and consistent drainage through the system.

H. Adhesive: All adhesives used in bonding the system together shall be resistant to moisture, bacteria and fungus, shall meet local/regional environmental requirements and be resistant to ultraviolet rays at all exposed locations within the installed system.

I. Adhesives for bonding tufted synthetic turf shall be one part moisture cured polyurethane obtained from a single manufacturer recommended and approved by the Turf Manufacturer.

J. Seaming Tape: The fabric used for seaming tape shall provide dimensional strength and enough surface texture to bond well with the adhesive, equal to high quality, coated Cordura tape made with a minimum roll width of 12 inches.

K. Sewn Seams: If seams are to be sewn, they shall be sewn with high quality cord/thread as recommended by synthetic Turf Manufacturer.

2.5 Resilient Infill:

A. Ballfields: Infill shall be a combination of recycled granulated SBR rubber, free of belting fabric and/or wire, and clean, sub-angular silica sand, with a minimum fill height necessary to achieve the required shock absorbing properties and biomechanical properties.

B. Play Area (Common Area between Ballfields): Infill shall consist of clean, sub-angular silica sand, installed at a rate of 2-3/lbs per square foot of surface area.

2.6 Shock Pad **(below Play Area Turf ONLY)**: **Note: This pad would be deleted under Alternate No. 1.**

A. Basis of Design Manufacturer/Product: Provide SHOCK PAD SERIES 14, 14mm expanded polypropylene shock pad, as manufactured by Brock USA LLC, (303) 544-5800, www.brockusa.com, or prior approved equal product. The shock pad is composed of prefabricated polypropylene panels ready for laying directly over the drain stone subbase. Minimum requirements are:

1. Minimum material nominal thickness 14mm
2. Tensile Strength > 45 psi (ASTM D3574-08 Test E)
3. Tensile Elongation > 10% (ASTM D3574-08 Test E)
4. Compression Strength > 25 psi @ 25% strain (ASTM D3575-08 Test D)
5. Linear Thermal Expansion < 0.10 mm/m/ °C (ASTM D696)
6. Water Absorption ≤ 5% after 24 hrs. (ISO 62:2008 / DIN 53428)
7. Water Permeability > 500 in/hr (ASTM 1551 DIN 18-035, Part 6)
8. Head Injury Criterion < 1,000 from > 0.4 m drop height (ASTM F3146-18, Procedure A)
9. Gmax < 160 G (ASTM 355-16 Missile A)
10. Shock Absorption > 55% (EN 14808:2005 / ASTM F3189-17)
11. Vertical Deformation < 4.0 mm (en 14809:2005)
12. Resistance to Chemicals ≤ 2 (ASTM F925)
13. Resistance to Bacteria – no growth (ASTM G22)
14. Resistance to Fungi – no growth (ASTM G21)
15. Initial Impact Attenuation for installed Surface System and Shock Pad: must provide a maximum average Gmax of 110 G upon initial testing of installed field (ASTM F1936-10)

16. Warranty Period Impact Attenuation for installed Surface System and Shock Pad: must provide a maximum average Gmax of 135 G during warranty period of field (ASTM F1936-10)

Note: Shock pad to be installed below turf at Play Area ONLY.

PART 3 – EXECUTION

3.1 Examination:

A. Examine substrates and conditions, with Turf CONTRACTOR present, for compliance with requirements for visual installation tolerances. Proceed with installation only after satisfactory conditions have been corrected.

B. Certification of Prior Work: The synthetic Turf Manufacturer and/or installation CONTRACTOR shall perform a visual inspection of the field base onto which the synthetic turf system is to be installed and to examine the finished surface for required compaction, and grade tolerances (through string line testing). After any discrepancies between the required materials, application and tolerance requirements noted have been corrected, the synthetic Turf CONTRACTOR should submit a written certification of VISUAL acceptance of the base for installation of the synthetic turf system.

C. Installation of all materials shall be performed in full compliance with approved project shop drawings. Only factory trained technicians skilled in the installation of athletic caliber synthetic turf systems, working under the direct supervision of the manufacturer's supervisors, shall undertake the placement of the turf system. The designated supervisory personnel on the project must be certified, in writing by the Turf Manufacturer as competent in the installation of these materials, including proper seaming and proper installation of the infill mixture. The manufacturer shall certify the installation and warranty compliance.

3.2 Preparation:

A. Inspect delivered field surface fabric and components immediately prior to installation. Any damaged or defective items shall be rejected. Installed artificial system shall be inspected for, but not limited to, the following:

1. Uniformity of product and color
2. Surface bubbles
3. Field markings
4. Field edge installation
5. Pile height of each roll shall be measured. Any material(s) that does not meet minimum height and thickness specifications shall be rejected. Pile height shall be measured in its finished position.

B. Environmental Conditions: No work under this section shall proceed when:

1. Ambient temperature is below 45 degrees F.
2. Material temperatures are below 45 degrees F.
3. Surfaces are wet or damp.
4. Rain is imminent or falling.
5. Conditions exist or are imminent, which will be unsuitable to installation requirements of the systems specified herein. Humidity levels shall be inside the limits recommended by the adhesive manufacturer to obtain optimum bonding characteristics of the surfaces.

3.3 Turf Attachment Nailer:

A. Install a combination, recycled turf / composite 2x4 nailer to the perimeter curb at the locations shown on the Drawings and/or approved shop drawings. Nailer shall be set 1 inch below top of the curb or equal to the depth of the infill material.

B. Fasten nailer to the concrete curb by means of a Tapcon or Hilti mechanical fastener (or to the CMU wall with a masonry expansion anchor, if applicable) at 24" o.c. (max.).

3.4 Shock Pad Installation:

A. Product to be shipped as flat panels on pre-packaged pallets. Pallets to be wrapped with heavy-duty barrier for protection from moisture and UV exposure.

B. Seams should be mechanically locked in place by hand without the use of additional materials, glue, fasteners or secondary processes and equipment.

C. Install materials expressly per manufacturer's guidelines.

3.5 **Ballfields** Synthetic Turf Installation:

A. The turf rolls are to be installed directly over the properly prepared base stone. Extreme care should be taken to avoid disturbing the base stone in regard to compaction and planarity. A 2-5 ton static roller shall be on site and available to repair and properly compact any disturbed areas of the base stone prior to turf installation.

B. The full width turf rolls shall be laid out across the field. When all of the rolls of the playing surface have been installed, the sideline areas will be installed at right angles to the playing field turf. All work shall be such that the seams shall remain as required for the duration of the warranty period at a minimum. All seam widths are to be held to a minimum and shall be traverse to the field direction. Seams shall be flat, tight and permanent with no separation or fraying.

C. The rolls of turf shall be rolled out a minimum of four hours prior to starting seaming procedures and allowed to relax/expand.

D. All visible wrinkles shall be stretched out before seaming.

E. Seams shall be flat, tight and permanent with no separation or fraying.

F. Synthetic turf yarn fabric that is trapped or glued between seams shall be freed from the seams by hand or other approved method to a vertical upright position prior to the commencement of brushing and top-dressing procedures.

G. All Synthetic Turf seams shall be assembled as follows: The full width rolls shall be laid out across the field. Utilizing standard state of the art adhering or sewing procedures, each roll shall be attached to the next.

H. Seams shall be glued with a supplemental backing material and/or sewn with the Manufacturer's specified high-strength sewing thread. The synthetic turf panels shall be joined only with materials approved by Turf Manufacturer and shall remain securely fastened together for the warranted life of the system. Seaming tape for seams or inlaid markings shall be installed below the backing material on both sides of a seam or inlay. Adhesive shall be applied to the seaming tape to provide a bond between adjacent turf panels or sections.

I. Seam gaps shall be uniform. Seam gaps shall not exceed the tufting gauge of the material such that they would be discernable at the conclusion of the infill placement and initial grooming.

J. The foul lines, coaches' boxes, batters' boxes and catcher's boxes shall be tufted into carpet by the Manufacturer wherever possible.

K. The perimeter of the field shall be firmly secured to the edge anchors for the life of the warranty and in accordance with project details.

3.6 **Play Area** Synthetic Turf Installation:

A. Same as listed in Paragraph 3.5 above except that the turf rolls are to be installed directly over the shock pad which is to be installed directly over the properly prepared stone base.

3.6.1 Tufted and Inlaid Lines:

A. Layout and descriptions of tufted and inlaid lines shall be as indicated on approved final shop drawings.

B. Inlaid lines and field markings shall be installed using methods recommended by the Turf Manufacturer.

3.7 Field Lining and Markings:

A. A complete field "Lining, Marking and Field Boundary" system shall be provided with the installation of the surfacing system specified herein. All markings shall be installed in accordance with prior-approved, project shop drawings.

B. Inlays shall conform to the manufacturer's specifications, directions and recommendations for the best results.

C. Striping layouts shall be accurately surveyed by the CONTRACTOR before installation of inlaid field markings.

D. Install inlays only when the surface is completely dry. Adhere all inlays securely into place. Never loose-lay and sew an inlay into place.

E. Inlaid lines and field markings shall be installed using methods recommended by the Turf Manufacturer.

3.8 Synthetic Turf Perimeter Attachment:

A. After final trimming of the turf, the turf edge shall be affixed to the perimeter nailer with industrial staples (minimum one inch (1") deep embedment at maximum two inch (2") staple spacing).

3.9 Installation of Infill: After all seaming is completed and inlaid lines have been installed, the infill materials shall be spread evenly, using a drop spreader or top dresser.

A. Infill materials shall be applied at a uniform rate of multiple applications until the specified infill depth is achieved.

B. Infill material shall be brushed between infill applications with a motorized, rotary broom and pull-type groomer brush used simultaneously.

C. Sand infill for Play Area shall be installed at a rate of 2-3/lbs per square foot of surface area.

3.10 Field Quality Control:

A. Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Testing and inspecting of completed applications of synthetic turf system shall take place in suggestive states, in areas of extent and using methods that are industry standard. Do not proceed with application of next stages until test results for previously completed applications show compliance.

C. Remove and replace items where test results indicate that it does not comply with specifiedrequirements.

3.11 Clean Up:

A. CONTRACTOR shall provide the labor, materials and equipment as necessary for final cleaning of surfaces and installed items.

B. During the Contract, and at intervals as directed by the OWNER/ENGINEER and as synthetic turf installation is completed, clear the site of all extraneous materials, rubbish, or debris and leave the site in a clean, safe, neat condition. Trim all loose and frayed fibers resulting from installation, seaming, cutting and grooming.

C. Surfaces, recesses, enclosures, etc. shall be cleaned as necessary to leave the work area in a very clean condition ready for immediate occupancy and use by the OWNER.

3.12 Closeout:

A. The Turf CONTRACTOR shall verify that a qualified representative of the synthetic Turf Manufacturer has inspected the installation and that the finished field surface conforms to the Manufacturer's requirements.

B. The Turf Manufacturer shall provide a non-prorated warranty to the OWNER that covers defects in materials and workmanship of the turf for a period of eight (8) years from the date of Substantial Completion as described in Paragraph 1.5 - Warranty. Submit five (5) copies of the Warranty documents.

C. The eight (8) year warranty shall also be supported by a 3rd party insured warranty from an A-rated domestic insurance carrier. The value of the policy shall be no less than the value of the synthetic turf (as identified in the CONTRACTOR'S Schedule of Values) per occurrence, no deductibles allowed. Submit five (5) copies of the insurance certificate to the OWNER.

D. Turf CONTRACTOR shall submit five (5) copies of the maintenance manual to the OWNER.

E. Turf CONTRACTOR shall train OWNER'S designated field personnel in proper grooming and care procedures. This includes training field personnel in how to properly use grooming equipment and make minor repairs.

F. Extra Materials (**Ballfield Only**): Provide extra synthetic turf replacement materials (90 oz/S.Y.) to the OWNER as follows:

1. Individual panels (with Velcro edges) per the table below:

Replacement Panel Location	TOTAL Number of Replacement Panels	Replacement Panel Color
BALLFIELDS		
Playing Field		
Batter's Box (Left Side)	16	Red Clay
Batter's Box (Right Side)	16	Red Clay
Catcher's Box	16	Red Clay
On-Deck Circle	32	Red Clay
Pitcher's Mound	16	Red Clay
Bullpens		
Catcher's Box	32	Red Clay *
Pitcher's Mound	32	Red Clay

* With inlaid White synthetic turf plate

2. Bulk material for future replacements (utilizing full roll width (and/or minimum 6'x6' pieces)):

Replacement Panel Color	Area (Amount)
Red Clay	500 S.F.
Dark Green	300 S.F.

- END OF SECTION -

SECTION 02810

FIELD IRRIGATION SYSTEM

PART 1 GENERAL

1.1 Scope: This Section covers the requirements for materials, installation and testing of the irrigation system for Field Nos. 1-4 (outfields and outfield sidelines) including all work, labor, tools and incidentals required to complete the irrigation system including all piping, valves, irrigation heads, control wiring, controller connections/programming, testing, etc., as directed by the ENGINEER.

1.2 Disclosure: The work included herein is for the installation of a new irrigation system for the outfields and outfield sidelines of Field Nos. 1-4. The irrigation system shown on the Irrigation Plans are diagrammatic in that the intent is to outline the general scope, layout and logic of the system. Scaled measurements may not be accurate. Actual location and quantities of pipes and fittings may vary due to field adjustments for existing and or proposed conditions and or other obstruction and or circumstances as may be required to provide the proper and intended irrigation coverage. The CONTRACTOR is required to investigate the structural and finished conditions effecting all of the contract work including obstructions, grade differences, dimensional data, etc., which may or may not affect the required performance of the system.

1.3 System Operation: Complete and fully functional irrigation system as approved by the ENGINEER and accepted by the OWNER will be the sole responsibility of the CONTRACTOR. All modifications and or adjustments to the irrigation system made by the CONTRACTOR as a result of changing field conditions and/or construction modifications shall be coordinated with the ENGINEER in the field.

1.4 Field Caution: The CONTRACTOR will be responsible for all damages caused to any utilities and or facilities, both above ground and underground, as a result of irrigation installation. Lack of installation of PVC irrigation sleeves beneath paved areas will result in pavement replacement at the CONTRACTOR's expense. The irrigation system shall be installed to the maximum extent possible to promote water, soil, and energy conservation.

1.5 Qualification: The CONTRACTOR shall provide documentation for himself and or his irrigation Sub-Contractor, documenting a minimum of five (5) years experience and present proof of the installation of five (5) irrigation systems of a similar magnitude and or scope of this project.

1.6 Submittals: Submit product data in accordance with Section 01340 – Shop Drawings, Samples and Project Data.

1.7 O & M Manuals: Provide Operation and Maintenance Manuals in conformance with Section 01730 - Operation and Maintenance Manuals.

1.8 Project Conditions:

A. The CONTRACTOR shall warrant that he has complete knowledge of the conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the CONTRACTOR of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed on the Drawings, outlined in these Specifications and Contract Documents.

B. Determine the locations of all utilities, subsurface drainage and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The CONTRACTOR shall repair immediately, at his expense, any damage to utilities or other construction resulting from the work.

C. The CONTRACTOR shall assume full responsibility for all intentional and unintentional disturbance or damage to the site by all parties, employees, contract workers, or sub-contractors involved under the authority or interest of the CONTRACTOR. The OWNER shall be the sole and final authority of the acceptability of all restoration and or repairs related thereto. All expenses of any disturbance or repairs shall be the sole responsibility of the CONTRACTOR.

D. Coordinate work schedules to avoid interference with other ongoing construction.

E. Store materials delivered to site, prior to actual usage, in a secure place not to interfere with other construction and protect from vandalism and damage by weather or other elements.

1.9 Quality Assurance: To insure unity of responsibility, all major irrigation system and components shall be the standard products and or components of a single manufacturer having a minimum of ten (10) years experience in the manufacture, design and installation of irrigation systems including but not limited to system controller, wirings, solenoid and isolation valves, irrigation heads, quick connects, swing joints, valve boxes and all related appurtenances.

1.10 Labor Competence: The successful CONTRACTOR shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assembly, glue, install, wire, test or adjust components of the irrigation system. If in the opinion of the ENGINEER, the labor furnished by the CONTRACTOR is incompetent or inexperienced in the practice assigned, the CONTRACTOR shall remove such persons or reassign them to a practice acceptable to the ENGINEER.

1.11 Applicable Publications: The publications listed below form a part of this Specification to the extent referenced. The publications may be referred to in the text by designation only.

A. American Society for Testing and Materials (ASTM)

B 62-85 - Standard Specifications for Composition Bronze or Ounce Metal Castings.

D 1784-81 - Standard Specifications for Rigid (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds.

D 1785-86 - Standard Specifications for (PVC) Plastic Pipe, Schedules 40 and 80.

D 2241-84 - Standard Specifications for PVC Pressure-Rated Pipe (SDR Series).

D 2564 Standard Specifications for Solvent Cements for (PVC) Plastic Pipe and Fittings.

F477 Specification for Electrometric seals (gaskets) for joining plastic pipe.

B. American Water Works Association:

C111 Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

C153 Ductile - Iron Compact Fittings, 3 Inch through 24 Inch for Water Service

C. National Sanitation Foundation (NSF), requirements for Seal of Approval.

D. Plastics Pipe Institute (PPI), recommendations for hydrostatic design stresses for PVC pipe.

PART 2 PRODUCTS

2.1 Major Irrigation Modification Components: Major irrigation modification components include;

2.1.1 Irrigation Controllers and Rain Sensors,

2.1.2 Irrigation Heads,

2.1.3 Solenoid (Station) Valves with Automatic Pressure Regulators,

2.1.4 Isolation (Ball) Valves

2.1.5 Swing Joints,

2.1.6 Control Wires and Connectors,

2.1.7 Valve Boxes,

Major irrigation components shall be the standard products of "RAIN BIRD", locally represented by Keeling Company, Lake Charles, La., 337-479-2345, or "HUNTER", locally represented by Ewing Irrigation Products, Lafayette, La., 337-234-0037, or approved equal.

2.1.1 Irrigation Controller and Rain Sensor: The controller shall have multi valve capacity of four (4) stations and pre-wired and configured to expand to a twenty two (22) station capacity with the following minimum specifications and or features:

A. Delay Watering: Capable of postponing irrigation for up to 14 days. Normal irrigation will resume automatically.

B. Bypass Rain Sensor: Capable of bypassing rain sensor.

C. Seasonal Adjust by Program: Reduce watering down to 5 percent of scheduled program times or increase up to 200 percent. Can apply to all programs or to each program individually.

D. Short Detect/Programming Errors: Visually notifies of electrical and programming issues with a bright red LED and scrolling messages across the LCD display.

E. One-Touch Watering: Capable of one-tough watering.

F. Contractor Default: Capable of saving program(s) after setup and simple program restoring.

G. Operating Specifications:

1. Station timing: 1 minute to 6 hours.
2. Seasonal Adjust: 5% to 200%
3. Max operating temperature: 149ºF (65ºC)

H. Electrical Specifications:

1. Input required: 120 VAC ± 10%, 60 Hz
2. Output: 25.5 VAC 1A
3. Master Valve/Pump Start Relay
   a. Operating Voltage: 24 VAC 50/60 Hz
   b. Max Coil Inrush: 11 VA
   c. Max Coil Holding: 5 VA
4. Idle/Off power draw 0.06 amps at 120 VAC
5. Power back-up not required. Nonvolatile memory permanently saves the current programming and a 10 year life lithium battery shall maintain the controller's time and date during power outages.

I. Controller shall be Model ESP4ME3 as manufactured by Rain Bird or approved equal.

J. Rain Sensor: Provide and install compatible sensor, wired to controller, to automatically shut off irrigation valves/heads when raining. Sensor shall be supplied with aluminum bracket for mounting. Rain sensor shall be Model RSD-BEX as manufactured by Rain Bird or approved equal.

2.1.2 Irrigation Heads: Irrigation heads shall be rotary type (full circle or part circle) with capacity and pressure ratings to meet full “Head to Head” coverage and ability to supply the designed flow and pressure and shall include the following minimum specifications and or features:

A. Two inch (2”) diameter exposed black rubber cover and black rubber collar.

B. Stainless steel tapered riser stem.

C. Easy arc adjustment for part-circular models through the top of the rotor from 40° to 360°.

D. Water lubricated gear drive.

E. Heavy-duty 316 stainless steel retract spring for positive pop-down.

F. Removable seal/check device up to 10 feet or 4.33 psi of head to prevent puddling and or erosion that may be caused by low-head drainage.

G. Three (3) port color coded nozzles that are interchangeable from the front with no special tools for adjustment from or to long, mid, or close range watering, with a radius adjustment screw that allows radius reduction of up to 25% without changing nozzles. Self-adjusting stator shall not require replacement when changing nozzles.

H. Pressure-activated wiper seal and tapered riser stem to protect internals from debris and ensure positive pop-up and retraction.

I. Stainless steel trip gears.

J. Operating Range:

1. Precipitation Rate: 0.37 to 1.14 inches/hour.
2. Radius: 39 to 65 feet.
3. Pressure: 30 to 90 psi.
4. Flow: 2.9 to 21.7 gpm.

K. Dimension:

1. 1" female NPT threaded inlet.
2. Overall height: 8 1/2 inches.
3. Pop-up height: 4" inches.
4. Exposure Surface: 2" inch diameter (black rubber).

L. Irrigation leads shall be Rainbird Falcon 6504 Pop-Up Sprinkler with #10 (gray) nozzles or approved equal. Refer to Irrigation Plans for general head locations and pattern designations.

2.1.3 Solenoid (Station) Valves: The electric remote control solenoid valve shall be a normally closed 24 VAC 60 Hz actuated globe pattern with a balanced pressure diaphragm design. The valve pressure rating shall be 200 psi minimum. Pressure loss through the valve shall not exceed 3.6 psi at 50 gpm and 9.6 psi at 100 gpm. The valve body and bonnet shall be glass-filled nylon. Diaphragm shall be nylon reinforced EPDM. All other internal parts shall be brass, bronze and stainless steel. The valve shall have both internal and external manual open/close control for manual operation without energizing the solenoid. The solenoid shall be fully encapsulated, one piece, with capture plunger and removable retainer. The solenoid shall be factory attached to the valve and ready for use. Valves requiring field attachment of the solenoid will not be accepted. The solenoid shall be 24 VAC, 60 Hz and shall open with 19.6 VAC minimum at 200 psi. Average inrush current shall not exceed 0.41 amps at 24 VAC. Average holding current shall not exceed 0.28 amps. The valve shall have a contamination proof self-flushing stainless steel screen located at the valve inlet. All solenoid actuated valves shall be two inch (2") and shall be factory equipped with a pressure regulating module capable of regulating outlet pressure between 15 and 100 psi. The pressure regulating module shall have an adjusting knob for setting pressure, a valve connection for pressure monitoring, and shall be fully adjustable manual and or electrically. Solenoid Valves shall be Rain Bird Model 200-PESB-PRS-D or approved equal. Refer to Irrigation Plans for number and locations.

2.1.4 Isolation (Ball) Valves: Isolation (ball) valves shall be brass construction, full port and have female pipe threads (NST) on each end. Ball valves shall have a minimum working pressure of 150 psi, a blowout proof stem and a fluorocarbon elastomer stem O-ring. Brass ball valve shall be Model LFFBV-3C as manufactured by Watts, or approved equal.

2.1.5 Swing Joints: Swing joints shall be constructed of rigid polyvinyl chloride (PVC) and have a pressure rating of 350 psi. Each swivel joint shall be sealed by two (2) O-rings. Swing joints shall be 1", 1¼" or 1½" as required. Length shall be 18".

2.1.6 Control Wires and Connectors: Use 1/c #12 type direct burial RED wire for all 24VAC "Control" wiring, and 1/c #12 type direct burial WHITE wire for all 24 VAC "Common" wiring. Approved wire splices shall be used. Solder or join all wire splices with positive mechanical connectors. Splices must be properly insulated and waterproofed . Splicing is allowed only at sprinkler heads or in 10" valve boxes.

2.1.7 Valve Boxes and Lids:

A. The valve boxes and lids shall be of adequate size to accommodate the solenoid valve/ball valve assembly (13"x 20" min.) and the wire splice locations (10" dia. min.). The valve box and plastic lid shall be green and constructed of modified polyethylene material for maximum durability and corrosion resistance. The unfoamed resin shall have a tensile strength of 3,300 psi per ASTM D 638. The valve box and lid shall have UV stabilizers. The green material shall be uniform throughout the lid and be void of foaming agents that create air pockets within the box wall. Locate valve boxes a minimum of two feet from paving, curbs or other construction and not in locations where vulnerable to heavy traffic.

B. Lids:

1. The lids shall seat securely and evenly inside the meter/valve boxes and shall not overlap the top edge of the boxes.
2. The lids shall have a diamond pattern for skid resistance.
3. The lids shall be solid with the exception of the bolt and finger holes.
4. The lids shall have "IRRIGATION" stamped thereon.

C. Body:

1. The body shall be tapered and have crush resistant ribbing along the outside of the box.
2. The body shall have a flange around the lid opening to help prevent settling and aide in the adjustment to grade.
3. The body shall have one cut out pipe slot location 180 degrees apart that measure – 2 1/2" x 2 1/2".

Valve boxes and lids shall be Pro Series Plus Model 318BC 13" x 20" Jumbo Rectangular Valve Box as manufactured by NDS of Lindsay, CA (877-412-7467), www.ndspro.com or approved equal.

2.2 Minor Irrigation Components:

2.2.1 Plastic (PVC) Pipe and Fittings (Minor Irrigation Components):

A. Pressure Pipe and Fittings: Pressure plastic pipe shall be extruded from 100% virgin unplasticized polyvinyl chloride (PVC). It shall be manufactured in accordance with ASTM D2241 for PVC Pipe, have a Standard Dimension Ration (SDR) of 21 and have a Pressure Rating (PR) of 200 psi. All furnished PVC pipe shall be continuously marked with the manufacturer's name or trademark, iron pipe size, material, type and working pressure. All sleeving to protect pipe or control wires under paving or other construction shall be Sch 40 PVC buried at a 24" minimum depth and a minimum of one foot (1') beyond the edges of paving and synthetic turf curbs. All main line pipe segments and fittings shall be PVC CL200 Ring-Type SDR 21 of the same manufacturer of the pipe.

B. Schedule 40 Pipe and Fittings: PVC Schedule 40 pressure pipe and fittings shall comply with ASTM D1784 and ASTM D2466. Pipe and fittings shall be manufactured as a system and be the product of a single manufacturer. PVC solvent cement shall comply with the recommendations of the Pipe Manufacturer. Use Teflon tape for all threaded connections.

2.2.2 Ductile Iron Connection Fittings: (None Required this Project)

A. Fittings: Fittings (solid sleeves) for connection of new PVC main pipe section to existing PVC main shall be mechanical joint S.S.B., unless otherwise shown on the Drawings, and shall be made of ductile cast iron with a pressure rating of 350 psi, and cement lined and asphalt coated. All fittings shall meet or exceed ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/A21.11 specifications. Fittings shall be as manufactured by Tyler Union of Anniston, AL (800-226-7601) or approved equal.

B. Mechanical Joint Restraint Devices: All follower glands shall be mechanical joint restraint devices. Mechanical joint restraint devices shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80. Restraining devices shall be of ductile iron heat treated to a minimum hardness of 370 BHN. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA A21.11 and ANSI/AWWA C153/A21.53 of latest revision. Twist-off nuts shall be used to insure proper actuating of the restraining devices. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG or approved equal.

C. Bolts and Nuts for Mechanical Joint Fittings: Bolts and nuts for mechanical joint fittings shall consist of cor-ten steel.

2.3 Thrust Blocking: Concrete for thrust blocking shall be in conformance with Section 03300 - Cast-In-Place Concrete.

PART 3 EXECUTION

3.1 General: Prior to all irrigation work included under this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where the irrigation work may properly commence. The CONTRACTOR shall not willfully install any sprinkler equipment as shown on the Drawings when it is obvious in the field that obstructions, grade differences or difference in the area's dimensions exist that may not have been considered in the design process. Such obstructions or difference shall be brought to the attention of the ENGINEER. In the event this notification is not performed by the CONTRACTOR, the CONTRACTOR shall assume full responsibility and the cost related to any revisions necessary. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the CONTRACTOR shall coordinate and work out space conditions to permit all work to be installed satisfactorily. The CONTRACTOR shall make necessary changes in his work to correct the condition without additional compensation. Flag the location of all sprinkler heads, valves and controllers. In the event of a discrepancy, immediately notify the ENGINEER. Do not proceed until such discrepancies have been resolved.

3.2 Sleeving: If required, sleeving shall be buried at a minimum of 18". Upon completion of site filling and compaction operations and prior to the construction of foundations, roadways, walks or other pavements or obstructions, install sleeves of sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend one foot (1') past the edges of all paving, curbs and synthetic turf. Clearly mark for future use.

3.3 Trenching and Backfilling: Refer to Section 02220 - Excavation, Backfill and Compaction for Trenches.

3.4 Pipe and Fitting Connections: When connecting Ring-type PVC Piping and fittings, the CONTRACTOR shall make certain that each rubber ring gasket is properly fitted into place free from all foreign objects and properly seated. Use only the solvent supplied and recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent. Make solvent welds with a nonsynthetic bristle brush in the following sequence: Apply an even coat of solvent to the outside of the pipe, apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that the coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position and hold the joint for approximately 15 seconds so that the pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving. Allow all joints to set a minimum of 24 hours prior to pressurization of system.

3.5 Thrust Blocks: Refer to Drawings for dimensional requirements. Refer to Section 03300 - Cast-In-Place Concrete for technical requirements.

3.6 Flushing: The CONTRACTOR shall exercise extraordinary caution in flushing and pressuring the irrigation mainlines. Under NO circumstances shall portions of the piping system be flushed through the sprinkler heads. Should it be concluded that the mainlines where in fact flushed through sprinkler heads, the CONTRACTOR shall be fully accountable for all cost for equipment replacement or repair as determined by the ENGINEER.

3.7 Wire Installation: Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes. Install “common” and “control” wires in the same trenches as the main and lateral lines. The wires shall be bundled together and taped every 10 feet. Provide expansion loops at every splice, change of direction, at the valves, and where the wire enters the conduit at the controllers. The expansion loops shall be created by wrapping 3 feet of wire around a ½ inch diameter pipe to form a coil. Connect each solenoid to the controller with a “control wire” which is red in color. Connect a “common neutral wire” to all solenoids which is white in color. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices should be avoided if at all possible and will be allowed only in runs more than 1000 feet and located in 10" valve boxes.

3.8 Controller and Rain Sensor Installation: The controller and rain sensor shall be installed on the new electrical rack located between Field Nos. 2 and 3 (refer to Drawings). Controller and rain sensor shall be rigidly secured to the rack and set plumb. All anchoring shall be stainless steel. Electrical connections shall be made as indicated or required by the manufacturer. All entering and leaving control wires shall be by a long sweep rigid steel elbow conduit. All electrical equipment and wiring shall comply with Local and State codes and be installed by those skilled and licensed in the trade.

3.9 Sprinkler Head Installation: After finished grade is accomplished, install/adjust heads to finished grade and backfill with clean topsoil so that head is stabilized and no lateral motion is exhibited during operation. The CONTRACTOR shall adjust the position of the swing joint arm such that the angle between the arm and the irrigation pipeline is no more than thirty degrees (30°) after installation. Riser extension fittings may be necessary between the swing joint and the sprinkler head or quick coupler valve.

3.10 Operation and Balancing: Upon completion of the irrigation system, the entire system shall be tested for proper operation. Observe that all stations function properly and in the correct sequence. The CONTRACTOR shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments to the controls. The CONTRACTOR shall ensure that the entire system is operating properly, that it is balanced and adjusted and that all work and clean up is completed.

3.11 Factory Representation: The CONTRACTOR, at his own expense, shall provide the services of a factory trained representative of the irrigation components manufacturer. The duration of the representatives "ON-SITE" time shall be four (4) hours minimum. The CONTRACTOR shall schedule a time and date with the OWNER, ENGINEER and others once the irrigation system has been installed and placed on-line for use and after operation of one (1) full day without incident. The purpose of the factory representative will be to train the OWNER'S personnel in the use of the complete irrigation system, provide O&M Manuals, trouble shoot, and make any adjustments necessary before final acceptance by the OWNER.

- END OF SECTION -

SECTION 02820

CHAIN LINK FENCE AND GATES (VINYL COATED)

PART 1 - GENERAL

1.1 Scope: This Section covers the furnishings of all labor, materials, tools and equipment and related incidentals as required to perform all operations necessary to install new vinyl coated chain link fencing, gates and related accessories as indicated on the Drawings and as directed by the ENGINEER.

1.2 Submittals: Submit product data in conformance with Section 01340 – Shop Drawings, Samples and Product Data.

1.3 Applicable Publications: The publications listed below from a part of this Specification to the extent referenced. The publications may be referred to in the text by designation only.

American Society for Testing and Materials (ASTM) Publications:

A90 Test Method for Weight (Mass) of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.

A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

A176 Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet and Strip

A392 Specification for Zinc-Coated Steel Chain- Link Fence Fabric

A478 Specification for Chromium Nickel Stainless and Heat Resisting Steel Weaving and Knitting Wire.

A817 Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric and Marcelled Tension Wire

A824 Specification for Metallic-Coated Steel Marcelled Tension Wire for Use with Chain-Link Fence

F567 Standard Practice for Installation of Chain-Link Fence

F626 Specification for Fence Fittings

F900 Specification for Industrial and Commercial Swing Gates

F1043 Specification for Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework

F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

1.4 Quality Assurance and Qualifications:

A. Installer Qualifications: Installer shall have at least three (3) years experience and have completed at least five (5) chain link fence projects with same material and of similar scope to that indicated for this Project with a successful construction record of in-service performance.

B. Single-Source Responsibility: Obtain chain link fences and gates, including accessories, fittings and fastenings, from a single source.

PART 2 - PRODUCTS

2.1 Steel Chain-Link Fence Fabric: Steel chain-link fence fabric shall be fabricated in one-piece widths for fencing twelve (12) feet and less in height to comply with Chain Link Fence Manufacturers Institute (CLFMI) "Product Manual". The fabric core wire shall be 9 gage (prior to vinyl coating) as indicated on the Drawings, with 2-inch diamond mesh pattern and selvage knuckled finish on top and bottom. The fabric coating shall meet the requirements of ASTM A817, Type 2, Class 1 zinc coating. The zinc coating shall be applied after weaving ("Galvanized after Weaving").

2.2 Round Posts and Rails: Round posts and rails shall be standard weight (schedule 40) galvanized-steel pipe conforming to ASTM F 1083, and to the heavy industrial requirements of ASTM F 669, Group IA, with minimum yield strength of 30,000 psi, not less than 1.8 oz. of zinc per sq. ft. The posts shall have Type A coating inside and outside according to ASTM F 1043, as determined by ASTM A 90, and weights per foot as follows (as applicable):

Actual OD (inches)	Weight (lb/ft)	NPS Size (inches)
1.660	2.27	1-1/4
1.900	2.72	1-1/2
2.375	3.65	2
2.875	5.79	2-1/2
3.500	7.58	3
4.000	9.11	3-1/2
4.500	10.79	4
5.563	14.62	5
6.625	18.97	6
8.625	28.55	8

A. Top, Bottom and Brace Rails: Rails shall be 1.660 inch OD Type I for 4 ft. through 10 ft. tall fence and 1.900 inch OD Type 1 for fence heights greater than 10 ft., as applicable. Rails shall be manufacturer's longest lengths (17 to 21 feet) with swedged-end or expansion-type coupling, approximately 6 inches long for joining. Provide rail ends or other means for attaching top rail securely to each post.

B. Line Posts: Line posts shall be 2.375 inch OD Type I for 4 ft. through 6 ft. tall fence, 2.875 inch OD Type I for 8 ft. tall fence and 3.500 inch OD Type I for 10 ft. tall fence, as applicable.

C. End, Corner, Pull and Gate Posts: Gate posts to support a gate leaf shall meet the requirements of ASTM F 900. End, corner, pull and gate posts shall be 2.875 inch OD pipe for 4ft. tall fence and 4.000 inch OD pipe for 5 ft. through 10 ft. tall fence, as applicable.

2.3 Fittings and Accessories:

A. Material: Fittings and accessories shall meet the requirements of ASTM F 626. Unless specified otherwise, hot-dip galvanized pressed steel or cast-iron fence fitting and accessories with at least 1.2 oz. of zinc per square foot as determined by ASTM A 90.

B. Tension or Stretcher Bars: Tension or stretcher bars shall be hot-dip galvanized steel with a minimum length 2 inches less than the full height of fabric, a minimum cross section of 3/16 inch by 3/4 inch, and a minimum of 1.2 oz. of zinc coating per square foot. Provide one bar for each gate and end post, and two for each corner and pull post.

C. Tension Wire: (None Required This Project) Tension wire shall be 7 gage metallic-coated steel marcelled tension wire conforming to ASTM A 824 with finish to match fabric. The wire shall have a Type II, Class 1 zinc coating, conforming to ASTM A 90, with a minimum coating weight of 0.80 oz. per square foot of uncoated wire.

D. Hog Rings: (None Required This Project) Hog rings shall be 12½ gage galvanized steel rings.

2.4 Fence Gates:

A. General: Fabricate gates from same material and finish as fence framework. Fabric shall be the same as for fence unless otherwise indicated. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware, and accessories. Secure fabric at vertical edges with tension bars and bands and to top and bottom of frame with hog rings.

B. Swing Gates: Swing gates shall comply with ASTM F 900. Perimeter frames for swing gates shall be fabricated of 1.660 inch (min.) OD Type I steel pipe for 4 ft. and 6 ft. tall fence and 1.900 inch (min.) OD Type I steel pipe for 8 ft. tall fence, as applicable.

C. Gate Hardware: Provide galvanized hardware and accessories for each gate as indicated on the Drawings.

2.5 Galvanizing Repair Paint: Zinc dust paint, complying with SSPC – Paint 20 or MIL P-21035B, Type I or II.

2.6 Concrete for Post Footings: Refer to Section 03300 - Cast-In-Place Concrete.

2.7 Aluminum Fence Ties: Tie wire for securing chain link fabric to posts and rails shall be #9 gauge (core wire), aluminum ties.

2.9 Ground Rods: Ground rods shall be 5/8” nominal diameter x 8' long Copperweld rod, Burndy type GAR.

2.10 PVC (Vinyl) Coating: All components used for chain link fence and gate construction shall be fusion bonded vinyl over galvanized surface with a PVC coating of 6 to 10 mils for fabric (8 gauge wire size (min.) after coating) and 10 to 14 mils for pipe and fittings in accordance with ASTM –F668 Class 2B. Powder coating of posts and hardware shall be an acceptable alternate to vinyl coating. Color of vinyl coating, and powder coating (if applicable), to be "BLACK".

PART 3 - EXECUTION

3.1 Installation:

A. Complete, New Fence and Gates:

1. General: Install chain link fence, gates and related appurtenances in conformance with ASTM F 567. Do not begin installation and erection before final grading is completed.

2. Excavation: Drill or hand-excavate (using post-hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.

3. Placing Posts: Space line posts for a maximum of ten feet (10') or as indicated on the Drawings. Protect portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations. Top of concrete footing to terminate 3" (min.) below finished ground surface.

4. Top and Brace Rails: Run rail continuously between line posts. Terminating into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer.

5. Gates: Install gates according to manufacturer's instructions. Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary. After repeated operation of completed installation equivalent to 3 days' use by normal traffic, readjust gates for optimum operating condition and safety. Lubricate operating equipment and clean exposed surfaces.

6. Grounding Devices: Grounding devices shall be installed at a maximum of two hundred fifty (250') feet on centers, at overhead utility crossings and at gate locations.

B. New Fabric on Existing Posts and Rails:

1. Adjust horizontal rails as indicated on the Drawings.

2. Clean, prep and paint existing posts, rails and rail attachment hardware, prior to installing new fabric, in accordance with Section 09900 – Painting – Exterior Metal/Iron.

C. Fabric: Leave approximately 1 inch between finish grade and bottom selvage. Pull fabric taut and tie to posts, rails, and tension wires (as applicable). Install fabric and anchor to framework so that fabric remains under tension after pulling force is released.

D. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not over 15 inches on center.

E. Galvanized Steel Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts for added security.

F. Aluminum Fence Ties: Aluminum tie wires for securing chain link fabric to posts and rails shall be spaced approximately 12” on center.

G. Hog Rings: (None Required This Project) Chain link fence fabric shall be securely attached to tension wire (as applicable) with 12½ gauge galvanized steel hog rings. Hog rings shall be spaced approximately 12" on center.

- END OF SECTION -

AVOYELLES PARISH POLICE JURY

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RECREATION AND EDUCATION COMPLEX

DIVISION 3 - CONCRETE

Section 03100 - CONCRETE FORMWORK
Section 03200 - CONCRETE REINFORCEMENT
Section 03300 - CAST-IN-PLACE CONCRETE
Section 03480 - PRECAST DECORATIVE BOLLARDS

SECTION 03100

CONCRETE FORMWORK

PART 1 - GENERAL

1.1 Scope: This Section covers all operations necessary to place Portland Cement concrete requiring form work.

1.2 Reference Standard: Work shall conform to the following Sections of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2016 Edition, except as may be modified herein:

Section 805 - Structural Concrete

1.3 Submittals: Submit product data in accordance with provisions of Section 01340 - Shop Drawings, Samples and Project Data.

1.4 Storage and Handling:

A. Forms shall be stored in a neat and orderly fashion and protected from damage.

B. If any form is deemed by the ENGINEER to be unfit for use, it shall be removed from the job.

C. Forms shall be cleaned and stacked immediately after stripping from concrete.

PART 2 - PRODUCTS

2.1 General: Materials shall conform to applicable provisions of sections or subsections in the Reference Standard.

PART 3 - EXECUTION

3.1 General: All work related to this Section shall conform to the applicable provisions contained in the Reference Standard.

- END OF SECTION -

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 Scope: This Section covers all operations necessary for concrete reinforcement work indicated on Drawings and specified herein.

1.2 Reference Standard: Work shall conform to the following Sections of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2016 Edition, except as may be modified herein:

Section 806 - Reinforcement

1.3 Submittals: Submittals consisting of mill certificates and steel bending fabrication drawings and bar tests shall be provided in accordance with Section 01340 - Shop Drawings, Samples and Product Data.

PART 2 - PRODUCTS

2.1 General: Reinforcement shall conform to Subsection 1009 of the Reference Standard, except that all reinforcement shall be Grade 60.

2.2 Bar and Wire Supports: Bar and wire supports shall be commercially fabricated from steel or plastic. Steel supports shall be provided with sandplates. Plastic supports shall be provided with a round base. Bar and wire supports shall be as manufactured by MEDCO and available through CMC of Alexandria, Louisiana, (318) 448-4448.

PART 3 - EXECUTION

3.1 General: All work related to this Section shall conform to the applicable provisions contained in the Reference Standard.

- END OF SECTION -

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 Scope: This Section covers all operations necessary for cast-in-place concrete work, as indicated on the Drawings and specified herein.

1.2 Reference Standard: Work shall conform to the following Sections of the State of Louisiana, Department of Transportation and Development, "Louisiana Standard Specifications for Roads and Bridges", 2016 Edition, except as may be modified herein:

Section 601 - Portland Cement Concrete Pavement
Section 706 - Concrete Walks, Drives and Incidental Paving
Section 805 - Structural Concrete
Section 901 - Portland Cement Concrete

1.3 Submittals: Submit product data in accordance with provisions of Section 01340 – Shop Drawings, Samples and Project Data.

PART 2 - PRODUCTS

2.1 General: Material for Portland Cement concrete shall conform to the applicable sections and subsections for the Reference Standard.

2.2 Portland Pozzolan Cement: No Portland Pozzolan cement shall be used for this project.

PART 3 - EXECUTION

3.1 General: All work related to this Section shall conform to the applicable provisions contained in the Reference Standard.

3.2 Concrete Compressive Strength: The average compressive strength in 28 days of Portland Cement concrete shall be as follows:

Item	28 Day Compressive Strength (PSI)	Structural Class/Pavement Type
Concrete Walks, Concrete Pads, Wall Footings, Turf Curbs, Fence Runners/Curbs, Fence Post Footings, Flagpole Footings	3,000	M
Backstop Post Footings, Canopy Footings, Field Light Footings	3,800	A

- END OF SECTION -

SECTION 03480

PRECAST DECORATIVE BOLLARDS

PART 1 - GENERAL

1.1 Scope: This Section includes concrete baseball and softball bollards.

1.2 Submittals: Submit the following in accordance with provisions of Section 01340 – Shop Drawings, Samples and Product Data.

A. Product Data & Shop Drawings: For each type of product.

PART 2 - PRODUCTS

2.1 Baseball and Softball Bollards:

A. Basis of Design Product: Subject to compliance with requirements, provide Wausau Made; Model # TF6204, 36” diameter precast concrete Baseball/Softball Bollard, Model # TF6209, 36” diameter precast concrete Soccer Bollard, or a comparable product by one of the following:

1. Kay Park Recreation (800) 553-2476.
2. Park Warehouse (877) 609-1678.
3. Other prior approved manufacturers.

B. Baseball, Softball and Soccer Bollard Construction:

1. Ball: Decorative precast concrete, reinforced as per manufacturer’s requirements. Provide a 4” diameter x 14” long pipe core cast into the base of the unit. Ball shall be 36” diameter with a flat base for mounting on pavement, and shall have decorative “stitching” and/or “pentagon patches” to resemble an actual baseball and/or softball.

2. Pipe Anchor (Anchor Style B): 3” Schedule 40 steel pipe, length as shown on the Drawings. Pipe shall be cast into a round concrete footing as shown on the Drawings.

C. Finish and Colors:

1. Baseball Color:

a. Ball Surface: # TK-15 WHITE.
b. Decorative Stitching: # M-2900 PRIMARY RED

2. Softball Color:

a. Ball Surface: # 16-B-55 OPTIC YELLOW
b. Decorative Stitching: # M-2900 PRIMARY RED

D. Schedule of Bollards:

1. Baseball Bollard: Provide one (1) baseball bollard along main walk entrance to ball fields as shown on the Drawings.

2. Softball Bollard: Provide one (1) softball bollard along main walk entrance to ball fields as shown on the Drawings.

2.2 Materials:

A. Steel and Iron: Free of surface blemishes and complying with the following:

1. Refer to Section 05500 – Miscellaneous Metals.

B. Anchors, Fasteners, Fittings, and Hardware: commercial quality, concealed, recessed, and capped or plugged.

1. Refer to Section 05500 – Miscellaneous Metals.

C. Nonshrink, Nonmetallic Grout (if required): Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M; recommended in writing by manufacturer, for exterior applications.

D. Erosion-Resistant Anchoring Cement (if required): Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound; resistant to erosion from water exposure without needing protection by a sealer or waterproof coating; recommended in writing by manufacturer, for exterior applications.

2.3 Fabrication

A. Metal Components: Form to required shapes and sizes with true, consistent lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.

B. Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed connections, finish surfaces smooth and blended, so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.

C. Factory Assembly: Factory assemble components to greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

PART 3 - EXECUTION

3.1 Installation:

A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.

B. Unless otherwise indicated, install bollards after landscaping and paving improvements have been completed.

C. Install bollards level, plumb, true, and positioned at locations indicated on Drawings.

D. Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to properly support bollard. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

E. Posts Set into Voids in Concrete: Form or core-drill holes for installing posts in concrete to depth recommended in writing by manufacturer of site furnishings and 3/4 inch (19 mm) larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to support bollard.

F. Pipe Sleeves (if required): Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to support bollard.

- END OF SECTION -

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DIVISION 4 - MASONRY

Section 04200 - UNIT MASONRY
Section 04435 - CAST STONE

SECTION 04200

UNIT MASONRY

PART 1 - GENERAL

1.1 Scope: This Section includes split faced, concrete masonry units, brick unit masonry, masonry waste disposal, grout and mortar, reinforcement, anchorage, accessories, sealer, masonry cleaning and equipment necessary to construct brick masonry veneer.

1.2 Submittals: The following submittals shall be provided in accordance with Section 01340 - Shop Drawings, Samples and Project Data.

A. Product Data: Provide data for each different masonry unit, accessory, and other manufactured products specified.

1. Provide test reports for facing brick showing compressive strength, 24 hour cold water absorption, 5 hour boil absorption, saturation coefficient, and initial rate of absorption (suction).

2. Certificates attesting to compliance with specifications for grades, types, and classes included herein.

B. Samples:

1. Initial Color Samples: Provide samples in small-scale form showing the full range of colors and textures available for each different masonry unit required.

2. Verification Samples: Provide a sample panel which shall be built approximately 4 feet long by 5 feet high. This sample panel shall include a minimum of one expansion joint and one outside corner. The panel shall also include joint treatment and mortar color. This sample panel may be part of the project and incorporated into the wall system. Masonry construction shall not proceed until the sample panel is accepted by the ENGINEER. The sample panel shall remain on the project for comparison purposes with the actual masonry work. If the sample panel is not part of the wall system, it shall be demolished and removed from the site after completion and acceptance for the project brick veneer masonry work. Masonry panel shall be tested with specified waterproofing material to obtain specified warranty.

C. Anchors and Ties: As specified.

D. Expansion Joint Material: One piece for each type used.

1.3 Performance Requirements: For Brick Veneer Masonry f'm = 1,500 psi (103 Mp_a) based on gross area.

1.4 Applicable Publications: The publications listed below form a part of this Specification to the extent referenced. The publication may be referred to in the text by designation only.

A. American Concrete Institute (ACI) Standards:

ACI SP-66	ACI Detailing Manual
ACI 530	ACI Building Code Requirements for Masonry Structures
ACI 530.IR	ACI Specifications for Masonry Structures

B. American Society for Testing and Materials (ASTM) Publications:

ASTM A36	Specification for Carbon Structural Steel
ASTM A82	Standard Specification for Steel Wire, Plain, for Concrete Reinforcement
ASTM A153	Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A563	Specification for Carbon and Alloy Steel Nuts
ASTM C55	Standard Specification for Concrete Building Brick
ASTM C67	Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
ASTM C90	Standard Specification for Load Bearing Concrete Masonry Units
ASTM C91	Standard Specification for Masonry Cement
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C129	Standard Specification for Non-Load Bearing CMU
ASTM C140	Standard Test Methods for Sampling and Testing CMU
ASTM C143	Standard Test Method for Slump of Hydraulic - Cement Concrete
ASTM C144	Specification for Aggregate for Masonry Mortar
ASTM C150	Specification for Portland Cement
ASTM C207	Specification for Hydrated Lime for Masonry Purposes
ASTM C216	Specifications for Facing Brick

ASTM C270	Specification for Mortar for Unit Masonry
ASTM C404	Standard Specification for Aggregates for Masonry Grout
ASTM 476	Standard Specification for Grout for Masonry
ASTM C1019	Standard Test Method for Sampling and Testing Grout
ASTM C1142	Specification for Extended Life Mortar for Unit Masonry
ASTM E119	Test Methods for Fire Tests of Building Construction and Materials
ASTM E488	Test Methods for Strength of Anchors in Concrete and Masonry Elements

1.5 Quality Assurance and Qualifications:

A. Single-Source Responsibility for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from one source and by a single manufacturer for each different product required.

B. Verify that manufacturer can run entire job in one batch. Blend all brick to produce a uniform appearance when installed. An observable “banding” or “layering” of colors or textures caused by improperly mixed brick is unacceptable.

C. Single-Source Responsibility for Mortar Materials: Obtain mortar ingredients for a uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source or producer for each aggregate.

1.6 Delivery, Storage, and Handling:

A. Store masonry units on elevated platforms, under cover, and in a dry location to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, and other causes. If units become wet, do not install until they are in an air-dried condition.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Conform to all handling and storage requirements of ASTM C90.

C. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.7 Additional Requirements:

A. Maintain at least one spare vibrator on site at all times.

B. Provide bracing and scaffolding necessary for masonry work. Design bracing to resist wind pressure as required by local code.

1.8 Protection of Unit Masonry:

A. Protection of Masonry: During erection, cover tops of walls, projections, and sills with waterproof sheeting at the end of each day's work. Cover partially completed masonry when construction is not in progress. Extend cover a minimum of 24 inches down both sides and hold cover securely in place. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place.

B. Loading: Do not apply uniform floor or roof loads at any time to masonry veneer.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry. Protect base of walls from rain-splashed mud and mortar splatter by covering spreads on the ground and over wall surfaces. Protect sills, ledges, projections, window surfaces and door frames, as well as similar products with painted and integral finishes, from mortar droppings. Clean and turn scaffold boards near the masonry wall on edge at the end of each day’s work to prevent rain from splashing accumulated mortar and dirt onto completed masonry.

D. Hot -Weather Requirements: Protect unit masonry work when temperature and humidity conditions produce excessive evaporation of water from mortar and grout. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg F (38 deg C) and above.

E. Cold Weather Protection: Do not lay masonry units when outside air temperature is below 40 degrees F.

1. Grouted construction: On any day when minimum anticipated nightime temperature is 32 degrees F or less, in addition to complying with general procedures above, heat grout materials to 90 degrees F to produce in-place grout temperature of not less than 70 degrees F at end of work day. Retain protective blankets or enclosures for not less than 48 hours.

2. Clay masonry units: Comply with the following requirements for clay masonry units which must be wetted before laying because of initial rate of absorption (suction) greater than 1 gram per square inch per minute (ASTM C 67):
   a. Surface temperatures above 32 degrees F: Sprinkle with water heated to 70 degrees F or above, just before laying.
   b. Surface temperatures below 32 F: Sprinkle with water heated to 130 degrees F or above, just before laying.

3. Water: Do not heat water for mortar or grout to more than 160 degrees F.

1.9 Compressive Strength Requirements: Masonry shall have a developed compressive strength of greater than or equal to 1500 psi at 28 days. Compressive strength shall be based on the net area of masonry. Concrete masonry units shall have developed compressive strength of 1900 psi at 28 days.

A. Mortar and Grout shall be tested in accordance with ASTM C270.

PART 2 - PRODUCTS

2.1 Manufacturers:

A. Brick Masonry Units: Brick masonry units shall match the existing brick as close as possible in both color and size, and have an allowance of $500.00 per thousand bricks as manufactured by:

1. Bradley Brick.

2. Acme Brick.

3. Or approved equal.

B. Portland Cement, Mortar Cement, Masonry Cement, and Lime: Portland cement, mortar cement, masonry cement and lime used for unit masonry construction shall be manufactured by LaFarge, or approved equal.

C. Joint Reinforced, Ties and Anchors: Joint reinforcement, ties and anchors shall be manufactured by Heckman, Inc., or approved equal.

2.2 Brick Masonry Units: Brick masonry units shall be modular and meet the requirements of ASTM C216 or C652; SW, FBS and the following.

A. Special shapes: Provide specially molded units as required to meet conditions indicated, unless standard units can be sawn to produce the same effect. Do not use standard units in any configuration which exposes cores or frogging.

2.3 CMU: Units to be split faced with nominal face dimensions of 8” x 8” x 16” to match existing CMU where repairs are indicated.

2.4 Grout and Mortar Materials:

A. Portland Cement: Portland cement for unit masonry shall be ASTM C 150, Type I or II. Provide natural color.

B. Masonry Cement: Masonry cement shall meet the requirements of ASTM C 91. Cement shall be selected from manufacturer's standard formulations.

C. Mortar Cement: Mortar cement shall be in accordance with U.B.C. Standard No. 21-14. Mortar shall be selected from manufacturer's standard formulations.

D. Hydrated Lime: Hydrated lime shall be ASTM C 207, Type S.

E. Portland Cement-Lime Mix: The mix shall be packaged blend of portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207.

F. Aggregate for Grout: Aggregate for cement grout shall meet the requirements of ASTM C 404. Blast furnace slag is not permitted. The maximum coarse aggregate size shall be 3/8 inch.

G. Aggregate for Mortar: Aggregate for mortar shall met the requirements of ASTM C 144, except for joints less than 1/4 inch, use aggregate graded with 100 percent passing the No. 16 sieve. White-Mortar Aggregates shall be natural white sand or ground white stone. The use of clay, rock, dust, dirt and other deleterious materials is prohibited in mortar.

H. Ready-Mixed Mortar: Ready-mixed mortar shall contain cementitious materials, water, and aggregate complying with requirements specified in this Section, combined with set-controlling admixtures to produce a ready-mixed mortar complying with ASTM C 1142.

I. Water: Potable water shall be used for unit masonry.

J. Water Repellant Admixture: All split faced CMU and mortar shall have water repellant admixture – polymeric type formulated to reduce porosity and water penetration and water absorption of the mortar and masonry units.

2.5 Grout and Mortar Mixes:

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated. Do not use calcium chloride in mortar or grout. Add cold-weather admixture (if used) at the same rate for all mortar, regardless of weather conditions, in order to ensure that mortar color is consistent.

B. Mortar for Unit Masonry: Mortar for brick masonry shall be Type N and comply with ASTM C 270, Specification for Mortar for Unit Masonry, for job-mixed mortar, and ASTM C 1142, Specification for Extended Life Mortar for Unit Masonry, for ready- mixed mortar and shall have a compressive strength of 750 psi. Type N mortar shall have proportions of 1 part portland cement, ½ part hydrated lime, and 4½ parts sand by volume. Add ½ bag of portland cement per 2 bag mix to all mortar installed below grade.

2.6 Reinforcement and Anchorage

A. Reinforcing bars: 60 ksi minimum yield strength of the size and types shown on the Drawings.

B. Anchors and Ties: Comply with the following general requirements for materials required in joint reinforcement and anchorage devices:

1. Steel wire: ASTM A 82.
    a. Hot-dip galvanizing (after fabrication): ASTM A 153, Class B-2.
        1. Use: Exterior locations or in contact with the earth.

2. Hot-dip galvanized steel sheet: ASTM A 635 or ASTM A 36; galvanizing in compliance with ASTM A 153, Class B.
    a. Use: Anchors and miscellaneous sheet metal in masonry accessories at exterior exposures.

C. Horizontal Joint Reinforcement (CMU and Brick): Welded wire units prefabricated into straight lengths of not less than 10 feet, with deformed continuous side rods and plain cross rods.

1. Width: Approximately two inches less than nominal wall width, providing not less than 5/8" mortar coverage on exterior exposures and ½ inch elsewhere.

2. Wire Sizes:
    a. Size Rod Diameter: .1483 inch.
    b. Cross Rod Diameter: .1483 inch.

3. Configuration:
    a. Application of Single Unit Width: Ladder design, cross rods at not more than 16" on center.
    b. Corners: Prefabrication L and T shaped units.

D. Fasteners: Self-drilling, self-tapping, corrosion-resistant screws, as recommended by manufacturer of veneer anchors.

Miscellaneous Masonry Accessories:

A. Control Joint/Shear Key: Extruded rubber for masonry walls at control joints, equal to RS Standard Series by Hohmann and Bernard, Inc.

B. Control Joint Filler: Closed cell foam, oversized 50 percent; self expanding.

2.8 New Masonry Cleaner: Masonry cleaner shall be job-mixed detergent solution of 1/2-cup dry measure tetrasodium polyphosphate and 1/2-cup dry measure laundry detergent dissolved in 1 gal. of water.

2.9 Sealer: Seal all exterior split face walls and brick walls with sealer equal to Masonry Sealer by Prosoco.

PART 3 - EXECUTION

3.1 Examination: Examine conditions, with CONTRACTOR present, for compliance with requirements for installation tolerances and other conditions affecting performance of unit masonry. Do not proceed with installation until unsatisfactory conditions have been corrected. Examine rough-in and built-in construction to verify actual locations of piping connections prior to installation.

3.2 General:

A. Thickness: Build single-wythe brick veneer to the actual thickness of the masonry units, using units of thickness indicated.

B. Forms and Shores: Provide bracing and scaffolding as required design bracing to resist wind pressure.

C. Cut masonry units with motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide continuous pattern and to fit adjoining construction. Use full-size units without cutting, where possible. Allow units cut with water-cooled saws to dry before placing, unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

D. Mix units for exposed unit masonry from several pallets or cubes as they are placed to produce uniform blend of colors and textures.

3.3 Construction Tolerances:

A. Variation from Plumb: For vertical lines and surfaces of columns and walls do not exceed 1/4 inch in 10 feet, nor 3/8 inch in 20 feet, nor 1/2 inch in 40 feet or more. For external corners, expansion joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet, nor 1/2 inch in 40 feet or more. For vertical alignment of head joints, do not exceed plus or minus 1/4 inch in 10 feet, nor 1/2 inch maximum.

B. Variation from Level: For bed joints and lines of exposed lintels, sills, horizontal grooves, and other conspicuous lines, do not exceed 1/4 inch in 20 feet (, nor 1/2 inch in 40 feet or more. For top surface of bearing walls, do not exceed 1/8 inch in 10 feet, nor 1/16 inch within width of a single unit.

C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls, and partitions, do not exceed 1/2 inch in 20 feet, nor 3/4 inch in 40 feet or more.

D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4 inch nor plus 1/2 inch.

E. Variation in Mortar-Joint Thickness: Do not vary from bed-joint thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary bed-joint thickness from bed-joint thickness of adjacent course by more than 1/8 inch. Do not vary from head-joint thickness indicated by more than plus or minus 1/8 inch. Do not vary head-joint thickness from adjacent head-joint thickness by more than 1/8 inch. Do not vary from collar-joint thickness indicated by more than minus 1/4 inch or plus 3/8 inch.

3.4 Laying Masonry Walls:

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint widths and for accurate locating of openings, movement-type joints, returns, and offsets. Avoid the use of less-than-half-size units at corners, jambs, and where possible at

other locations.

B. Lay walls to comply with specified construction tolerances, with courses accurately spaced and coordinated with other construction.

C. Bond Pattern for Exposed Masonry: Do not use units of less than ½ horizontal face dimension. Lay exposed masonry in one-half running bond with vertical joint in each course centered on units in courses above and below. Bond and interlock each course of each wythe at corners.

D. Stopping and Resuming Work: In each course, rack back 1/2-unit length for one-half running bond, do not tooth. Clean exposed surfaces of set masonry, and remove loose masonry units and mortar prior to laying fresh masonry.

E. Fill space between hollow metal frames and masonry solidly with mortar, unless otherwise indicated.

3.5 Mortar Bedding and Jointing: Lay brick masonry units with full mortar coverage on horizontal and vertical faces. For starting course on footings, spread out full mortar bed. Maintain joint widths indicated, except for minor variations required to maintain bond alignment. If not indicated, lay walls with 3/8-inch joints. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

3.6 Expansion Joints:

A. General: Install expansion joints in unit masonry where indicated on Drawings. Build-in related items as the masonry progresses. Do not form a continuous span through movement joints unless provisions are made to prevent in-plane restraint of wall or partition movement.

B. Form expansion joints in masonry made from open joint of width indicated, but not less than 3/8 inch for installation of sealant and backer rod. Maintain joint free and clear of mortar.

C. Install weep holes in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing and as follows:

1. Form weep holes with product specified in Part 2 of this Section.

2. Space weep holes 24 inches o.c.

D. Trim wicking material used in weep holes flush with the outside face of wall after mortar has been set.

E. Install reglets and nailers for flashing and other related construction where shown to be built into masonry.

3.7 Repairing, Pointing, and Cleaning:

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units. Install new units to match adjoining units. Install new units in fresh mortar or grout, pointed to eliminate evidence

of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep vents, and completely fill with mortar. Point-up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for application of sealants.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears prior to tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain ENGINEER'S approval of sample cleaning before proceeding with cleaning of masonry.

3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.

4. Wet wall surfaces with water prior to application of cleaners. Remove cleaners promptly by rinsing thoroughly with clear water.

5. Clean brick by bucket and brush hand-cleaning method described in BIA Technical Note No. 20 Revised, using a job-mixed detergent solution.

E. Protection: Provide final protection and maintain conditions that ensure unit masonry is without damage and deterioration at time of Substantial Completion.

3.8 Embedded Items: Spaces around built-in items shall be filled with mortar. Openings around flush mount electrical outlets boxes in wet locations shall be pointed with mortar. Cells receiving anchor bolts and cells of the first course below bearing plates shall be filled with grout.

3.9 Masonry Waste Disposal: Undamaged, excess masonry materials are CONTRACTOR'S property and shall be removed from the Project site for his use. Remove excess masonry waste that cannot be used and legally dispose off of Owner's property.

- END OF SECTION -

SECTION 04435

CAST STONE

PART 1 - GENERAL

1.1 Scope: Furnish necessary labor, material and equipment for complete installation of cast stone caps at backstop brick wall as shown on Drawings and specified herein.

1.2 Submittals: Submit the following information in accordance with Section 01340 - Shop Drawings, Samples and Product Data.

A. Submit shop drawings showing complete information for fabrication and installation of cast stone units. Indicate member dimensions and cross section; location, joints, connections, anchoring, size and type of reinforcement, including special reinforcement and lifting devices necessary for handling and erection, if required.

B. Show layout, dimensions, and identification of each precast unit corresponding to sequence and procedure of installation.

C. Show location and details of anchorage devices that are to be embedded in other construction or furnished by others.

D. Submit samples full size to illustrate quality, color, texture and range of surface finish.

1.3 Quality Assurance:

A. The manufacturer shall have a minimum of ten years continuous operation, having experience, adequate facilities and capacity to furnish the quality, sizes and quantity of cast stone required without delaying the progress of the work, and whose products have been previously used and exposed to local weather with satisfactory results.

B. Design modifications may be made only as necessary to meet field conditions and to ensure proper fitting of the work, and only as acceptable to the ENGINEER. Maintain general design concept shown without increasing or decreasing sizes of members or altering profiles and alignment shown.

C. Standards: Comply with the requirements of the Cast Stone Institute Technical Manual.

1.4 Delivery, Storage and Handling: Deliver cast stone to project site in such quantities and at such times to assure continuity of installation. Store units at project site to prevent cracking, distortion, warping, staining, or other physical damage, and so the markings are visible. Lift and support units only at designated lifting or supporting points as shown on final shop drawings.

1.5 References:

ASTM A615 - Standard Specification for Deformed and Plain Billet - Steel Bars for Reinforced Concrete.

ASTM A82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.

ASTM A185 - Standard Specification for Steel Welded Wire Reinforcement, Plain for Concrete

ASTM C150 - Standard Specification for Portland Cement

ASTM C33 - Standard Specification for Concrete Aggregates

ASTM C979 - Standard Specification for Pigments for Integrally Colored Concrete

ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete

ASTM C494 - Standard Specification for Chemical Admixtures for Concrete

1.6 Project Conditions: Refer to manufacturer's installation instructions.

PART 2 - PRODUCTS

2.1 Manufacturers: Cast stone units shall be as manufactured by Stone Legends, (800) 398-1199; Architectural Cast Stone; Advanced Cast Stone, Capital Cast Stone (765) 482-3344, or approved equal member of the Cast Stone Institute. Shapes, sizes and styles shall be as shown on Drawings. Slight variations of the stone profiles will be acceptable upon Engineer's prior approval.

2.2 Products:

A. Wall cap: Shall match profile in the Drawings.

2.3 Form Work: Provide forms and, where required, form facing material of metal, plastic, wood, or other acceptable materials that is non-reactive with concrete and will produce required finish surfaces. Accurately construct form mortar-tight and of sufficient strength to withstand pressures due to concrete placing operations. Maintain form work to provide complete cast stone unit of shapes, lines and dimensions indicated, within specified fabrication tolerances.

2.4 Reinforcing Materials:

A. Reinforcing Bars: Cast Stone shall be reinforced with new billet steel reinforcing bars meeting ASTM A 615, Grade 60, unless otherwise indicated. If the surfaces are to be exposed to the weather the reinforcement shall be galvanized or epoxy coated when covered with less than 2" of material for bars larger than 5/8" and 1 ½" for bars 5/8" or smaller. The material covering in all covering in all cases shall be at least twice the diameter of the bars.

B. Steel Wire: Where applicable, ASTM A 82, plain, may be used.

C. Welded Wire Fabric: Where applicable, ASTM A 185 welded wire fabric may be used.

2.5 Concrete Materials:

A. Portland Cement: ASTM C 150, Type I or Type III, white or grey. Use only one brand and type of cement throughout the project unless otherwise acceptable to ENGINEER.

B. Coarse Aggregate: ASTM C 33, durable, carefully selected and graded; free of material causing staining or reacting with cement. Use aggregate from same source as those used in ENGINEER's control samples. Granite, quartz or limestone.

C. Fine Aggregate: Clean, sharp, natural sand, free from loam, clay, lumps or other deleterious substances and conforming to ASTM C 33.

D. Color: ASTM C 979, inorganic iron oxide pigment, maximum of 10% of weight cement; except that carbon black pigments shall not be used.

E. Water: Potable, tap water free from foreign materials in amounts harmful to concrete and embedded steel.

F. Air-Entraining Admixture: ASTM C 260, wet cast mixtures shall maintain 5%-7% air entrainment when surfaces are exposed to freeze-thaw.

G. Water-Reducing Admixture: ASTM C 494, Type A - G.

2.6 Setting Materials: All anchorage accessories shall be furnished by setting contractor and shall include straps, clamps, dowels, anchors, etc. as required in stainless steel - Type 302 or 304.

2.7 Setting Mortar: Setting mortar shall be Type N, ASTM C220 mortar. All stones not thoroughly wet shall be drenched with clear water prior to setting.

2.8 Proportioning and Design of Mixes:

A. Prepare and submit for approval, design mixes for each type of concrete required.

B. Design mixes may be prepared by independent testing facility or by qualified manufacturing plant personnel, at manufacturer's option.

C. Proportion mixes by either laboratory trail batch or field experience methods, using materials to be employed on the project for each type of concrete required, complying with ACI 318.

D. Mix: Standard-weight concrete consisting of specified Portland cement, aggregates, admixtures, pigment and water to produce the following properties:

1. Compressive Strength: 6,500 psi minimum at 28 days

2. Total Air Content: 6%

E. Adjustment to Concrete Mixes: Mix design adjustments may be requested when characteristics of material, job conditions, weather, test results, or other circumstances warrant. Laboratory test data for revised mix designs and strength results must be submitted to and accepted by ENGINEER before using in the work.

2.9 Fabrication:

A. General: Fabricate cast stone units complying with manufacturing and testing procedures, quality control recommendations and dimensional tolerances of the Cast Stone Institute, unless otherwise indicated.

B. Fabricate units straight, smooth, and true to size and shape, with exposed edges and corners precise and square, unless otherwise indicated. Units which are warped, cracked, broken, spalled, stained or otherwise defective will not be acceptable.

C. Built-In Items: Provide reglets, slots, holes, and other accessories in units to receive dowels, waterstops, flashing, and other similar work as indicated.

D. Exposed surfaces shall exhibit a fine grained texture, similar to natural stone. No bug-holes or air voids will be permitted.

PART 3 - EXECUTION

3.1 Installation:

A. All cast stone shall be set by experienced masons, accurately and in accordance with the shop and setting drawings. Unless otherwise noted, every stone shall be set in a full bed of mortar. All anchors and dowels shall be firmly placed and all anchor holes and similar holes filled completely with mortar.

B. All anchors, dowels and other anchoring devices shall be furnished as shown on approved shop drawings.

C. When setting with mortar, all stones to be thoroughly wet shall be drenched with clear water just prior to setting.

D. After stone has been set, face of each stone shall be sponged off to remove any splashed mortar or mortar smears.

E. All stone shall be protected from splashing mortar or damage by other trades. Any foreign matter splashed on the stone shall be removed immediately.

F. Fill all dowel holes and anchor slots completely with mortar or non-stick grout.

G. Set all stones in a full bed of mortar. Leave head joints in coping and similar stones open for sealant.

H. Tuck point stone joints to a slight concave.

I. Sealant joints - Prime the ends of stones insert properly sized foam backup rod and gun-in sealant.

J. Provide raked joints to a depth of 1/2" from the face for pointing.

3.2 Tolerances

A. Comply Cast Stone Institutes Technical Manual (current edition)

B. Set stones 1/8" or less, within plane of adjacent unit.

C. Joint, +1/6", -1/8".

3.3 Jointing

A. Joint Size:
1. At stone/brick joints - 3/8".
2. Stone/stone joints exposed on topside - 3/8".

B. Joint Material:
1. Use a full bed of mortar at all bed joints.
2. Flush vertical joints full with mortar.
3. Leave all joints with exposed tops or under relieving angles per plans.

C. Location of Joints:
1. As shown on approved shop drawings.
2. Unless otherwise shown: at control and expansion joints per plans

3.4 Patching and Cleaning

A. The repair of chipped or damaged cast stone shall be done only be mechanics skilled in this class of work with materials furnished by the manufacturer and according to his direction.

B. Before sealing, the face of all cast stone shall be scrubbed with a fiber brush, using soap powder and water and shall then be thoroughly rinsed with clean running water. Any mortar on the face of the cast stone shall be removed. No acids or prepared cleaners shall be used without the approval of the cast stone manufacturer.

3.5 Inspection and Acceptance

A. The ENGINEER shall inspect the finished product within the scope of ACI Committee 311 Manual of Concrete Inspection.

B. Cast stone color and texture shall be equal to the approved samples when viewed in good typical lighting at a distance of 10 feet.

C. Cast stone shall show no obvious repairs, or imperfections other than minimal color variations when viewed with the unaided eye at a distance of 20 feet.

D. Cast stone units not meeting these requirements shall be removed and replaced with acceptable units.

- END OF SECTION -

AVOYELLES PARISH POLICE JURY

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RECREATION AND EDUCATION COMPLEX

DIVISION 5 - METALS

Section 05310 - SHEET METAL ROOFING
Section 05320 - SHEET METAL FLASHING AND TRIM
Section 05500 - MISCELLANEOUS METALS

SECTION 05310

SHEET METAL ROOFING

PART 1 - GENERAL

1.1 Scope: This Section includes prefinished, factory formed metal roofing panels.

1.2 Performance Requirements: Provide manufactured roof panel assemblies complying with performance requirements indicated and capable of withstanding structural movement, thermally induced movement, and exposure to weather without failure or infiltration of water into the building interior.

A. Provide factory preformed panel system which has been certified by the manufacturer to comply with specified requirements under installed conditions.

B. Provide one piece, single length panel where possible.

C. Provide clips and other accessories as required by specific job conditions for complete installation.

D. R Panels:

1. Air Infiltration: Max. 0.11 cfm/lf of seam at static pressure of ±6.24 psf when tested per ASTM E 1680.

1.3 Submittals: The following information shall be submitted in accordance with Section 01340 – Shop Drawings, Samples and Product Data.

A. Product Data: Provide manufacturer's product specifications, standard details, certified product test results, and general recommendations, as applicable to materials and finishes for each component and for total panel assemblies.

B. Shop Drawings: Provide layouts of panels on roofs, details of edge conditions, joints, panel profiles, supports, anchorages, trim, flashings, underlayment, closures, and special details. Distinguish between factory- and field-assembled work. Clearly indicate locations of field applied sealant.

C. Samples for Initial Selection: Provide manufacturer's color charts or chips showing the full range of colors, textures, and patterns available for roof panels with factory-applied finishes.

1.4 Quality Assurance and Qualifications: Engage an experienced installer who has completed metal roof panel projects similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

1.5 Delivery, Storage, and Handling:

A. Deliver panels and other components so they will not be damaged or deformed. Package panels for protection against damage during transportation or handling.

B. Exercise care in unloading, storing, and erecting roof panels and other components to prevent bending, warping, twisting, and surface damage.

C. Stack materials on platforms or pallets, covered with tarpaulins or other suitable weathertight and ventilated covering. Store panels and other components to ensure dryness. Do not store panels in contact with materials that might cause staining, denting, or other surface damage.

1.6 Project Conditions: Verify actual measurements/opening by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work. Where field measurements cannot be made without delaying the Work, either establish opening dimensions and proceed with fabricating roof panels without field measurements or allow for trimming panel units.

1.7 Warranty: Warranty shall be provided in accordance with Section 01 78 36 – Warranties.

PART 2 - PRODUCTS

2.1 Manufacturers: Metal Roofing shall be manufactured by McElroy Metal, Inc. (800-562-3576) or approved equal.

2.2 R- Panels:

A. Profile: Major longitudinal 1 -1/4” deep, spaced 12” o.c., minor longitudinal ribs centered between major ribs, spaced 4” o.c. panel.

B. Size: 36” cover width, lengths on Drawings.

C. Material: 26 gauge galvalume finish.

D. Color: Selected from full range of manufacturer’s standard colors.

2.3 Accessories: Provide manufacturers standard accessories and other items essential to complete standing seam roof installation including anchor clips, trim, closures, flashing, fascia, etc.

2.4 Support: Install R-Panel roofing panels over metal purlins as shown on the Drawings.

2.5 Field Sealant: Provide color coordinated primerless silicone or high grade, non drying butyl as recommended by panel manufacturer. Do not use sealant containing asphalt. Provide nonsetting, nonhardening, nonmigrating, heavy-bodied polyisobutylene sealant.

2.6 Fabrication: Fabricate and finish panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

2.7 Finish: Panels and other components, flashing, etc., shall have a Galvalume finish.

PART 3 - EXECUTION

3.1 Examination: Examine substrates and conditions for compliance with requirements for conditions affecting performance of metal panel roofing. Do not proceed with roof panel installation until unsatisfactory conditions have been corrected.

3.2 Installation: Comply with panel manufacturer's written instructions and recommendations for installation, as applicable to project conditions and supporting substrates. Anchor panels and other components of the work securely in place, with provisions for thermal and structural movement.

A. Panel Installation: Field cutting exterior panels by torch is not permitted. Install panels with concealed fasteners, unless otherwise indicated.

B. Accessories: Install components required for a complete roof panel assembly.

C. Separate dissimilar metals by painting each metal surface in area of contact with a bituminous coating, by applying rubberized-asphalt underlayment to each metal surface, or by other permanent separation as recommended by manufacturers of dissimilar metals.

D. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not otherwise indicated, types recommended by panel manufacturer. Install weatherseal under ridge cap. Flash and seal panels at eave and rake with rubber, neoprene, or other closures to exclude weather. Seal panel end laps with double beads of tape or sealant, for the full width of panel. Seal side joints where recommended by panel manufacturer.

E. Installation Tolerances: Shim and align panel units within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.4 Repair, Cleaning and Protection:

A. Repair: Factory colored finished surfaces shall be touched up as necessary with the manufacturer’s recommended touch-up paint.

B. Damaged Units: Replace panels and other components of the work that have been damaged or have deteriorated beyond successful repair by finish touch up or similar

minor repair procedures.

C. Cleaning: Remove temporary protective coverings and strippable films, if any, as soon as each panel is installed. On completion of panel installation, clean finished surfaces as recommended by panel manufacturer and maintain in a clean condition during construction.

- END OF SECTION -

SECTION 05320

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 Scope: This Section includes the fabrication and installation of miscellaneous flashing, drip edges, and flashing tape.

1.2 Applicable Publications: The publications listed below form a part to this specification to the extent referenced. The publication may be referred in the text by designation only.

A. American Society for Testing and Materials:

ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction.

B. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA):

SMACNA - Architectural Sheet Metal Manual

1.3 Submittals: Submit the following in accordance with provisions of Section 01340 – Shop Drawings, Samples and Product Data.

A. Product Data: Provide manufacturer's data sheets on each component to be used including:

1. Material profile, dimensions, jointing details, fastening methods.

2. Installation methods.

B. Selection Samples: One sample of each component, minimum 6" length.

1.4 Delivery, Storage and Handling:

A. Store products indoors in manufacturer's unopened packaging until ready for installation.

B. Protect work from moisture damage.

1.5 Coordination: Coordinate work with roofing installation.

PART 2 - PRODUCTS

2.1 Acceptable Manufacturers:

A. Miscellaneous: Local fabrication. Kynar coated aluminum flashing to match roof color.

2.2 Fabrication:

A. General Metal Fabrication: Shop-fabricate Work to the greatest extent possible. Comply with details indicated on Drawings, and with applicable requirements of SMACNA. Fabricate for waterproof and weather-resistant performance; with expansion provisions for running Work, sufficient to permanently prevent leakage, damage, or deterioration of Work. Form Work to fit substrates. Comply with material manufacturers instructions and recommendation for forming material. Form exposed sheet metal Work without excessive oil-canning, buckling, and tool marks, true to line and level indicated, with exposed edges folded back to form hems.

B. Seams: Fabricate non-moving seams in sheet metal with flat-lock seams. Form seams and solder tin edges to be seamed.

C. Sealant Joints: Where movable, non-expansion type joints are indicated, or required for proper performance of Work, form metal to provide for proper installation of elastomeric sealant per SMACNA standards.

D. Metal Separation: Separate metal from non-compatible metal or corrosive substrates by coating concealed surfaces at locations of contact with bituminous coating or other permanent separation as recommended by manufacturer.

PART 3 - EXECUTION

3.1 Examination:

A. Do not begin installation until substrates have been properly prepared.

B. If substrates preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

3.2 Preparation:

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 Installation:

A. Install in accordance with manufacturer's instructions.

B. Except as otherwise indicated, comply with SMACNA recommendations.

C. Anchor units of Work securely in place by methods indicated, providing for thermal expansion of metal units. Conceal fasteners wherever possible, and set units true to line and level. Install Work with laps, joints, and seams that will be permanently watertight and weather-resistive.

3.4 Protection:

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

- END OF SECTION -

SECTION 05500

MISCELLANEOUS METALS

PART 1 - GENERAL

1.1 Scope: This Section covers the field or factory fabrication of any metal products, not covered elsewhere, as applicable.

1.2 Quality Assurance:

A. Fabricator Qualifications: A firm experienced in producing metal fabrications similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

B. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel." AWS D1.3, "Structural Welding Code--Sheet Steel.".

1.3 Reference Standards:

A. "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings" of the American Institute of Steel Construction. (AISC)

B. "Code for Welding in Building Construction" of the American Welding Society. (AWS).

C. "Specifications for Architecturally Exposed Structural Steel" of the American Institute of Steel Construction.

D. "A Guide to the Shop Painting of Structural Steel" as developed by the Steel Structures Painting Council and the American Institute of Steel Construction.

E. State of Louisiana, Department of Transportation and Development, Standard Specifications for Roads and Bridges (LSSRB) – 2006 Edition.

1.4 Project Conditions: Where metal fabrications are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work. Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Allow for trimming and fitting.

1.5 Coordination: Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.6 Dissimilar Materials: Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected as covered in paragraph 3.4 Protection of Aluminum contained herein.

1.7 Submittals:

A. Submit shop drawings, etc., in accordance with Section 01340 – Shop Drawings, Samples and Product Data. Shop drawings shall indicate material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive data and installation instructions and templates.

B. Product Data: Manufacturer’s specifications installation instructions. Submit for:

1. All manufactured products used in fabrication.
2. Shop primers.
3. Grouts.
4. Anchors, bolts and fastening devices.
5. Batting cage columns and base plates.
6. Steel pipe conduits for walk path.
7. Removable pipe bollards.

C. Samples of products and materials when requested.

PART 2 - PRODUCTS

2.1 Metals, General: For metal fabrications exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

2.2 Metals Materials:

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Architectural Steel Tubing: Cold-formed steel tubing complying with ASTM A 500.

C. Structural Steel Tubing: Hot formed steel tubing ASTM A 501.

D. Steel Sheet: Hot-rolled, ASTM A570; or cold-rolled ASTM A611, Class 1; of grade required for design loading.

E. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

F. Galvanize: ASTM A153 for galvanizing iron and steel hardware; ASTM A386 for galvanizing assembled steel products.

G. Brackets, Flanges and Anchors: Cast or formed metal of the same type material and finish as supported items, unless otherwise indicated.

H. Steel Pipe (Drainage): (None Required this Project) ASTM A53 with bituminous (asphaltic varnish) coated exterior.

I. Removable Pipe Bollards: (None Required this Project) Removable pipe bollards shall be 36" high, four inch (4") nominal diameter steel posts (ASTM A36) and shall fit into a recessed, receiver sleeve anchored in a concrete footing. The receiver sleeve shall be placed over a bed of aggregate material for proper drainage. The receiver sleeve shall have a stainless steel cover (SAE 304) capable of being locked to the side of the bollard post and closed over the sleeve hole when the post is removed. Bollard post sleeve shall be installed as shown on the Drawings. Bollard posts shall be factory powder coated in "Safety Yellow" and be Model R-7902 Steel Bollard with Model R-7901-R Removable Mount and lockable, Hinged Lid as manufactured by Reliance Foundry of Surrey, BC, Canada (888-735-5680) or approved equal.

2.3 Paint:

A. Shop Primer: Provide fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with performance requirements in FS TT-P-664; selected for good resistance to normal atmospheric corrosion, compatibility with finish paint systems indicated, and capability with finish paint systems indicated, and capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.

B. Galvanizing Repair Paint: Zinc dust paint, complying with SSPC-Paint 20 or MIL P-21035B, Type I or II.

C. Finish Paint: Refer to Section 09900 - Painting - Exterior Metal/Iron.

2.4 Fasteners: Provide Type 304 or 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 5, where built into exterior walls. Select fasteners for type, grade, and class required and sufficient size and number to tie together the various parts of the building and secure all of its parts in place. Such miscellaneous items shall be of same material as metals they contact.

A. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with hex nuts, ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.

B. Anchor Bolts: ASTM F 1554, Grade 36.

C. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

D. Plain Washers: Round, carbon steel, ASME B18.22.1 (ASME B18.22M).

E. Lock Washers: Helical, spring type, carbon steel, ASME B18.21.1 (ASME B18.21.2M).

F. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.

1. Material: Carbon-steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.

2. Material: Alloy Group 1 or 2 stainless-steel bolts complying with ASTM F 593 (ASTM F 738M) and nuts complying with ASTM F 594 (ASTM F 836M).

G. Toggle Bolts: FS FF-B-588, tumble-wing type, class and style as needed.

2.5 Grout: Provide factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.6 Fabrication, General:

A. General: Fabricate in strict accordance with the Drawings, approved shop drawings and the referenced standards.

B. Workmanship:

1. Use materials of size, thickness and type indicated or required to produce strength and, durability in finished product for use intended. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support.

2. Form exposed work to line and level with accurate angles and surfaces and straight sharp edges. Form bent metal corners to smallest radius possible without causing grain separation. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible.

3. Taping: Drill and tap miscellaneous metal work as indicated to receive bolts, screws, finish hardware and similar items.

C. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

D. Shear and punch metals cleanly and accurately. Remove burrs.

E. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength

and corrosion resistance of base metals.

2. Obtain fusion without undercut or overlap.

3. Remove welding flux immediately.

4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

G. Fabricate joints that will be exposed to weather in a manner to exclude water, or provide weep holes where water may accumulate.

H. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.

I. Remove sharp or rough areas on exposed traffic surfaces.

J. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flat-head (countersunk) screws or bolts. Locate joints where least conspicuous.

K. Shop Priming: Immediately after cleaning, shop prime all structural steel with one (1) prime coat, except steel to be encased in concrete.

L. Galvanizing: All items specified to be galvanized, shall be galvanized after fabrication.

2.7 Miscellaneous Framing and Supports: Provide steel framing and supports indicated and as necessary to complete the Work. Fabricate units from structural-steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.

A. Fabricate units from slotted channel framing where indicated.

B. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors 1-1/4 inches wide by 1/4 inch thick by 8 inches long at 24 inches o.c., unless otherwise indicated.

2.8 Steel Finishes:

A. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements for SSPC surface-preparation specifications and environmental exposure conditions of installed metal fabrications.

B. Apply shop primer to uncoated surfaces of metal fabrications. Comply with SSPC- Pa 1, "Paint Application Specification No. 1," for shop painting.

C. Steel (Drainage) Pipe: (None Required this Project) Apply bituminous (asphaltic varnish) coating to exterior of zinc-coated, steel drainage pipe. Asphaltic varnish shall comply with Section 1008.03 of the LSSRB (Reference Standard).

2.9 Painting: Painting of steel fabrications shall be in accordance with Section 09900 - Painting - Exterior Metal/Iron.

PART 3 - EXECUTION

3.1 Examination:

A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means erector accepts existing conditions.

3.2 Preparation:

A. Coordination: Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction.

B. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible.

C. Shop Assembly: Preassemble items in shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations

D. Clean and strip primed steel items to bare metal where site welding is required.

E. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate sections.

3.3 Installation, General:

A. General: Install metal fabrications in strict accordance with the Drawings, the approved shop drawings, and all applicable regulations, codes and referenced standards.

B. Install items plumb and level, accurately fitted, free from distortion or defects.

C. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal fabrications to in-place construction. Include

threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors.

E. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

F. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

G. Field Welding: Comply with the following requirements:

1. Field weld components indicated on Drawings.

2. Perform field welding in accordance with AWS D1.1.

3. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

4. Obtain fusion without undercut or overlap.

5. Remove welding flux immediately.

6. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

3.4 Protection of Aluminum: Aluminum that will be in contact with grout or concrete shall be protected from galvanic or corrosive action by being given a coat of bituminous paint conforming to Mil. Spec. MIL-C-18480 or shall be given a coat of zinc-chromate primer and a coat of aluminum paint. Aluminum in contact with structural steel shall be protected against galvanic or corrosive action by being given a coat of zinc-chromate primer and a coat of aluminum paint. The zinc-chromate primer shall conform to Fed. Spec. TT-P-645. The aluminum paint shall consist of aluminum paste conforming to Fed. Spec. TT-P-320, thinner compatible with the varnish and spar varnish conforming to Fed. Spec. TT-V-119, mixed in proportion of two (2) pounds of paste to not more than one pint of thinner to one gallon of spar varnish. The paste, thinner, and varnish shall be field mixed.

3.5 Finishes:

A. Unless otherwise specified, aluminum items shall have standard mill finish.

B. Surfaces of ferrous metal except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating unless otherwise specified. Surfaces of items to be embedded in concrete shall not be painted. Items to be finish painted shall be prepared according to manufacturer's recommendations or as specified in Section 09900 - Painting - Exterior Metal/Iron.

3.6 Erection: Allow for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

3.7 Steel (Drainage) Pipe: (None Required this Project) Steel drainage pipe shall be installed over 4" of compacted bedding material in accordance with Section 02726 – Bedding Material.

3.8 Erection Tolerances:

A. Maximum Variation From Plumb: 1/4 inch.

B. Maximum Offset From True Alignment: 1/4 inch.

- END OF SECTION -

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RECREATION AND EDUCATION COMPLEX

DIVISION 9 - FINISHES

Section 09900 - PAINTING – EXTERIOR METAL/IRON
Section 09910 - PAINTING

SECTION 09900

PAINTING – EXTERIOR METAL/IRON

PART 1 - GENERAL

1.1 Scope: This Section includes surface preparation and field painting of exterior metal/iron surfaces including, but not limited to, the following:

A. Existing Surfaces:

1. Backstop and backstop anchor posts.

2. Existing electrical guy anchor post.

B. New Surfaces:

1. Scoreboard support columns.

C. Paint exposed surfaces, except where the Drawings indicate that a surface or material is not to be painted.

D. Do not paint finished metal surfaces, operating parts, and labels.

1. Finished metal surfaces include the following:

a. Anodized aluminum.
b. Stainless steel.
c. Brass.
d. Bronze.
e. Chrome plated steel.

2. Operating parts include moving parts of operating equipment.

3. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.2 Submittals: The following submittals shall be provided in accordance with Section 01340 – Shop Drawings, Samples and Product Data.

A. Product Data: Provide product data for each paint system specified. Include all primers.

1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.

1. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.

1.3 Quality Assurance and Qualifications:

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

B. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

1.4 Delivery, Storage, and Handling:

A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1.6 Project Conditions:

A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 deg F (10 and 32 deg C).

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg F (7.2 and 35 deg C).

C. Do not apply paint in rain, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 Manufacturers: Subject to compliance with requirements, provide one of the products in the paint schedules as manufactured by:

A. Carboline (CB)

B. PPG

C. Sherwin Williams (SW)

2.2 Paint Materials, General:

A. Material Compatibility: Provide primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

C. Colors: Color for painting shall be as noted on the Drawings or as selected by the OWNER/ENGINEER from the manufacturer’s standard color chart.

PART 3 - EXECUTION

3.1 Examination:

A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.

1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.

2. Start of painting process will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

3.2 Preparation:

A. General: Remove hardware and hardware accessories, plates, machined surfaces and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers as required.

2. Existing Steel Surfaces: Remove rust and/or rust scale from all surfaces by mechanical means and immediately spot prime exposed steel surfaces as specified herein.

a. Apply full prime coat as specified herein.

3. New Shop-Primed Steel Surfaces: Clean shop-primed surfaces to be painted with non-petroleum-based solvents to ensure surface is free of oil and surface contaminants. Spot-prime any areas where shop-primer has been scarred/removed.

D. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.

2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.

3. Use only thinners approved by paint manufacturer and only within recommended limits.

3.3 Application:

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

2. Provide finish coats that are compatible with applied primers.

3. Completed coatings shall be free of defects such as runs, sags, variations in color, lap or brush marks. holidays and skips.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.

2. Omit primer on metal surfaces that have been shop primed and touchup painted.

3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure welds and exposed fasteners receive a dry film thickness equivalent to that of smooth surfaces.

4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.

2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.

3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required. Protect adjacent facilities from overspray.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

E. Prime Coats: Before applying finish coats, apply a prime coat of material, as specified herein and as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.

F. Completed Work: Match approved sample for color, texture, and coverage.

Remove, refinish or repaint work not complying with requirements.

3.4 Cleaning: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site. After completing painting, clean paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.5 Protection:

A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by ENGINEER.

B. Provide "Wet Paint" signs to protect newly painted finishes.

3.6 Paint Schedule :

A. Metals/Iron: Provide the following finish systems over existing and new ferrous metal/iron posts, columns, beams, purlins, attachment hardware, etc. (as applicable). Primer is required on any new galvanized components which are to be painted.

1. Apply all products at spreading rates recommended by the manufacturer.

Mfg	**Spot Prime and 1st Coat (Primer)**	**2nd Coat (Finish)**
CB	Carbomastic 15 (3 – 5 mils DFT)	Carboxane 2100FC (3 – 7 mils DFT)
PPG	Amerlock 2 AL (4 – 8 mils DFT)	PSX 800 (3 – 7 mils DFT)
SW	Epoxy Mastic Aluminum II (4 – 6 mils DFT)	Sher-Loxane 800 (4 – 6 mils DFT)

- END OF SECTION -

SECTION 09910

PAINTING

PART 1 - GENERAL

1.1 Scope: This Section includes surface preparation and field painting or staining of exposed exterior and interior items and surfaces. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections. **Note: Refer to Section 09900 for painting of exterior metal/iron surfaces.**

A. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, the ENGINEER will select from standard colors and finishes available.

B. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

1. Prefinished items include the following factory-finished components:

a. Finished mechanical and electrical equipment.
b. Light fixtures.
c. Toilet Compartments.
d. Acoustical Ceiling Materials.
e. Finish Hardware.

2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:

a. Furred areas.
b. Ceiling plenums.
c. Pipe spaces.

3. Finished metal surfaces include the following:

a. Anodized aluminum.
b. Stainless steel.
c. Brass.
d. Bronze.
e. Chrome plated steel.

4. Operating parts include moving parts of operating equipment and the following:

a. Valve and damper operators.
b. Linkages.
c. Sensing devices.
d. Motor and fan shafts.

5. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.2 Definitions: Standard coating terms defined in ASTM D 16 apply to this Section.

A. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.

B. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.

C. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.

D. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.

1.3 Submittals: The following submittals shall be provided in accordance with Section 01340 - Shop Drawings, Samples, and Product Data.

A. Product Data: Provide product data for each paint system specified. Include all primers.

1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.

2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.

B. Samples for Initial Selection: Provide manufacturer's color charts showing the full range of colors available for each type of finish-coat material indicated. After color selection, the ENGINEER will furnish color chips for surfaces to be coated.

C. Samples for verification: Provide mockup of each color selected in the form of a 2 foot by 2 foot area. On the actual surface to be painted.

1.4 Quality Assurance and Qualifications:

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

B. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

1.5 Delivery, Storage, and Handling:

A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1.6 Project Conditions:

A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 deg F (10 and 32 deg C).

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg F (7.2 and 35 deg C).

C. Do not apply paint in rain, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.7 Extra Materials: Furnish extra paint materials from the same production run as the materials applied in the quantities. Package paint materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver not less than 1 gal. or 1 case (5%) as appropriate of each material and color applied to the Owner.

PART 2 - PRODUCTS

2.1 Manufacturers: Subject to compliance with requirements, provide one of the products in the paint schedules as manufactured by

A. Sherwin Williams.

B. Benjamin Moore

C. Or approved equal.

2.2 Paint Materials, General:

A. Material Compatibility: Provide primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

C. Colors: Provide color samples for selection by the ENGINEER.

PART 3 - EXECUTION

3.1 Examination:

A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.

1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.

2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers. Notify the ENGINEER about anticipated problems using the materials specified over substrates primed by others.

3.2 Preparation:

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting. After completing

painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and reprime.

2. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.

a. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.

b. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.

3. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

4. Cementitious Materials: Prepare concrete, concrete masonry block surfaces, and other cementitious materials to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.

a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.

b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer’s written instructions.

D. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean

condition, free of foreign materials and residue.

2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.

3. Use only thinners approved by paint manufacturer and only within recommended limits.

3.3 Application:

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

2. Provide finish coats that are compatible with primers used.

3. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, and similar components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.

4. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.

5. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.

6. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.

7. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.

8. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.

9. Sand lightly between each succeeding enamel or varnish coat.

10. Completed coatings shall be free of defects such as runs, sags, variations in color, lap or brush marks. holidays and skips.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has

cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.

2. Omit primer on metal surfaces that have been shop primed and touchup painted.

3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.

2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.

3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and in occupied spaces.

H. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.

I. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections. Provide satin finish for final coats.

J. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 Cleaning: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.5 Protection:

A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.6 Exterior Paint Schedule (Doors and Door Frames, Miscellaneous Metals, Etc.):

A. Doors/Frames/Metals: Provide the following finish systems over exterior ferrous metal. Primer is not required on shop-primed items.

1. Gloss, Alkyd-Enamel Finish: Two (2) finish coats.

a. Primer: Quick-drying, rust-inhibitive, alkyd-based or epoxy-metal primer, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.5 mils.

b. First and Second Coats: Full-gloss, acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.5 mils.

Mfg	**1st Coat**	**2nd and 3rd Coats**
BM	D.T.M. Alkyd Gloss Enamel #M26	D.T.M. Acrylic Gloss Enamel #M28
ICI	Devflex 4020 PF DTM Flat Interior/Exterior Waterborne Primer & Finish - Acrylic	Devflex 4216 Interior/Exterior Waterborne Enamel - Acrylic
SW	SW DTM Acrylic Primer/Finish B66W1	SW DTM Acrylic Semi Gloss Coating B66-200 Series

3.7 Interior Paint Schedule (Gypsum Board, CMU, Interior Metal Doors and Frames, Wood Shelves, Etc.):

A. Gypsum Board and Walls: Provide the following finish systems over interior gypsum board wall surfaces:

1. Semigloss, Acrylic-Enamel Finish: Two (2) finish coats over a primer.

   a. Primer: Latex-based, interior primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.

   b. First and Second Coats: Semigloss, acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils.

Mfg	**1st Coat**	**2nd and 3rd Coats**
BM	Regal First Coat Interior Latex Primer and Underbody #216	Regal Semi Gloss #333
ICI	Kilstain All Purpose Stain Killer/Primer/Sealer PRIMZ 220	Devoc Regency Interior Semi Gloss RG64XX Series
SW	S-W Prep Rite 200 Latex Primer B28W200	S-W Pro Mar 200 Latex Semi Gloss B31W2200 Series

B. Ferrous Interior Metal Doors and Door Frames and all Other Interior Ferrous Metals: Provide the following finish systems over ferrous metal:

1. Full-gloss Acrylic Finish: Two (2) finish coats over a rust-inhibitive primer.

   a. Primer: Quick-drying, rust-inhibitive, alkyd-based or epoxy-metal primer, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.5 mils.

   b. First and Second Coats: Full-gloss, acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.5 mils.

BM	D.T.M. Alkyd Gloss Enamel #M26	D.T.M. Acrylic Gloss Enamel #M28
ICI	Devoe Coatings 4020 DTM Flat Interior/Exterior Waterborne Primer & Finish	DevFlex 4208 Gloss Interior/Exterior Waterborne Enamel
SW	S-W All Surface Enamel Latex Primer A11W210	S-W Pro Mar 200 Latex Gloss B21W200

C. CMU: Provide the following finish systems over CMU.

1. Elastomeric Coating: Two (2) finish coats over a primer. If the indicated color is unable to be provided in an elastomeric coating, then provide the elastomeric coating system in an appropriate “primer” color with a topcoat system of 100% acrylic latex in the indicated color.

1. Apply acrylic coating over block filler and minimum of one coat of the elastomeric coating system to achieve a minimum DFT of 10 mil or as required to meet manufacturer's warranty. The elastomeric coating shall be the same color as the acrylic top coat or an appropriate colored "primer" and to be pin hole free.

Mfg	**Normal Weather Coatings (Above 40°F)**	
	Block Filler	**1st & 2nd coats**
BM	Moorcraft Super Craft Latex Block Filler 285	Moorlastic 100% Acrylic Elastomeric Waterproof Coating Low Lustre 055
ICI	BloxFil #4000 Heavy Duty Block Filler	Decra-Flex #2260 Elastomeric Smooth
SW	Heavy Duty Block Filler B42W46	Conflex XL High Build Elastomeric, A5-400

- END OF SECTION -

AVOYELLES PARISH POLICE JURY

AVOYELLES PARISH
RECREATION AND EDUCATION COMPLEX

DIVISION 10 – SPECIALTIES

Section 10140 - WAYFINDING SIGNAGE
Section 10350 - FLAGPOLES

SECTION 10140

WAYFINDING SIGNAGE

PART 1 - GENERAL

1.1 Scope: Provide labor, materials, equipment and services necessary to furnish and install signs of size, material, images, components and construction as shown in the Drawings.

1.2 Submittals: Submit product data for each type of product specified in accordance with Section 03140 - Shop Drawings, Samples and Product Data.

A. Product Data
B. Shop Drawings
C. Color/Finish Samples
D. Full Size Layouts

1.3 Quality Assurance:

A. Manufacturer Qualifications: Fabricate and install work using a manufacturer having a minimum of five (5) years experience in this type of work on projects of this size.

B. Obtain each sign type indicated from one source from a single manufacturer.

C. Coordination:

1. Coordinate with other trades to assure proper and adequate provision in work of those trades involved. Coordinate placement of anchorage devices with templates for installing signs.

2. Do not deliver materials to site until areas are ready to receive them.

1.4 Warranty:

A. Guarantee materials and workmanship for a period of one (1) year.

B. Manufacturer's Warranty: Submit manufacturer's standard warranty document executed by authorized company official.

1. Warranty Period: Three years from product ship date.

PART 2 - PRODUCTS

2.1 Manufacturers: Shall be ASI Signage Innovations, 1101 24th Street Kenner LA 70062; (504) 704 1000 telephone; Emily Hebert: (337) 517-9451, Emily.Hebert@asisignage.com or Kevin Leaumont: (504) 616-8636, Kevin.Leaumont@asisignage.com or Approved Equal.

2.2 Materials: Signage shall be equal ASI Legacy Series Flange - Mount; Double sided and Single sided. ASI LF Series and ASI SPG Series Panel Sign Stud – Mounted.

2.3 Signage:

A. Double Post & Panel:

1. Rules & Regulations Sign (1)
ASI Legacy Series Double Post & Panel
80”h x 38”w Overall
42”h x 30”w – Aluminum Panel w/ custom top
3”dia – round post painted 1 standard color w/ ball cap finial
Panel Construction: 1/8" aluminum with square corners. Panel shall be attached flush to frame with no visible screws, fasteners or retainer lip.
Finish: Double Sided Paint w/ Double-Sided ASI LTV Vinyl Graphics
a.) Post & Frame to be powder coated
b.) ASI Standard Colors
Installation Method: Flange– Mount w/ escutcheon cover

2. LA 115 Entrance Sign (1)
ASI Legacy Series Double Post & Panel – double sided
114”h x 136”w Overall
72”h x 120”w – Aluminum Panel w/ custom top
8”dia – round post painted 1 standard color w/ ball cap finial
Panel Construction: 1/8" aluminum with square corners. Panel shall be attached flush to frame with no visible screws, fasteners or retainer lip.
Medallion Crest – Cast Aluminum
Finish: Double Sided Paint w/ Double-Sided ASI LTV Vinyl Graphics
a.) Post & Frame to be powder coated
b.) ASI Standard Colors
Installation Method: Flange– Mount w/ escutcheon cover

B. Aluminum Panel Signs:

1. “Home” and Visitor Dugout Sign - (4 Each (8 Total))
ASI Legacy Series Aluminum Panel Sign
12”h x 20”w x 1/2” thick
Panel Construction: 1/8" aluminum. Face of number shall be attached flush to side reveal with no visible screws, fasteners or retainer lip.
Finish: First Surface Painted w/ Single-Sided ASI LTV Vinyl Graphics
a.) ASI Standard Colors

Installation Method: Blind Stud-Mounted Flush

2. Field Identification Sign (4 Each (8 Total))
ASI Legacy Series Aluminum Panel Circle
24”h x 1/2” thick
Non-Illuminated
ASI LTV Cut Vinyl Graphic
a.) ASI Standard Color and Font
b.) Installation Method: Blind Stud-Mounted Flush

3. Field Regulation Sign (8)
ASI Legacy Series Aluminum Panel Sign
32”h x 24”w x 1/2” thick
Non-Illuminated
ASI LTV Cut Vinyl Graphic
a.) ASI Standard Color and Font
b.) Installation Method: Blind Stud-Mounted Flush

2.4 Fabrication:

A. General: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.

B. Allow for thermal movement resulting from a maximum ambient temperature change (range) of 100 deg F (38 deg C). Design, fabricate, and install sign assemblies to prevent buckling, opening up of joints, and over-stressing of welds and fasteners.

C. Mill joints to a tight, hairline fit. Form joints exposed to the weather to exclude water penetration.

D. Preassemble signs in the shop to the greatest extent possible to minimize field assembly. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in a location not exposed to view after final assembly.

E. Conceal fasteners if possible; otherwise, locate fasteners to appear inconspicuous.

F. Form panels to required size and shape. Comply with requirements indicated for design, dimensions, finish, color, and details of construction.

G. Coordinate dimensions and attachment methods to produce message panels with closely fitting joints. Align edges and surfaces with one another in the relationship indicated.

H. Increase material thickness or reinforce with concealed stiffeners or backing materials as required to produce surfaces without distortion, buckles, warp, or other surface deformations.

PART 3 - EXECUTION

3.1 Provide signs as indicated in the Drawings and fabricate in accordance with Shop Drawings.

3.2 Installation:

A. Install per manufacturers instructions, utilize fasteners, adhesives, anchors and inserts as recommended by the manufacturer.

B. Coordinate with electrical other trades where required.

C. Install product in locations indicated using mounting methods recommended by sign manufacturer and free from distortion, warp, or defect adversely affecting appearance.

D. Install product level, plumb, and at heights indicated.

E. Install product at heights to conform to Americans with Disabilities Act Accessibility Guidelines (ADAAG) and applicable local amendments and regulations.

F. Install signs within the following tolerances and in accordance with manufacturer's recommendations:

1. Within 1 inch vertically and horizontally of intended location.

3.3 Property Lines, Easements and Utilities: Contractor shall be responsible for verifying the exact location of any sign structure.

3.4 Cleaning:

A. Repair scratches and other damage which might have occurred during installation. Replace components where repairs were made but are still visible to the unaided eye from a distance of 10 feet.

B. Remove temporary coverings and protection to adjacent work areas. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project in accordance with provisions in Division 1

3.5 Sign Schedule

A. Schedule: Refer to signage schedule and Drawings for sizes, locations, and layout of signage types, sign text copy, and graphics.

- END OF SECTION -

SECTION 10350

FLAGPOLES

PART 1 - GENERAL

1.1 Scope: This Section includes internal halyard aluminum flagpoles with satin aluminum finish. Flagpoles shall be provided and installed as specified herein and as shown on the Drawings.

1.2 Submittals: Submittals shall be provided in accordance with Section 01340 – Shop Drawings, Samples and Product Data. Provide data for each type of flagpole and accessory specified. Include installation instructions and details for foundation system of ground-set poles.

1.3 Applicable Publications: The publications listed below form a part of this Specification to the extent referenced. The publication may be referred to in the text by designation only.

American Society for Testing and Materials (ASTM) Publications:

B 241M	Specification for Aluminum and Aluminum - Alloy Seamless Pipe and Seamless Extruded Tube
B 597	Practice for Heat Treatment of Aluminum Alloys

1.4 Quality Assurance and Qualifications:

A. Manufacturing Standards: Provide each flag pole as a complete unit produced by a single manufacturer, including fittings, accessories, bases, and anchorage devices.

B. Design Criteria: Provide flagpoles and installations constructed to withstand a 90-mph wind velocity minimum when flying a flag of appropriate size. Use heavy pipe sizes as required for flagpole height and type specified.

C. Pole Construction, General: Construct poles and ship to project site in one piece, if possible. If more than one piece is necessary, provide snug-fitting, weathertight, hairline joints.

1.5 Delivery, Storage and Handling: Spiral wrap flagpoles with heavy Kraft paper or other weather-tight wrapping and prepare for shipment in hard fiber tube or other protective container. Deliver flagpoles and accessories completely identified for installation procedure.

1.6 Related Work: Work related to construction of the concrete foundation shall be in accordance with Section 03300 - Cast-In-Place Concrete.

PART 2 - PRODUCTS

2.1 Manufacturers: Provide aluminum flagpoles with satin aluminum finish as manufactured by Acme Lingo Flagpoles, Baartol Company or approved equal.

2.2 Flagpoles: Aluminum flagpoles shall be fabricated as follows:

1. Provide cone-tapered flagpoles.
2. Finish: Satin Aluminum
3. Height: 30' poles.

2.3 Foundation Tube: As recommended by manufacturer.

2.4 Baseplate: Welded steel baseplate for anchor-bolt mounting, of same metal and finish as flagpole. Provide with anchor bolts.

2.5 Fittings:

A. Final Ball: Provide manufacturer's standard flush-seam ball, size to match pole butt diameter.

B. Internal Halyard: Ball-bearing, nonfouling, revolving truck assemblies of cast metal with continuous 5/16-inch diameter, braided polypropylene halyards and 9-inch cast-metal cleats with fasteners.

2.6 Concrete Footings: Concrete for flagpole footings shall be in accordance with Section 03300 – Cast-In-Place Concrete.

PART 3 - EXECUTION

3.1 Preparation for Ground Set Poles:

A. Excavation: Excavate for foundation concrete to neat clean lines in undisturbed soil. Provide forms where required due to unstable soil conditions. Remove wood, loose soil, rubbish, and other foreign matter from excavation; and moisten earth before placing concrete. Back fill open excavation after concreting with original excavated material.

B. Concrete: Finish trowel exposed concrete surfaces to smooth, dense surface. Provide positive slope for water runoff to base perimeter.

3.2 Flagpole Installation:

A. General: Prepare and install flagpole(s) at the location(s) shown on the Drawings and in compliance with accepted shop drawings and manufacturer's instructions.

1. Provide 3/4" dia x 18" lighting ground spike attached to base plate for each flagpole installation.

2. Paint below-grade portions of ground-set flagpole with heavy coat of bituminous paint.

- END OF SECTION -

AVOYELLES PARISH POLICE JURY

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DIVISION 11 - EQUIPMENT

Section 11480 - ATHLETIC FIELD EQUIPMENT
Section 11485 - SCOREBOARDS

SECTION 11480

ATHLETIC FIELD EQUIPMENT

PART 1 - GENERAL

1.1 Scope:

A. CONTRACTOR shall provide labor, equipment, materials including support and accessory hardware to install the specified athletic field equipment on all baseball and softball field and bullpens.

B. This Section includes the following:

1. Bases and Pitching Rubbers
2. Foul Poles
3. Tensioned Cable-Supported Net Backstop
4. Wall-Mounted Backstop Pads
6. Fence and Gate Top Rail Covers
7. Helmet Racks
8. Bat Racks

1.2 Performance Requirements:

A. Tension cable-supported backstop netting system design shall be verified in accordance with ASCE 7-16 and the applicable codes. Shop drawings shall be stamped by a Structural Engineer registered in the State of Louisiana. Loads shall include at a minimum:

1. Dead, Wind and Ice loads on netting.
2. Tension loads imposed by cables.
3. System shall be designed to be lower for Named storms and icing conditions.
4. Minimum design wind loads for 3 sec. gust at 102 MPH Exposure C per code for poles.
5. Static pole deflection shall be less than L/100.
6. Static cable sag shall be less than 2%.

1.3 Submittals:

A. Product Data: Submit manufacturer's technical literature, shop drawings and installation instructions in conformance with Section 01340 – Shop Drawings, Samples and Product Data.

B. Shop Drawings for Netting Systems:

1. Include plans, elevations, component details and dimensions, anchoring and mounting requirements to other work.

2. Include structural analysis data for poles and netting systems, signed and sealed by the qualified professional engineer responsible for their preparation.

C. Submit 12-inch square samples of netting and screen materials.

1.4 Quality Assurance:

A. Professional Engineer Qualifications: A qualified professional structural engineer currently licensed to practice in the State of Louisiana and experienced in providing types of engineering services required.

B. Backstop Installer Qualifications: An experienced installer who has completed backstop systems similar in material, design, and extent to that indicated for this Project and whose work has resulted in backstop installations with a record of successful in-service performance.

1. Installer's Responsibilities: Installation of entire backstop assembly, including cabling, fittings, and netting.

C. Approved Installers:

1. Containment Systems: (205) 533-7040, tpankey@csnetting.com.

2. Prior approval required for other installers.

1.5 Coordination:

A. Coordinate locations of all items of the work for proper installation timing and location. Furnish items from other Sections to be incorporated into the work in conjunction with the work of this Section.

1.6 Warranty:

A. Provide five (5) copies of Manufacturer's warranty.

B. Provide manufacturer's one (1) year warranty on all athletic field equipment included in this Section, except as noted below:

1. Five (5) year warranty on cables and cable hardware.

2. Two (2) year warranty on netting.

C. All warranty periods begin on date of Substantial Completion.

1.7 Product Delivery And Storage:

A. Protection:

1. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the OWNER'S representative.

2. Deliver all materials to the job site and store above ground under protective cover with all labels intact and legible until installation.

3. Use all practical means necessary to protect backdrop curtains and accessories before, during, and after installation.

4. Use all practical means necessary to protect the work of others during installation.

B. Replacements:

1. In the event of damage by the CONTRACTOR, immediately make all repairs and replacements necessary to the approval of, and at no additional cost to, the OWNER so as to minimize any conflict with the construction schedule.

2. In the event of damage by parties other than CONTRACTOR, immediately advise OWNER of any additional cost to repair or replace damaged product.

1.8 Protection of Structures: Excavation, backfill, compaction, bracing, shoring, dewatering or any work related to this Section shall be carried out in such a manner as not to disturb and or undermine other newly constructed facilities, existing facilities, both above and below ground.

PART 2 - PRODUCTS

2.1 Acceptable Manufacturers:

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Bases and Pitching Rubbers:
   a. Basis of Design: Sportsfield Specialties (888)975-3343 www.sportsfield.com
   b. Beacon Athletics (800) 747-5985 www.beaconathletics.com

c. Southern Athletic Fields (800) 837-8062 www.safdirt.com
d. Mid-America Sports Advantage (800) 264-4519

2. Foul Ball Poles:
   a. Basis of Design: Sportsfield Specialties (888) 975-3343 www.sportsfield.com
   b. Beacon Athletics (800) 747-5985 www.beaconathletics.com
   c. Southern Athletic Fields (800) 837-8062 www.safdirt.com
   d. Mid-America Sports Advantage (800) 264-4519

3. Tension Cable-Supported Net Backstops:
   a. Basis of Design: Containment Systems (205) 533-7040, tpankey@csnetting.com.
   b. Christensen Net Works (800) 330-7980 joe.franson@cnwnetting.com
   c. Cascade Nets (866) 738-8071
   d. U.S. Netting (800) 331-2973 www.usnetting.com

4. Wall-Mounted Backstop Pads:
   a. Basis of Design: Sportsfield Specialties (888) 975-3343 www.sportsfieldspecialties.com
   b. Promats Athletics (800) 617-7125 www.promatsathletics.com
   c. Gared Sports (800) 325-2682 www.garedsports.com
   d. Porter Athletic, Inc.(800) 947-6783 www.porterathletic.com

5. Fence and Gate Top Rail Covers:
   a. Basis of Design: Beacon Athletics (800)747-5985 www.beaconathletics.com
   b. Hoover Fence Co. (800) 355-2335 www.hooverfence.com
   c. Partac Peat Corporation (800) 247-2326 http://www.beamclay.com

6. Helmet Racks:
   a. Basis of Design: Baseballracks (708) 636-1047, www.baseballracks.com
   b. Jaypro Sports (800) 243-0533, www.jayprosports.com
   c. Achillion Sports (888) 754-8280, www.achillionsports.com
   d. PYT Sports (708) 634-2099, www.pytsports.net

7. Bat Racks:

   a. Basis of Design: Baseballracks (708) 636-1047, www.baseballracks.com
   b. Jaypro Sports (800) 243-0533, www.jayprosports.com
   c. Achillion Sports (888) 754-8280, www.achillionsports.com
   d. PYT Sports (708) 634-2099, www.pytsports.net

2.2 Products:

A. Bases and Pitching Rubbers:

1. Ground Anchor Mounts: Model # LGBBP-44 Schutt® Ground Anchor Mounts - 1 ¾" square by 8" long galvanized steel female ground anchors for all base and pitching rubber locations. **Note: Double first base anchors required for softball field.**

2. Bases:

a. Model # VB001PW Champro "The Hall" - 15" x 15" x 3", embossed, UV-resistant, molded white rubber pro-style, weather resistant, rust-resistant, powder-coated, welded steel anchor stanchion and stanchion pan, reinforced side walls.

b. Model # VB004 Champro In-Ground Double White & Orange First Base - 15" x 15" x 3", embossed, UV-resistant, molded white rubber pro-style, weather resistant, rust-resistant, powder-coated, welded steel anchor stanchion and stanchion pan, reinforced side walls. **Note: One (1) full set of bases and one (1) double first base required for each field.**

3. Pitching Rubbers: Model # VB042 Champro Dual Stanchion Pitching Rubber - 6" wide x 24" long x 1.75 cm thick with double ground anchor and double anchor plug.

4. Anchor Plug Inserts: Model # E140484 Champro Foam Base Plug with Tassel to fit snug in stanchion anchors. One (1) plug to be provided for each installed stanchion anchor.

B. Foul Poles:

1. Basis of Design: LGFPW630PL 30' Foul Pole Equipment and Accessories as Manufactured and/or Supplied by: Sportsfield Specialties, Inc. (888) 975-3343 www.sportsfield.com.

a. Upright poles fabricated of 6" Schedule 40 aluminum pipe (6.625" O.D.).
b. 30'above finish grade height.
c. Powder-coat finish. Color - White
d. Base plate mount.
e. Upright pole with mesh wing.
f. Mesh wing is fabricated of stamped 1/8" (0.125") thick aluminum panel with double-reinforced bends welded at corners, 1.5" square open mesh size, 18"W x 22' from top of upright pole to 8' above finished grade.
g. Stainless steel assembly hardware.
h. Model-specific hardware kit and installation instructions.

C. Tension Cable-Supported Net Backstops: Basis of Design: Containment Systems. (205) 533-7040, tpankey@csnetting.com.

1. Backstop/Anchor Posts:

   a. Posts: Provide Sch. 40 steel posts. Diameter(s) to be determined by backstop/anchor designer. Height as detailed on the Drawings.
   b. Caps: Provide welded, domed post caps as required.
   c. Concrete: Refer to Section 03300 – Cast-In-Place Concrete.
   d. Painting: Posts to be delivered shop primed and painted in the field in accordance with Section 09900 – Painting – Exterior Metal/Iron.

2. Netting:

   a. Backstop Netting: Netting for backstops shall be twisted/knotted, #36, 1.75 inch square, 350 pound (min.), nylon net with interwoven, continuous 3/8 inch black, double-braided, polyester rope, 2,500# tensile strength (min.). The netting shall be configured and installed in "square mesh" pattern. "Diamond mesh" patter will not be accepted. The netting shall be one piece, unit custom made to fit the application and dimensions as shown on the Drawings. The 3/8 inch integral polyester rope shall be continuous through and across the top, bottom, sides, corners and all corner posts used for hanging/securing. The netting shall be dyed "Black" and have UV and urethane bonding treatments.

3. Mounting Hardware (Netting): Mounting hardware, for hanging netting at backstops shall be as follows:

   a. Eye Bolts: Eye bolts for bolting or welding to backstop post shall be one (1") inch diameter with eye collar. Inside diameter of eye shall be two (2") inches, ASTM A36 steel, galvanized (cut and remove 1 inch bolt behind collar for welding application). Eye bolts shall be closed.
   b. Wire Rope: Wire rope for backstop netting assembly shall be as follows:
      i. Top Cable: IPS galvanized steel wire, ASTM A603.
      ii. Vertical and Bottom Cables: IPS galvanized steel wire, ASTM A603.
   c. Wire Rope Thimbles: ASTM A36 steel, galvanized.
   d. Wire Rope Grips: ASTM A36 steel, galvanized.
   e. Turn Buckles: Twelve (12) inch adjustment range, eye and eye ends, ASTM A36 steel, galvanized.

   Note: Wire rope, thimbles, grips and turn buckles to be included in tension cable-supported net backstop design.

   f. Sewn Cord: The bottom netting perimeter rope shall be laced/sewn to wire cables with #36 round, braided cord at 2" on center (max.) spacing. Cord shall be low stretch and UV and abrasion resistant.

g. Snap Hooks: The sides (verticals) and top netting perimeter rope shall be secured to wire cables with ¼" electro-galvanized spring snap hooks at 18" on center.

D. Wall-Mounted Backstop Pads: Provide and install manufactured wall-mounted pads. Basis of Design: Model # EnviroZone EFWPDFZ as distributed by Sportsfield Specialties (888) 975-3343 www.sportsfield.com.

1. 2 3/4" thick panels.

2. 2" thick recyclable thermoplastic expanded bead polyethylene (EPE) closed cell foam.

3. 3/4" square-edge water-resistant composite sheathing backing panel.

4. 25 oz/SY EcoGuard extruded vinyl with UV resistant additives. Color as selected by OWNER from full range of available options.

5. DeltaF four-way stretch vinyl perimeter fabric to prevent wrinkles due to thermal expansion of the pad.

6. Attached to face of brick wall backstop base with manufacturer's concealed Z-clips.

E. Fence and Gate Top Rail Cap: Basis of Design: Safety Top Cap by Beacon Athletics (800) 747-5985 www.beaconathletics.com.

1. Manufactured from UV-resistant .070" thick high-density polyethylene HDPE.

2. D-shape design measures 2-5/8W" x 5-1/2H" x 8'L.

3. Weather treated and UV-protected to resist color fading

4. Manufactured with predrilled holes for attachment.

5. Cap color to be selected by OWNER/ENGINEER from full range of available options.

6. Provide color-matched nylon zip-ties

7. Provide special installation tools to aid in installation.

F. Helmet Racks: Basis of Design: Model "12 Helmet Cubby Rack" as manufactured by Baseballracks, (708) 636-1047, www.baseballracks.com.

1. Rack: One-piece, preassembled, factory painted with logo/graphics and having the following attributes.

a. Six (6) cubbies wide x two (2) rows high
b. Premium wood construction – medium-density overlay signboard
c. Chain link fence mounting option
d. Color to be selected by OWNER/ENGINEER

G. Bat Racks: Basis of Design: Model "Ozzie Bat Rack" as manufactured by Baseballracks, (708) 636-1047, www.baseballracks.com.

1. Rack: One-piece, preassembled, factory painted with logo/graphics and having the following attributes.

a. Thirteen (13) bat capacity (2 rows: 1st row - 6 bats, 2nd row - 7 bats)
b. Premium wood construction – medium-density overlay signboard
c. Chain link fence mounting option (Visitor Dugout Only)
d. Color to be selected by OWNER/ENGINEER

PART 3 - EXECUTION

3.1 General Installation:

A. Install all materials in this Section in accordance with manufacturer's recommendations, as indicated on the Drawings and approved shop drawings. All work shall be constructed, fabricated, installed, etc. in a neat and professional-like manner to the satisfaction of the OWNER/ENGINEER.

B. CONTRACTOR shall be responsible for proper inspection and installation of all items.

C. Welding: All welding shall be according to and qualified by Section 2 of "Qualification of Welding Procedures" of the latest edition of API Standard 1104. Welders shall be qualified according to the requirements of Section 3 "Welder Qualification" of the latest edition of API Standard 1104 and Title 49 of the Code of Federal Regulations §192.227 and §192.229. All welds shall be ground smooth to the touch to accommodate recreational use.

D. Backstop/Anchor Posts: Install all backstop/anchor posts in conformance with ASTM F567-93. Posts shall be plumb and true to line and grade as shown on the Drawings. All welds shall be ground smooth to the touch. Touch up field welds and/or nicked spots in conformance with Section 09900 – Painting – Exterior Metal/Iron. Posts shall be securely braced for seven (7) days after pouring of concrete foundations and or until the concrete meets the design strength and or whichever comes first. Posts shall be fitted with standard dome fence caps which shall be tack welded into place. All construction and fittings shall be welded. Welding shall conform to paragraph 3.1.C "Welding" of this Section.

E. Backstop Posts Miscellaneous:

1. Painting of Backstop/Anchor Posts: Paint backstop/anchor posts as specified in Section 09900 – Painting Exterior Metal/Iron.

F. Mounting Hardware (for Netting): Install cable, fittings and mounting hardware in conformance with manufacturer's recommendations and as detailed on the Drawings. Refer to paragraph 3.1.C. "Welding" of this Section. All hardware shall be on the opposite side of the playing field areas.

G. Netting: Install netting true to lines shown on the Drawings. Netting shall be configured and installed in "square mesh" pattern. Netting shall be pulled tight and free of wrinkles, folds or creases. Netting shall be one (1) piece, unit sized to accommodate dimensions as shown on the Drawings. Netting shall be hung on interwoven, integral polyester, perimeter rope only. Netting perimeter rope shall be continuous, top, bottom, sides, corner post and/or turns. Netting perimeter rope shall be laced/sewn to wire cables at 2" on center (max.) spacing on bottom and secured to sides and top with galvanized spring snap hooks at 18" o.c. Install net after backstop cables have been tightened in place. Color for netting shall be "Black". Netting shall be installed by a Manufacturer approved installer.

H. Bases, Plates and Pitching Rubbers: Bases and pitching rubbers shall be mounted as shown on the Drawings and in strict conformance with the manufacturer's recommendations.

I. Foul Poles: Install foul poles in strict conformance with the Drawings and manufacturer's recommendations. Touch up skinned-nicked spots from installation operation in conformance with Section 09 91 20 – Painting (Civil Sitework).

J. Wall-Mounted Backstop Pads: Each panel of wall-mounted backstop pads shall be mounted to the backstop boards with manufacturer's concealed Z-Clips.

K. Fence and Gate Top Rail Caps: Fence and gate top rail caps shall be attached with 8" color matched nylon cable ties (50 lb. Break) in accordance with Manufacturer's instructions. Clip excess tie lengths and dispose of waste.

L. CONTRACTOR shall be responsible for proper inspection and installation of all items.

3.2 Cleaning:

A. Remove labels and temporary protective coverings.

B. Clean pads promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods which might damage finish.

3.3 Protection:

A. Protect installed equipment to ensure equipment will be without damage or deterioration at time of substantial completion.

- END OF SECTION -

SECTION 11485

SCOREBOARDS

PART 1 - GENERAL

1.1 Scope: This Section includes single sided LED scoreboards with top sponsorship panel for the four (4) ballfields.

1.2 References:

A. Standard for Electric Signs, UL 48

B. Standard for CSA C22.2 #207

C. Federal Communications Commission Regulation Part 15

D. National Electric Code

1.3 Submittals:

A. Product Data: Submit manufacturer's product illustrations, data and literature that fully describe the scoreboards and accessories proposed for installation.

B. Shop Drawings: Submit mechanical and electrical drawings.

C. Maintenance Data: Submit manufacturer's installation, operation, and maintenance manuals.

1.4 Delivery, Storage and Handling:

A. Product delivered on site.

B. Scoreboard and equipment to be housed in a clean, dry environment.

1.5 Project Conditions:

A. Environmental Limitations: Do not install scoreboard equipment until mounting structure is secure and concrete has ample time to cure.

B. Field Measurements: Verify position and elevation of structure and its layout for scoreboard equipment. Verify dimensions by field measurements.

C. Verify mounting structure is capable of supporting the scoreboard's weight and windload in addition to the auxiliary equipment.

D. Installation may proceed within acceptable weather conditions.

1.6 Quality Assurance:

A. For outdoor use.

B. Source Limitations: Obtain each type of scoring or related equipment through one source from a single manufacturer.

C. ETL listed to UL 48

D. NEC compliant.

E. FCC compliant.

F. ETLC listed to CSA 22.2 #207

1.7 Warranty:

A. Provide five (5) years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects.

B. Provide toll-free service coordination.

C. Provide technical phone support during normal business hours.

PART 2 - PRODUCTS

2.1 Approved Manufacturers:

A. Basis of Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, SD 57006-5128, (800) 325-8766, www.daktronics.com

B. Fair-Play Scoreboards, 1700 Delaware Avenue, Des Moines, IA 50317, (800) 247-0265, www.fair-play.com

C. Or approved equal.

2.2 Scoreboard:

A. Basis of Design: Model BA-2715 as manufactured by Daktronics.

B. General Information:

1. Features: Single-sided scoreboard shall display HOME and GUEST scores to 99, INNING to nine, and indicate BALL, STRIKE, and OUT. Scoreboard shall show TIME to 99, but also be able to display AT BAT, PITCH COUNT or H/E (hit/error) instead. Clock information shall shift from hours to minutes to seconds as time counts down.

2. Dimensions: 3'-0" (914 mm) high, 9'-0" (2.74 m) wide, 0'-8" (203 mm) deep.

3. Weight: 75 lb (34 kg).

4. Power requirement: 80 W (red digits).

5. Color: provide over 150 colors to choose from.

C. Construction:

1. Alcoa aluminum alloy 5052 for excellent corrosion resistance.

2. Scoreboard back, face, and perimeter: 0.063” (1.60 mm) thick.

D. Digits & Indicators:

1. LED Color: RED.

2. HOME, GUEST, INNING, and TIME digits: 15" (381 mm) high.

3. BALL, STRIKE and OUT indicators: 2" (51 mm) diameter.

4. Seven bar segments per digit.

5. PanaView® LED digit technology.

6. All digits and indicators are sealed front and back with weather-tight silicone gel.

E. Captions:

1. Vinyl applied directly to scoreboard face.

2. HOME and GUEST captions: 6" (152 mm) high.

3. BALL, STRIKE, OUT, INNING, and TIME captions: 5" (127 mm) high.

4. Color: standard white or others available upon request.

F. Accessory Equipment:

1. Vinyl striping shall be applied around the scoreboard and top sponsorship panel face.

G. Top Sponsorship Panel: A 2’ – 0” x 9’-0” non-illuminated, sponsorship panel shall be factory mounted directly above the scoreboard cabinet. Panel shall be manufactured from same aluminum alloy materials as the scoreboard. Color of sponsorship panel shall be selected by OWNER/ENGINEER.

2.4 Scoring Console:

A. Basis of Design: Model All Sport 1600 Console (Controller) as manufactured by Daktronics.

B. Shall be able to score multiple sports using changeable keyboard inserts.

C. Shall be able to control multiple scoreboards and displays, including other All Sport 1600 controlled displays.

D. Shall be ablet to recall clock, score, and period information if power is lost.

E. Shall be able to run Time of Day and Segment Timer modes.

F. Console Features:

1. Rugged aluminum enclosure to house electronics.

2. Sealed membrane water-resistant keyboard.

3. 32-character LCD to verify entries and recall information currently displayed.

4. Power cord that plugs into a standard grounded outlet; 3 watts max.

5. Soft-sided carrying case.

G. Accessory Equipment:

1. 2.4 GHz spread spectrum radio system with frequency hopping technology and 64 non-interfering channels; system includes a transmitter installed inside the console and a receiver installed inside each scoreboard.

H. Scoring Console Controllers Unit to be supplied with each scoreboard (4 required).

PART 3 – EXECUTION

3.1 Examination:

A. Verify that mounting structure is ready to receive scoreboard. Verify that placement of conduit and junction boxes are as specified and indicated on the shop drawings and in the Drawings. Verify concrete has cured adequately according to the Specifications.

3.2 Installation:

A. All power cables to scoreboards and displays will be routed in conduit. Power to the scoreboards/displays as well as raceways is shown on the Drawings.

B. Install scoreboards and exterior displays to beams in location detailed and in accordance with manufacturer's instructions. Verify unit is plumb and level.

3.3 Control Center:

A. Test control unit for proper operation of control unit, scoreboard and all features. Leave control unit in carrying case and other loose accessories with OWNER'S designated representative.

B. Verify earth ground does not exceed 15 ohms.

- END OF SECTION -

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DIVISION 15 - MECHANICAL

Section 15100	-	PACKAGED WASTEWATER TREATMENT PLANT
Section 15900	-	OSCILLATING FAN

SECTION 15100

PACKAGED WASTEWATER TREATMENT PLANT

PART 1 - GENERAL

1.1 Scope: This Section covers the work required to furnish, install, and start-up treatment for a new 1,500 GPD extended aeration packaged wastewater treatment plant.

1.2 Submittals: Submit product data in accordance with provisions of Section 01340 – Shop Drawings, Samples and Project Data.

1.3 Certification: Capability of a plant of this type to perform as outlined herein, when built by an approved manufacturer, shall be certified by an independent testing laboratory. Certified data shall be made available to the OWNER and ENGINEER as required.

1.4 Operations and Maintenance Manuals: Complete operations and maintenance manuals shall be provided in accordance with the provisions of Section 01730 – Operation and Maintenance Manuals.

1.5 Warranty: The manufacture shall warrant the equipment being supplied to the OWNER against defects in workmanship and materials for a period of one (1) year in accordance with the provisions of Section 01740 – Warranties and Bonds.

1.6 Certification: Capability of a plant of this type to perform as outlined, when built by an approved manufacturer, shall be certified by an independent testing laboratory. The manufacturer shall make certified data available to the regulator agency, customer, consultant and contractor.

PART 2 - PRODUCTS

2.1 Packaged Sewer Treatment Plant: Principal items of equipment supplied with the system shall include concrete aeration and clarification tank(s), air distribution system, air diffused system, airlift sludge return pumping system, airlift surface skimming system, galvanized grating with bolted locking device for all tank openings, rotary blowers, motors, electrical controls, mechanical equipment housing, effluent weir trough and all necessary internal piping and mechanical equipment. The wastewater treatment facility structure shall be reinforced to withstand normal pressures from external soil and internal hydrostatic loads.

2.1.1 General:

A. The CONTRACTOR shall furnish and install one (1) complete Extended Aeration wastewater treatment facility with all necessary parts and equipment described in the following specifications. The plant shall be equipped with a “v”-notch trough bar screen, concrete dosing, aeration and clarification tank(s), dosing control system and dosing control pumps, air distribution system, air diffused system, airlift sludge return pumping system, airlift surface skimming system, galvanized grating with bolted locking device for all tank openings, rotary blowers, motors, electrical controls, mechanical equipment housing, effluent weir trough and all necessary internal piping and mechanical

equipment. The wastewater treatment facility structure shall be reinforced to withstand normal pressures from external soil and internal hydrostatic loads.

B. Treatment of the daily waste water flow shall be accomplished by the Extended Aeration process. This plant will treat non-industrial sewage influent with a BOD concentration of 204 mg/l over 24 hours to provide an effluent quality of 30mg/l of BOD5 and 30mg/l TSS. The chlorine contact chamber will provide adequate disinfection (<400ppm fecal) through a hypochlorite concentration of 8mg/l to meet LA DEQ standards including a minimum retention of 30 minutes DAF and 15 minutes at PHF.

2.1.2 Acceptable Manufacture and Design Condition: The wastewater treatment facility shall be a GAINEY Model W. O. 15 (1,500 GPD), or approved equal, as shown in the Drawings, capable of treating 1,500 gallons per day of sanitary sewage. This facility shall be constructed and built to serve a population equivalent of 15 with a total loading and treatment capability of 1.93 pounds of BOD 5 per day.

2.1.3 Aeration Chamber: Primary treatment shall be accomplished in the aeration chamber of the facility. All incoming wastewater shall enter and be retained in the aeration chamber for twenty-four hours. Air shall be introduced along one wall near the bottom to produce a mixing and rolling action in the tank. Two thousand one hundred (2,100) cubic feet of air shall be pumped into the aeration chamber for each pound of BOD applied per day. The spiral rolling action created by the introduction of air shall insure thorough mixing of the incoming organic material with the activated sludge present in the chamber. In addition, the spiral flow pattern shall prevent short circuiting of the flow and assure adequate retention of all organic materials.

2.1.5 Clarification Chamber(s): Secondary treatment of the wastewater shall be accomplished in a clarification chamber. Mixed liquors shall flow from the aeration chamber into the clarification chamber(s) by hydraulic displacement. The effective holding capacity of the clarifier(s) shall be calculated after excluding the lower two-thirds, by height, of the hopper(s) and shall still be of sufficient volume to provide in excess of four-hour retention of the daily flow. The chamber(s) shall be constructed so that the clarifier will successfully perform its function of solids separation without hydraulic upset even at a significant runoff period of eight (8) hours.

2.1.6 Aeration Chamber: The aeration chamber shall have a capacity of 1,585 gallons to provide twenty-four (24) hour retention of daily waste water flow. The chamber(s) shall be of sufficient size to provide a minimum of eighty (80) cubic feet of tank capacity per pound of applied BOD. Concrete fillets shall be installed in the bottom of the chamber parallel to the treatment flow to ensure uniform tank roll and prevent deposition of solids. Overall construction of the chamber shall be such that effective mixing shall be maintained to provide optimum treatment.

2.1.7 Air Distribution Piping:

A. Galvanized SCH 40 piping and galvanized malleable iron pipe fittings shall be used throughout the air distribution system. Individual galvanized pipe unions, dresser couplings and flexible couplings with stainless steel clamps shall be provided as necessary in the air distribution piping as required to allow individual adjustment of each separate element within the system.

B. Primary air distribution shall be provided through a SCH 40 G.I. air header. The air header shall have individual drop pipes connected to the header assembly for air supply to individual diffused assemblies. Each drop pipe shall be equipped with a brass air adjustment gate valve to control air flow individually to each diffused assembly. In addition, brass quick release couplings or unions shall be provided for all pipe diffuser assemblies.

2.1.8 Air Diffusion System: Diffusers shall be provided parallel to the treatment flow in the aeration chamber. Each diffuser assembly shall be installed no more than twelve inches (12") off the floor of the chamber nor more than twelve inches (12") away from the chamber sidewall. Diffusers shall be constructed of SCH 80 polyvinyl chloride plastic (PVC) and shall be constructed to ensure uniform mixing within the aeration chamber. Fine air bubble distribution effected by the diffusers shall be adequate to provide all oxygen necessary for the Aerobic Digestion process while maintaining an acceptable dissolved oxygen level in the final plant effluent.

2.1.9 Clarification:

A. Final clarification chamber(s) shall be provided for secondary treatment of the daily flow. It shall be provided for a minimum capacity of 360 gallons. The effluent weir shall be sufficient length to provide an overflow rate of 757 at 1 fps gallons per lineal foot per day at peak hourly flow and the surface area of the tank shall provide a settling rate of 267 gallons per day per square foot at peak hourly flow.

B. The clarifier shall be constructed of properly reinforced 4,500 PSI, twenty-eight (28) day compression strength concrete. Each casting in the clarifier shall be monolithic unit with all four walls incorporated into the tank section. The clarifier shall consist of essentially four independent zones operating together to provide satisfactory solids separation. An inlet baffle zone shall be provided at the flow inlet to the clarification chamber. All transfer turbulence shall be dissipated upstream, of the inlet baffle and its performance shall be adequate to eliminate all turbulence downstream from the baffle. The area contained behind the baffle shall allow adequate capacity and retention for surfacing of all buoyant material entering the clarifier. The baffle shall extend above the surface and adequate distance to entrap all floating material and it shall extend below the transfer port a sufficient distance to eliminate passage of buoyant material or surface turbulence.

C. Flows shall be directed out of the inlet baffle zone into the hopper zone. All transfer shall be accomplished below the bottom of the inlet baffle into the upper one-third area of the hopper zone. In this zone, sludge shall settle by gravity to the bottom hopper(s). The hopper(s) shall have sloping sidewalls directing all sludge to the bottom near the airlift pump inlet(s). Maximum area at the base of the hopper (s) shall be one (1) square foot. Settled sludge shall be returned to the aeration chamber by continuous airlift pumping.

D. Clarified liquids shall be contained in the settling zone above the hopper area for additional gravity settling. From here they shall be hydraulically displaced to the outlet zone. The outlet zone shall consist of an adjustable side plate effluent weir trough and outlet baffle. The outlet baffle shall extend into the surface of the liquid to a point not

exceeding three inches and shall extend above the surface an equal distance. The baffle shall run the entire length of the outlet zone and shall totally separate the surface liquids of the settling and outlet zones. Centered in the outlet zone parallel to the outlet baffle shall be an effluent weir trough with two adjustable v-notched side plates. The trough shall be capable of being adjusted from end to end to provide adequate fall to the plant outlet and the side plates shall each be capable of being leveled from side to side and end to end to the level of the liquid surface in the chamber.

2.1.10 Airlift Sludge Return:

A. A SCH 80 PVC airlift sludge return pump shall be provided for the hopper(s) in the clarification chamber. Air shall be supplied to the airlift(s) through a secondary SCH 40 G.I. air distribution system connected to the main SCH 40 G.I. air header of the treatment plant. Individual SCH 40 G.I. air manifold piping shall be installed for each airlift and shall be equipped with brass gate valves for fine adjustment or shut off.

B. The airlift(s) proper shall be constructed of SCH 80 PVC to above normal water surface. All other exposed piping and fittings, etc. shall be SCH 40 G.I. A removable clean-out plug shall be installed at the top of the vertical airlift pipe. Piping shall be arranged so that returned sludge is deposited in the aeration chamber at a point which prevents short-circuiting and with positive visible return. The airlift pump(s) shall be designed and manufactured of 3 SCH 80 PVC to above normal water surface and with sufficient air supply to provide a pumping rate in excess of the total daily flow. Air required to achieve this shall be provided in excess of the necessary for aeration, mixing and treatment. The airlift pump inlet(s) shall be equipped to achieve this. Brackets shall be used to position the inlet correctly at the base of the hopper. Inlets will restrict sludge flow and shall not be considered.

2.1.11 Airlift Surface Skimmer: An airlift surface skimming system shall be installed in the settling zone of the clarification chamber(s). The airlift skimmer(s) shall be constructed of SCH 80 PVC below normal water surface and SCH 40 G.I. above normal water surface. The skimmer inlet(s) shall be equipped with an adjustable cone. The inlet cone(s) shall be provided with attached flexible connector for installation and adjustment of the cone(s) on the airlift assembly. A removable galvanized clean-out plug shall be provided at the top of the skimmer airlift pipe where it joins the horizontal discharge line above the normal water surface. The 2” SCH 40 G.I. discharge line(s) shall run on top of the plant and return back to the aeration chamber(s) for final discharge. The skimmer air supply shall be connected to the main air header of the treatment plant. Air adjustment/shut-off valve(s) will be installed in the skimmer air manifold supply line(s) and all valves shall be brass gate valves.

2.1.12 Disinfection: Disinfection of treatment plant effluent shall be done by a Norweco Model LF1000 - 1-Tube chlorinator or approved equal and a chlorine contact chamber. The chlorine contact chamber will have the volume of 55 gallons with the retention time of fifteen (15) minutes at peak hourly flow and thirty (30) minutes at ADF. The chlorine contact chamber shall be as manufactured by GAINEY’s, as shown on the Drawings or approved equal.

2.1.13 Mechanical Equipment:

A. Air required for the treatment process and operation of airlifts in the clarifier(s) shall be provided by two (2) Eurus Blower ZZ2L blowers. The blower(s) shall be of the rotary positive displacement type and shall provide 30 C.F.M. of free air at the rated operating pressure of six and one half (6 ½) PSI. The blower unit shall be provided with inlet air filter silencer(s), discharge flexible coupling connector to air header assembly. Check valves shall be included in the duplex blower system discharge piping. Blower connection to the drive motor(s) shall be conventional V-belts power transmission drive assembly.

B. Two (2) 1,750 RPM, 208 volt, three phase, 60 hertz, 1.5 horsepower, 4.64 amps shielded, drip-proof, electric motor(s) shall be used to drive the blower(s). When operation at the rated horsepower the motor(s) shall reach maximum speed that shall exceed ninety-seven percent (97%) of the reference synchronous speed. The motor(s) for the facility shall be designed and rated for continuous duty applications and shall not overload or exceed motor nameplate ratings when operating as outlined for this facility.

C. Dosing Blower: Dosing blower at the headworks shall be two (2) horsepower and meet the requirements of A. and B. above.

2.1.14 Welded Aluminum Equipment Housing: Frame shall be 2" x 2" x 1/2" aluminum with brackets in front for electrical panel. Mounting plate shall be 1/4" reinforced aluminum with rubber mounts, to absorb shock and noise. Adjustment slide base for ease of motor alignment and belt tension adjustment shall be furnished. Cabinet shall be eighty thousandths gauge aluminum, mounted to frame with heavy duty aluminum piano hinge (3" width - 1/8" thick with 3/8" pin).

2.1.15 Electrical Controls: Electrical controls shall be mounted in a separate weatherproof and dust proof PVC cabinet. The cabinet shall be equipped with a locking device to restrict access to the controls to authorized persons. Controls shall include: 208 volt, three (3) phase motor control center with across-the-line manual type motor starter, motor circuit breaker and thermal overload protection. The motor control center shall be factory-wired to the motor with a resilient power cable and tested under actual operating conditions prior to shipment to the jobsite.

2.1.16 Time Clock: Electrical controls shall include a fifteen (15) minute multiple, twenty-four (24) hour time clock to permit cyclic automatic operation of the treatment facility throughout the day. A three-position "hand-off-auto" selector switch shall be installed to allow the treatment plant aeration unit to operate either on a continuous run basis or according to the cycle established on the time clock.

2.1.17 Galvanized Metal Grating: Tank openings shall be protected with heavy duty 14 gauge galvanized metal grating bolted in position. Individual bolted bar assemblies shall be provided for each tank opening. The galvanized safety grating shall also be used as a leaf screen to prevent entry of leaves and discarded debris into the tankage. Therefore maximum width of individual openings within the grating proper shall not exceed one-half inch (½").

PART 3 – EXECUTION

3.1 General: All work included in this Section shall be performed in accordance with the Drawings and the manufacturers' recommendations. Mount Panel "P and Dosing Control Panel and related appurtenances on electrical/control rack as shown on the Drawings.

- END OF SECTION -

SECTION 15900

OSCILLATING FAN

PART 1 - GENERAL

1.1 Scope: This section covers the labor and materials to install oscillating fans at the dugouts and bleacher canopies.

1.2 Submittals: The following shall be provided in accordance with Section 01340 – Shop Drawings, Samples and Product Data.

A. Product Data

B. Installation Instructions

1.3 Delivery, Storage and Handling:

A. Deliver fans in unopened packages to provide protection to job site.

B. Inspect fans for damage upon delivery.

PART 2 - PRODUCTS

2.1 Manufacturer: Provide oscillating wall fans as manufactured by Global Industries, or approval equal.

2.2 Oscillating Wall Mount Fan: Shall meet the following requirements:

A. CFM High: 7,700, CFM Low: 5,950
B. 24” Diameter
C. Construction: Aluminum Steel
D. Horsepower: 3/10
E. Fan Type: Industrial
F. Electrical: 200 Watts, single phase 1.6 amps, 60 Hz, 120v
G. 2 speeds
H. Direct Drive
I. 3 aluminum blades
J. Rated for outdoor use
K. Model No. WR292450

2.3 Oscillating Ceiling Mount Fan: Shall meet the following requirements:

A. CFM High: 7,700, CFM Low: 5,950
B. 24” Diameter
C. Construction: Aluminum Steel
D. Horsepower: 3/10

E. Fan Type: Industrial
F. Electrical: 200 Watts, single phase 1.6 amps, 60 Hz, 120v
G. 2 speeds
H. Direct Drive
I. 3 aluminum blades
J. Rated for outdoor use
K. Model No. WT9A293057

PART 3 - EXECUTION

3.1 Installation: Install fans according to manufacturer's installation recommendations. Two (2) fans shall be installed at each dugout and each bleacher canopy.

3.2 Coordinate with electrical for installation of GFCI receptacle at dugouts and bleachers.

3.3 Adjust and Clean: Check and adjust fan to verify that it is working properly.

- END OF SECTION -

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DIVISION 16 - ELECTRICAL

Section 16050 (26 00 00)	-	BASIC ELECTRICAL MATERIALS AND METHODS
Section 16305 (26 05 00)	-	UNDERGROUND TRANSMISSION AND DISTRIBUTION
Section 16310 (26 20 00)	-	INTERIOR DISTRIBUTION SYSTEM
Section 16520 (26 56 00)	-	EXTERIOR LIGHTING

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Project No. 25285

SECTION 26 00 00

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 – GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 709 (2017) Laminated Thermosetting Material

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.147 Control of Hazardous Energy (Lock Out/Tag Out)

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. (IEEE)

IEEE C2 (2023) National Electrical Safety Code

IEEE C57.12.28 (2014) Standard for Pad-Mounted Equipment - Enclosure Integrity

IEEE 100 (2000; Archived) The Authoritative Dictionary of IEEE Standard Terms

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250 (2020) Enclosures for Electrical Equipment (1000 Volts Maximum)

NEMA ICS 6 (1993; R2016) Industrial Control and Systems: Enclosures

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2020) National Electrical Code

1.2 RELATED REQUIREMENTS

This section applies to all sections of Division 26, "Electrical" of this project specification unless specified otherwise in the individual sections.

1.3 DEFINITIONS

A. Unless otherwise specified or indicated, electrical and electronics terms used in these specifications, and on the drawings, shall be as defined in IEEE 100.

B. The technical sections referred to herein are those specification sections that describe products, installation procedures, and equipment operations and that refer to this section for detailed description of submittal types.

C. The technical paragraphs referred to herein are those paragraphs in PART 2 - PRODUCTS and PART 3 - EXECUTION of the technical sections that describe products, systems, installation procedures, equipment, and test methods.

1.4 ELECTRICAL CHARACTERISTICS

Electrical characteristics for this project shall be 120/208 volts, three phase, four wire, 60 Hz, and 120/208 volts, three phase, four wire. Final connections to the power distribution system at the pole mounted transformers shall be made by the Contractor as directed by the Design Professional. Contractor shall coordinate his work with CLECO.

1.5 SUBMITTALS

Submittals required in the sections which refer to this section shall conform to the requirements of the Submittals Section and to the following additional requirements. Submittals shall include the manufacturer's name, trade name, place of manufacture, catalog model or number, nameplate data, size, layout dimensions, capacity, project specification and technical paragraph reference. Submittals shall also include applicable federal, military, industry, and technical society publication references, and years of satisfactory service, and other information necessary to establish contract compliance of each item to be provided. Photographs of existing installations are unacceptable and will be returned without approval.

A. Manufacturer's Catalog Data: Submittals for each manufactured item shall be current manufacturer's descriptive literature of cataloged products, equipment drawings, diagrams, performance and characteristic curves, and catalog cuts. Handwritten and typed modifications and other notations not part of the manufacturer's preprinted data will result in the rejection of the submittal. Should manufacturer's data require supplemental information for clarification, the supplemental information shall be submitted as specified for certificates of compliance.

B. Drawings: Include wiring diagrams and installation details of equipment indicating proposed location, layout and arrangement, control panels, accessories, piping, ductwork, and other items that must be shown to ensure a coordinated installation. Wiring diagrams shall identify circuit terminals and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment. Drawings shall indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices.

C. Instructions: Where installation procedures or part of the installation procedures are required to be in accordance with manufacturer's instructions, submit printed copies of those instructions prior to installation. Installation of the item shall not proceed until manufacturer's instructions are received. Failure to submit manufacturer's instructions shall be cause for rejection of the equipment or material.

D. Certificates: Submit manufacturer's certifications as required for products, materials, finishes, and equipment as specified in the technical sections. Certificates from material suppliers are not acceptable. Preprinted certifications and copies of previously submitted documents will not be acceptable. The manufacturer's certifications shall name the appropriate products, equipment, or materials and the publication specified as controlling the quality of that item. Certification shall not contain statements to imply that the item does not meet requirements specified, such as "as good as"; "achieve the same end use and results as materials formulated in accordance with the referenced publications"; or "equal or exceed the service and performance of the specified material." Certifications shall simply state that the item conforms to the requirements specified.

Certificates shall be printed on the manufacturer's letterhead and shall be signed by the manufacturer's official authorized to sign certificates of compliance.

1. Reference Standard Compliance: Where equipment or materials are specified to conform to industry and technical society reference standards of the organizations such as American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), National Electrical Manufacturers Association (NEMA), Underwriters Laboratories Inc. (UL), and Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance.

2. Independent Testing Organization Certificate: In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Design Professional. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

E. Material and Equipment Manufacturing Date: Products manufactured more than three years prior to date of delivery to site shall not be used, unless specified otherwise.

1.6 QUALITY ASSURANCE

A. Material and Equipment Qualifications: Provide materials and equipment that are products of manufacturers regularly engaged in the production of such products which are of equal material, design and workmanship. Products shall have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2-year period shall include applications of equipment and materials under similar circumstances and of similar size. The product shall have been on sale on the commercial market through advertisements, manufacturers' catalogs, or brochures during the 2-year period. Where two or more items of the same class of equipment are required, these items shall be products of a single manufacturer; however, the component parts of the item need not be the products of the same manufacturer unless stated in the technical section.

B. Regulatory Requirements: Equipment, materials, installation, and workmanship shall be in accordance with the mandatory and advisory provisions of NFPA 70.

C. Alternative Qualifications: Products having less than a 2-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6000 hours, exclusive of the manufacturers' factory or laboratory tests, is furnished.

D. Service Support: The equipment items shall be supported by service organizations which are reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

E. Manufacturer's Nameplate: Each item of equipment shall have a nameplate bearing the manufacturer's name, address, model number, and serial number securely affixed in a conspicuous place; the nameplate of the distributing agent will not be acceptable.

F. Modification of References: In each of the publications referred to herein, consider the advisory provisions to be mandatory, as though the word, "shall" had been substituted for "should" wherever it appears. Interpret references in these publications to the "authority having jurisdiction," or words of similar meaning, to mean the Design Professional.

1.7 NAMEPLATES

ASTM D 709. Provide laminated plastic nameplates for each panelboard; as specified in the technical sections or as indicated on the drawings. Each nameplate inscription shall identify the function and, when applicable, the position. Nameplates shall be melamine plastic, 0.125 inch thick, white with black center core. Surface shall be matte finish. Corners shall be square. Accurately align lettering and engrave into the core. Minimum size of nameplates shall be one by 2.5 inches. Lettering shall be a minimum of 0.25 inch high normal block style.

1.8 ELECTRICAL REQUIREMENTS

Electrical installations shall conform to IEEE C2, NFPA 70, and requirements specified herein.

1.9 MECHANICAL REQUIREMENTS

All control equipment to provide the proper sequence of operation shall be furnished and installed by the electrical contractor.

All conduit and wiring for control purposes shall be furnished and installed as work of this electrical section. All control wiring shall be color coded.

1.10 LOCKOUT REQUIREMENTS

Provide disconnecting means capable of being locked out for machines and other equipment to prevent unexpected startup or release of stored energy in accordance with 29 CFR 1910.147. Mechanical isolation of machines and other equipment shall be in accordance with requirements of Division 23, "Mechanical."

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PAINTING OF EQUIPMENT

A. Factory Applied: Electrical equipment shall have factory-applied painting systems which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test.

B. Field Applied: Paint electrical equipment as required to match finish of adjacent surfaces or to meet the indicated or specified safety criteria.

3.2 NAMEPLATE MOUNTING

Provide number, location, and letter designation of nameplates as indicated. Fasten nameplates to the device with a minimum of two sheet-metal screws or two rivets, or industrial adhesive.

END OF SECTION 26 00 00

SECTION 26 05 00

UNDERGROUND TRANSMISSION AND DISTRIBUTION

PART 1 - GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B 1 (2013; R2018) Hard-Drawn Copper Wire

ASTM B 8 (2011; R2017) Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft

ASTM C260/C260M (2010a; R2016) Air-Entraining Admixtures for Concrete

ASTM F 512 (2019) Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. (IEEE)

IEEE C2 (2023) National Electrical Safety Code

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA TC 2 (2020) Electrical Polyvinyl Chloride (PVC) Tubing and Conduit

NEMA TC 3 (2021) Polyvinyl Chloride PVC Fittings for Use with Rigid PVC Conduit and Tubing

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)

NETA ATS (2021) Acceptance Testing Specifications

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2020) National Electrical Code

NFPA 70B (2019) Electrical Equipment Maintenance

UNDERWRITERS LABORATORIES INC. (UL)

UL 6 (2007; Reprint Nov 2020) Rigid Metal Conduit

UL 83 (2017; Reprint Apr 2020) Thermoplastic-Insulated Wires and Cables

UL 467 (2013; Reprint Jun 2017) Grounding and Bonding Equipment

UL 486A-486B (2018; Reprint May 2021) Wire Connectors

UL 510 (2020; Reprint Dec 2022) Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape

UL 514A (2013; Reprint Jun 2022) Metallic Outlet Boxes

UL 514B (2012; Reprint May 2020) Conduit, Tubing and Cable Fittings

UL 651 (2011; Reprint Mar 2022) Schedule 40 and 80 Rigid PVC Conduit

UL 1242 (2006; Reprint Apr 2022) Electrical Intermediate Metal Conduit - Steel

1.2 RELATED REQUIREMENTS

Section 26 00 00, "Basic Electrical Materials and Methods" applies to this section with additions and modifications specified herein.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Conduit

1. Rigid Metal Conduit: UL 6, galvanized steel, threaded type.
2. Intermediate Metal Conduit: UL 1242, galvanized steel, threaded type.
3. Plastic Conduit for Direct Burial: NEMA TC 2, EPC-40-PVC

B. Fittings

1. Metal Fittings: UL 514B, threaded type.
2. PVC Conduit Fittings: NEMA TC 3
3. Outlet Boxes for Steel Conduit: Outlet boxes for use with rigid or flexible steel conduit shall be cast-metal cadmium or zinc-coated if of ferrous metal with gasketed closures and shall conform to UL 514A.

C. Conductors Rated 600 Volts and Less: Conductor and conduit sizes indicated are for copper conductors unless otherwise noted. Insulated conductors shall have the date of manufacture and other identification imprinted on the outer surface of each cable at regular intervals throughout the cable length. Wires and cables manufactured more than 12 months prior to date of delivery to the site shall not be used.

1. 600 Volt Wires and Cables: Conductors in conduit other than service entrance shall conform to UL 83, Type THWN. Conductor size and number of conductors in each cable shall be as indicated. Conductors shall be color coded. Conductor identification shall be provided within each enclosure where a tap, splice, or termination is made. Conductor identification shall be by color-coded insulated conductors, plastic-coated self-sticking printed markers, colored nylon cable ties and plates, or heat shrink type sleeves. Control circuit terminations shall be properly identified. Conductors No. 10 AWG and smaller

shall be solid copper. Conductors No. 8 AWG and larger shall be stranded copper. All conductors shall be copper.

a. Colors for coding conductors shall be:

208-VOLT SYSTEM

Neutral - White
Phase A - Black
Phase B - Red
Phase C - Blue
Grounding conductor - Green

D. 600 Volt Wire Connector and Terminals: Shall provide a uniform compression over the entire contact surface. Solderless terminal lugs shall be used on stranded conductors.

1. For use with copper conductors: UL 486A-486B.

E. Tape

1. Insulating Tape: UL 510, plastic insulating tape, capable of performing in a continuous temperature environment of 80 degrees C.

2. Buried Warning and Identification Tape: Provide detectable aluminum foil plastic-backed tape or detectable magnetic plastic tape manufactured specifically for warning and identification of buried cable and conduit. Tape shall be detectable by an electronic detection instrument. Provide tape in rolls, two- inches minimum width, color coded for the utility involved with warning and identification imprinted in bold black letters continuously and repeatedly over entire tape length. Warning and identification shall be CAUTION BURIED ELECTRIC CABLE BELOW or similar. Use permanent code and letter coloring unaffected by moisture and other substances contained in trench backfill material.

F. Grounding and Bonding Equipment: UL 467. Ground rods shall be copper clad steel with diameter adequate to permit driving to full length of the rod, but not less than 3/4 inch in diameter and 10 feet long unless otherwise indicated.

G. Cable Tags: Provide as specified in Section 26 00 00, "Basic Electrical Materials and Methods".

PART 3 - EXECUTION

3.1 INSTALLATION NFPA 70 and IEEE C2

A. Contractor Damage: The Contractor shall promptly repair any indicated utility lines or systems damaged by Contractor operations. Damage to lines or systems not indicated, which are caused by Contractor operations, shall be treated as "Changes" under the terms of the General Provisions of the contract. If the Contractor is advised in writing of the location of a nonindicated line or system, such notice shall provide that portion of the line or system with "indicated" status in determining liability for damages. In any event, the Contractor shall immediately notify the Contracting Officer of any such damage.

B. Concrete: Shall be composed of fine aggregate, coarse aggregate, portland cement, and water so proportioned and mixed as to produce a plastic, workable mixture. Fine aggregate shall be of hard, dense, durable, clean, and uncoated sand. The coarse aggregate shall be reasonably well graded from 3/16 to one inch. The fine and coarse aggregates shall be free from injurious amounts of dirt, vegetable matter, soft fragments or other deleterious substances. Water shall be fresh, clean, and free from salts, alkali, organic matter, and other impurities. Concrete shall have a compressive strength of 3000 psi at the age of 28 days. Slump shall not exceed 4 inches. Retempering of concrete will not be permitted. Exposed, unformed concrete surfaces shall be given a smooth, wood float finish. Concrete shall be cured for a period of not less than 7 days, and concrete made with high early strength portland cement shall be repaired by patching honeycombed or otherwise defective areas with cement mortar as directed by the Design Professional.

C. Installation of Conduit by Directional Boring

1. Directional boring shall be accomplished by use of remotely controlled, steerable, guided boring equipment. Line and grade shall be controlled by a guidance system that relates the actual position of the boring equipment to the design position, both horizontally and vertically. Tolerance of two inches (2") for line and one and one half inches (1½") for grade shall not be exceeded. Active steering information shall be monitored and transmitted to the operation console.
2. Directional boring techniques involve establishing a pilot hole to the design grade and location and simultaneously back-reaming the pilot hole while pulling the conduit through the established hole. Back- reaming shall be conducted to increase the diameter of the pilot hole while using bentonite clay fluid to stabilize the hole and facilitate installation of the conduit. The simultaneous pull-back operation involves pulling the conduit length back through the drilling mud along the reamed hole pathway. The diameter of the reamer shall be no greater than a factor of 1.33 times the outside diameter of the conduit.
3. Axial tension force readings and torque readings shall be monitored. Pull back speed rates of 2 feet (2') per minute shall not be exceeded.
4. Where polyethylene conduit is used, the HDPE (polyethylene) conduit should be cut to length only after is in thermal equilibrium with the surrounding soil (usually overnight). To accommodate any potential contraction the conduit shall be pulled out an extra 4% (4 feet per 100 feet) to ensure the conduit ends remain extended beyond the design point.

D. Underground Conduit: Type of conduit shall be EPC-40-PVC, rigid galvanized steel, or intermediate galvanized.

1. Conduit Installation: Top of the conduit shall be not less than 24 inches below grade. Run conduit in straight lines except where a change of direction is necessary. As each conduit run is completed, draw a stiff bristle brush through until conduit is clear of particles of earth, sand and gravel; then immediately install conduit plugs. Provide not less than three-inches clearance from the conduit to each side of the trench. A minimum clearance of 2 1/2 inches shall be provided between adjacent conduits. Grade bottom of trench smooth; where rock, soft spots, or sharp-edged materials are encountered, excavate the bottom for an additional three-inches, fill and tamp level with original bottom with sand or earth free from particles, that would be retained on a 1/4 inch sieve. Provide color, type and depth of warning tape as specified in paragraphs "BURIED WARNING AND IDENTIFICATION TAPE" in this Section.

E. Cable Pulling: Pull cables down grade with the feed-in point at the highest elevation. Use flexible cable feeds to convey cables through into duct runs. Do not exceed the specified cable bending radii when installing cable under any conditions. If basket-grip type cable-pulling devices are used to pull cable in place, cut off the section of cable under the grip before splicing and terminating.

1. Cable Lubricants: Use lubricants that are specifically recommended by the cable manufacturer for assisting in pulling jacketed cables. Cable lubricants shall be soapstone, graphite, or talc for rubber or plastic jacketed cables.

2. Cable Pulling Tensions: Tensions shall not exceed the maximum pulling tension recommended by the cable manufacturer.

F. Grounding Systems: Noncurrent-carrying metallic parts associated with electrical equipment shall have a maximum resistance to solid earth ground not exceeding 5 ohms.

1. Grounding Electrodes: Provide cone pointed driven ground rods driven full depth plus six-inches, installed to provide an earth ground of the appropriate value for the particular equipment being grounded.

2. Grounding Connections: Make grounding connections which are buried or otherwise normally inaccessible by exothermic weld or compression connector.

   a. Make exothermic welds strictly in accordance with the weld manufacturer's written recommendations. Welds which are "puffed up" or which show convex surfaces indicating improper cleaning are not acceptable. Mechanical connectors are not required at exothermic welds.
   b. Make compression connections using a hydraulic compression tool to provide the correct circumferential pressure. Tools and dies shall be as recommended by the manufacturer. An embossing die code or other standard method shall provide visible indication that a connector has been adequately compressed on the ground wire.

3. Grounding Conductors: Grounding conductors shall be stranded-bare copper conforming to ASTM B 8, Class B, for sizes No. 6 AWG and larger, and shall be solid-bare copper conforming to ASTM B 1 for sizes No. 8 and smaller.

G. Reconditioning of Surfaces

1. Unpaved Surfaces: Restore to their original elevation and condition unpaved surfaces disturbed during installation of duct. Preserve sod and topsoil removed during excavation and reinstall after backfilling is completed. Replace sod that is damaged by sod of quality equal to that removed. When the surface is disturbed in a newly seeded area, re-seed the restored surface with the same quantity and formula of seed as that used in the original seeding.

2. Paving Repairs: Where trenches, pits, or other excavations are made in existing roadways and other areas of pavement where surface treatment of any kind exists, restore such surface treatment or pavement the same thickness and in the same kind as previously existed, except as otherwise specified, and to match and tie into the adjacent and

surrounding existing surfaces.

3.2 FIELD QUALITY CONTROL

A. Performance of Acceptance Checks and Tests: Perform in accordance with the manufacturer's recommendations, NFPA 70B, NETA ATS, and referenced ANSI standards. Include the following visual and mechanical inspections and electrical tests, performed in accordance with NETA ATS.

1. 600 Volt Cable Tests: Perform tests after wiring is completed, connected, and ready for operation, but prior to placing system in service and before any branch circuit breaker is closed.

a. Visual and Mechanical Inspection
1) Inspect cables for physical damage and proper connection in accordance with contract plans and specifications.
2) Test cable mechanical connections to manufacturer's recommended values using a calibrated torque wrench. In the absence of manufacturer's data use NETA recommended values.
3) Check cable color coding for compliance with contract specifications.

b. Electrical Tests
1) Perform insulation-resistance test on each conductor with respect to ground and adjacent conductor; applied potential shall be 1000 volts DC for 1 minute; minimum insulation-resistance values shall not be less than 2 megohms.
2) Perform continuity test to insure proper cable connection.

2. Ground Rods: Perform ground resistance tests for ground rods before any wire is connected. Take measurements in normally dry weather, not less than 48 hours after rainfall. Ground resistance shall also be measured for each piece of equipment and medium voltage cable splice to the ground electrode. Use a portable ground testing megger in accordance with manufacturer's instructions to test each ground or group of grounds. The instrument shall be equipped with a meter reading directly in ohms or fractions thereof to indicate the ground value of the ground electrode under test.

END OF SECTION 26 05 00

SECTION 26 20 00

INTERIOR DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.1 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C80.1	(2020) Electrical Rigid Steel Conduit (ERSC)
ANSI C80.3	(2020) Steel Electrical Metallic Tubing (EMT)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B1	(2018) Hard-Drawn Copper Wire
ASTM B8	(2011; R2017) Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
ASTM D709	(2017) Laminated Thermosetting Materials

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)

ANSI/NETA ATS	(2021) Acceptance Testing Specifications

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250	(2021) Enclosures for Electrical Equipment (1000 Volts Maximum)
NEMA ICS 1	(2022) Industrial Control and Systems; General Requirements
NEMA ICS 6	(1993; R2016) Industrial Control and Systems: Enclosures
NEMA KS 1	(2013) Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum)
NEMA ST 20	(2021) Dry-Type Transformers for General Applications
NEMA TC 2	(2020) Electrical Polyvinyl Chloride (PVC) Tubing and Conduit
NEMA TC 3	(2021) Polyvinyl Chloride PVC Fittings for Use with Rigid PVC Conduit and Tubing
NEMA TC 14	(2015) Reinforced Thermosetting Resin Conduit (RTRC) and Fittings
NEMA WD 1	(1999; R2020) General Color Requirements for Wiring Devices

NEMA WD 6	(2021) Wiring Devices - Dimensional Requirements
NEMA Z535.4	(2011; R2017) Product Safety Signs and Labels

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2020) National Electrical Code
NFPA 70E	(2021) Electrical Safety in the Workplace

UNDERWRITERS LABORATORIES INC. (UL)

UL 1	(2005; Reprint Jan 2020) Flexible Metal Conduit
UL 5	(15th Edition - May 2016) UL Standard for Safety Surface Metal Raceways and Fittings
UL 6	(2007; Reprint Sep 2019) Electrical Rigid Metal Conduit - Steel
UL 20	(2018; Reprint Jan 2021) General-Use Snap Switches
UL 50	(2015) Enclosures for Electrical Equipment
UL 67	(2018; Reprint Jul 2020) Panelboards
UL 83	(2017; Reprint Mar 2020) Thermoplastic-Insulated Wires and Cables
UL 360	(2013; Reprint Aug 2021) Liquid-Tight Flexible Steel Conduit
UL 467	(11th Edition - Apr 2022) Grounding and Bonding Equipment
UL 486A-486B	(2018; Reprint May 2021) Wire Connectors
UL 486C	(2018; Reprint May 2021) Splicing Wire Connectors
UL 489	(2016; Rev 2019) Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures
UL 506	(2017; Reprint Jan 2022) Specialty Transformers
UL 508	(2018; Reprint Jul 2021) Industrial Control Equipment
UL 510	(2020) Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape
UL 514A	(2013; Reprint Aug 2017) Metallic Outlet Boxes
UL 514B	(2012; Reprint May 2020) Conduit, Tubing and Cable Fittings
UL 651	(2011; Reprint May 2022) Schedule 40 and 80 Rigid PVC Conduit

UL 797	(2007; Reprint Mar 2021) Electrical Metallic Tubing -- Steel
UL 943	(2016; Reprint Feb 2018) Ground-Fault Circuit-Interrupters
UL 1242	(2014; Reprint Aug 2022) Electrical Intermediate Metal Conduit -- Steel
UL 1561	(2011; Reprint Jun 2015) Dry-Type General Purpose and Power Transformers

1.2 RELATED REQUIREMENTS

Section 26 00 00, "Basic Electrical Materials and Methods," applies to this section with additions and modifications specified herein

1.3 SUBMITTALS: Submit the following:

A. Manufacturer’s Catalog Data

1. Surge Protective Devices (SPD)

B. Drawings

1. Panelboards

1.4 QUALITY ASSURANCE

In each standard referred to herein, consider the advisory provisions to be mandatory, as though the word "shall" has been substituted for "should" wherever it appears. Interpret references in these standards to "authority having jurisdiction," or words of similar meaning, to mean Design Professional.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

Materials, equipment, and devices shall, as a minimum, meet requirements of UL, where UL standards are established for those items, and requirements of NFPA 70.

2.2 CONDUIT AND FITTINGS

Shall be rigid steel (zinc-coated) conduit, rigid nonmetallic conduit, intermediate metal conduit (IMC), electrical metallic tubing (EMT), flexible metal conduit, and liquid-tight flexible conduit, conforming to the following:

A. Rigid Steel Conduit (Zinc-Coated): ANSI C80.1, UL 6.

B. Rigid Nonmetallic Conduit: PVC Type EPC-40 in accordance with NEMA TC 2.

C. Intermediate Metal Conduit (IMC): UL 1242, zinc-coated steel only.

D. Electrical Metallic Tubing (EMT): UL 797, ANSI C80.3.

E. Flexible Metal Conduit: UL 1.

1. Liquid-Tight Flexible Metal Conduit, Steel: UL 360.

F. Fittings for Metal Conduit, EMT, and Flexible Metal Conduit: UL 514B. Ferrous fittings shall be cadmium or zinc-coated in accordance with UL 514B.

1. Fittings for Rigid Metal Conduit and IMC: Threaded-type. Split couplings unacceptable.

2. Fittings for EMT: Steel or Die Cast compression type.

G. Fittings for Rigid Nonmetallic Conduit: NEMA TC 3.

2.3 SURFACE RACEWAY

Surface raceway shall be UL 5, two-piece painted steel, totally enclosed, snap-cover type.

2.4 OUTLET BOXES AND COVERS

UL 514A, cadmium- or zinc-coated.

2.5 CABINETS, JUNCTION BOXES, AND PULL BOXES

Volume greater than 100 cubic inches, UL 50, hot-dip, zinc-coated, if sheet steel.

2.6 WIRES AND CABLES

Wires and cables shall meet applicable requirements of NFPA 70 and UL for type of insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more than 12 months prior to date of delivery to site shall not be used.

A. Conductors: Conductors No. 8 AWG and larger diameter shall be stranded. Conductors No. 10 AWG and smaller diameter shall be solid, except that conductors for remote control, alarm, and signal circuits, classes 1, 2, and 3, shall be stranded unless specifically indicated otherwise. Conductor sizes and ampacities shown are based on copper, unless indicated otherwise. All conductors shall be copper.

1. Minimum Conductor Sizes: Minimum size for branch circuits shall be No. 12 AWG.

B. Color Coding: Provide for service, feeder, branch, control, and signaling circuit conductors. Color shall be green for grounding conductors and white for neutrals; except where neutrals of more than one system are installed in same raceway or box, other neutral shall be white with colored (not green) stripe. Color of ungrounded conductors in different voltage systems shall be as follows:

1. 208/120 volt, 3-phase (1) Phase A - black (2) Phase B - red (3) Phase C - blue

C. Insulation: Unless specified or indicated otherwise or required by NFPA 70, power and lighting wires shall be 600-volt, Type THWN/THHN conforming to UL 83, except that grounding wire may be type TW conforming to UL 83; remote-control and signal circuits shall be Type TW or TF, conforming to UL 83. Where lighting fixtures require 90-degree Centigrade (C) conductors, provide only conductors with 90-degree C insulation or better.

D. Bonding Conductors: ASTM B 1, solid bare copper wire for sizes No. 8 AWG and smaller diameter; ASTM B 8, Class B, stranded bare copper wire for sizes No. 6 AWG and larger diameter.

2.7 SPLICES AND TERMINATION COMPONENTS

UL 486A-UL486B for wire connectors and UL 510 for insulating tapes. Connectors for No. 10 AWG and smaller diameter wires shall be insulated, pressure-type in accordance with UL 486A-UL486B or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

A. Temperature Limitations: Contractor shall comply with the temperature limitations included in NEC Article 110-14(c). Ampacity rating of conductors shall be computed at the temperature rating of the equipment termination.

2.8 DEVICE PLATES

Provide UL listed, one-piece device plates for outlets to suit the devices installed. For metal outlet boxes, plates on unfinished walls shall be of zinc-coated sheet steel or cast metal having round or beveled edges. Plates on finished walls shall be nylon or lexan, minimum 0.03 inch wall thickness. Plates shall be same color as receptacle or toggle switch with which they are mounted. Screws shall be machine-type with countersunk heads in color to match finish of plate. Sectional type device plates will not be permitted. Plates installed in wet locations shall be gasketed and UL listed for "wet locations."

2.9 SWITCHES

A. Toggle Switches: UL 20, totally enclosed with bodies of thermosetting plastic and mounting strap. Handles shall be ivory. Wiring terminals shall be screw-type, side-wired. Switches shall be rated quiet-type AC only, 120/277 volts, with 20 amp current rating and number of poles indicated.

B. Disconnect Switches: NEMA KS 1. Provide heavy duty-type switches where indicated, where switches are rated higher than 240 volts, and for double-throw switches. Switches serving as motor-disconnect means shall be horsepower rated. Provide switches in NEMA enclosure per NEMA ICS 6.

2.10 RECEPTACLES

UL 498 and NEMA WD 1, specification grade, heavy-duty, grounding-type. Ratings and configurations shall be as indicated. Bodies shall be of ivory thermosetting plastic supported on a metal mounting strap. Dimensional requirements shall be per NEMA WD 6. Provide screw-type, side-wired wiring terminals. Connect grounding pole to mounting strap.

A. Weatherproof Receptacles: Provide in cast metal box with gasketed, weatherproof, cast-metal cover plate and gasketed cap over each receptacle opening. Provide caps with a spring-hinged flap. Receptacle shall be UL listed for use in "wet locations with plug in use."

B. Ground-Fault Circuit Interrupter (GFI) Receptacles: UL 943, duplex type for mounting in standard outlet box. Device shall be capable of detecting current leak of 6 milliamperes or greater and tripping per requirements of UL 943 for Class A GFI devices.

C. Dryer Receptacles: NEMA 14-30 configuration, rated 30 amperes, 125/250 volts. Furnish one matching plug with each receptacle. Hubbell #HBL 9430A, Leviton #278, or equal.

D. USB Charger Type Duplex Convenience Receptacles: NEMA WD 1, NEMA WD 6 for standard configurations and UL498. Comply with USB batter charging spec USB BC1.2. Duplex, 20A, 125V, 2P, 3W, grounded with dual USB, type A and C, solid state charging ports, equal to Hubbell #USB20AC5W, or Leviton #T5833.

E. Surge Protective Receptacles: UL 1449, duplex type for mounting in standard outlet box. Devices shall be capable of EMI/RFI noise filtering and point-of-use surge protection up to 18,000 amp total surge current.

2.11 PANELBOARDS

UL 67 and UL 50. Panelboards for use as service disconnecting means shall additionally conform to UL 869. Panelboards shall be circuit breaker-equipped. Design shall be such that individual breakers can be removed without disturbing adjacent units or without loosening or removing supplemental insulation supplied as means of obtaining clearances as required by UL. Where "space only" is indicated, make provisions for future installation of breaker sized as indicated. Panelboard locks shall be keyed same. Directories shall indicate load served by each circuit of panelboard. Directories shall also indicate source of service (upstream panel, switchboard, motor control center, etc.) to panelboard. Type directories and mount in holder behind transparent protective covering.

A. Panelboard Buses: Support bus bars on bases independent of circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or tapping. Provide isolated neutral bus in each panel for connection of circuit neutral conductors. Provide separate ground bus identified as equipment grounding bus per UL 67 for connecting grounding conductors; bond to steel cabinet.

B. Circuit Breakers: UL 489, thermal magnetic-type having a minimum short-circuit current rating equal to the short-circuit current rating of the panelboard in which the circuit breaker shall be mounted. Breaker terminals shall be UL listed as suitable for type of conductor provided. Series rated circuit breakers and plug-in circuit breakers are unacceptable.

1. Multipole Breakers: Provide common trip-type with single operating handle. Breaker design shall be such that overload in one pole automatically causes all poles to open. Maintain phase sequence throughout each panel so that any three adjacent breaker poles are connected to Phases A, B, and C, respectively.

C. Manufacturer: GE Spectra bolt-on AVI, Square D Class 2441, Eaton, or equal.

D. Identification: Provide engraved laminated-plastic or metal nameplate for each device, mounted with corrosion-resistant screws.

2.12 SURGE PROTECTIVE DEVICES (SPD)

SPDs shall comply with NFPA 70 and UL 1449 4th Edition, Type 1. SPDs shall be field-mounted (installed external to electrical equipment) for low-voltage (120 to 600 V) power distribution and control equipment and connected with leads as short as possible to main lugs or circuit breaker in panel as

directed. The SPD for Service Entrance application shall provide temporary overvoltage protection in addition to surge protection.

A. Peak Surge Current Rating: The minimum single-pulse surge current withstand rating per mode shall not be less than the specified SPD rating. The peak surge current rating shall NOT be the arithmetic sum of the ratings of the individual MOVs in a given mode. SPD manufacturer shall provide independent 3rd party testing validating unit is capable of surviving a single surge at the specified rating. SPD types shall be provided as follows:

1. Service Entrance Suppressor (Type "A"): SPD shall be rated at 100,000 amps per mode for 120/208V, three phase, four wire for service entrance switchboards or panelboards.

2. Panelboard Suppressor (Type "B"): SPD shall be rated at 50,000 amps per mode for 120/208V, three phase, four wire panelboards.

B. Protection modes and UL 1449 voltage protection rating (VPR) for grounded wye circuits shall not exceed the following:

	208Y120 V
Line to Neutral:	700 V
Line to Ground:	700 V
Neutral to Ground:	700 V
Line to Line:	1200 V

C. SPD monitoring options shall include tri-color protection status indicator lights, audible alarm with silence switch, Form C contacts rated at 5 A and 250 V (one normally open and one normally closed) for remote monitoring of protection status, and surge counter which measures, discriminates between, and indicates the level of surges.

D. Install SPDs with conductors between suppressor and points of attachment as short and straight as possible and adjust circuit-breaker positions to achieve shortest and straightest leads. Do not splice and extend SPD leads unless specifically permitted by manufacturer. Do not exceed manufacturer's recommended lead length. Do not bond neutral and ground. Use crimped connectors and splices only. Wire nuts are unacceptable.

E. Enclosures shall be fiberglass reinforced polyester, rated for outdoor use (NEMA 3R).

F. Provide start-up and testing services of a factory-authorized and factory-trained local service representative. The tests shall include:

1. Off-line Testing: Impulse injection to verify the system tolerances as well as verification of proper facility neutral-to-ground bond. Compare field test results to factory benchmark test parameters supplied with each individual unit.

2. On-line Testing: Verify that suppression and filtering paths are operating with 100% protection as well as verification of proper facility neutral-to-ground bond by measuring neutral-to-ground current and voltage and by visual inspection.

3. Voltage measurements from Line-to Ground (L-G), Line-to-Neutral (L-N), Line-to-Line (L-L), and Neutral-to-Ground (N-G), taken at the time of the testing procedure.

G. SPD shall be equal to ABB (Current Technologies) "TG3" or Schneider Electric "EM" Series, with warranty support for fifteen (15) years from date of Substantial Completion. Manufacturer agrees to repair or replace SPDs that fail in materials or workmanship within specified warranty period.

2.13 GROUNDING AND BONDING EQUIPMENT

UL 467. Ground rods shall be copper-clad steel, with minimum diameter of 3/4 inch and minimum length of 10 feet.

2.14 NAMEPLATES

Provide as specified in Section 26 00 00, "Basic Electrical Materials and Methods."

2.15 FIRESTOPPING MATERIALS

Provide asbestos free firestopping system capable of maintaining an effective barrier against flame and gases. System shall be UL listed and comply with ASTM E 814. Include UL system number, UL listed print from manufacturer for each type of floor, wall, and ceiling penetration.

PART 3 - EXECUTION

3.1 INSTALLATION

Electrical installations shall conform to requirements of NFPA 70 and to requirements specified herein.

A. Service Entrance Identification: Service entrance disconnect devices, switches, and enclosures shall be labeled and identified as such.

1. Labels: Wherever work results in service entrance disconnect devices in more than one enclosure, as permitted by NFPA 70, each enclosure, new and existing, shall be labeled as one of several enclosures containing service entrance disconnect devices. Label, at minimum, shall indicate number of service disconnect devices housed by enclosure and shall indicate total number of enclosures that contain service disconnect devices. Provide laminated plastic labels conforming to paragraph entitled "Nameplates." Use lettering of at least 0.25 inch in height, and engrave on black-on-white matte finish. Service entrance disconnect devices in more than one enclosure, shall be provided only as permitted by NFPA 70.

B. Wiring Methods: Provide insulated conductors installed in rigid steel conduit, IMC, rigid nonmetallic conduit, or EMT, except where specifically indicated or specified otherwise or required by NFPA 70 to be installed otherwise. Grounding conductor shall be separate from electrical system neutral conductor. Provide insulated green equipment grounding conductor for circuit(s) installed in conduit and raceways. Minimum conduit size shall be 1/2 inch in diameter for low voltage lighting and power circuits. Conduit which penetrates fire-rated walls, fire-rated partitions, or fire-rated floors shall be firestopped in accordance with the paragraph entitled "Firestopping Materials," specified in this section.

1. Low Voltage Wiring: Low voltage wiring such as telephone, computer, control, etc. which is run open above ceiling shall be bundled, neatly trained and supported independently from the suspended ceiling system. Wiring shall not be supported by ceiling tiles, t-bars, or ceiling support wires. Install in accordance with NEC Article 720-11 and ANSI/EIA/TIA-569. Do not support wiring from conduit, piping, or ductwork.

   "Low voltage wiring shall be attached to the building structure at 4' on center (maximum), and routed as high as possible, free and clear of mechanical equipment, light fixtures, access panels and any other building equipment or items. Do not use tie straps or wire wraps to support cables. Each cable shall be continuous, with no splices from the source to the connected device. Routing shall be parallel or perpendicular to building walls. Support arrangement and tension on cables shall be sufficient to secure cables but shall not cause deformation or exceed minimum cable bending radius." Where wiring penetrates walls or ceilings, a metal conduit sleeve with bushings at each end, shall be provided for the penetration.

2. Restrictions Applicable to EMT

   a. Do not install underground.
   b. Do not encase in concrete, mortar, grout, or other cementitious materials.
   c. Do not use in areas subject to severe physical damage including but not limited to equipment rooms where moving or replacing equipment could physically damage the EMT.
   d. Do not use in hazardous areas.
   e. Do not use outdoors.

3. Nonmetallic Conduit

   a. Restrictions applicable to PVC Schedule 40
      1) Do not use above slab or grade.

4. Restrictions Applicable to Flexible Conduit: Use only as specified in paragraph entitled "Flexible Connections."

5. Underground Conduit: Rigid steel; steel IMC; PVC, Type EPC-40. Convert nonmetallic conduit to rigid, or IMC, steel conduit before rising through floor slab.

C. Conduit Installation: Unless indicated otherwise, conceal conduit under floor slabs and within finished walls, ceilings, and floors. Keep conduit minimum 6 inches away from parallel runs of flues and steam or hot water pipes. Install conduit parallel with or at right angles to ceilings, walls, and structural members where located above accessible ceilings and where conduit will be visible after completion of project.

   1. Conduit Support: Support conduit by pipe straps, wall brackets, hangers, or ceiling trapeze. Fasten by wood screws to wood; by toggle bolts on hollow masonry units; by concrete inserts or expansion bolts on concrete or brick; and by machine screws, welded threaded studs, or spring-tension clamps on steel work. Threaded C-clamps may be used on rigid steel conduit only. Do not weld conduits or pipe straps to steel structures. Load applied to fasteners shall not exceed one-fourth proof test load. Fasteners attached to concrete ceiling shall be vibration resistant and shock-resistant. Holes cut to depth of more than 1 1/2 inches in reinforced concrete beams or to depth of more than 3/4 inch in concrete joints shall not cut main reinforcing bars. Fill unused holes. In partitions of light steel construction, use sheet metal

screws. In suspended-ceiling construction, run conduit above ceiling. Do not support conduit by ceiling support system. Conduit and box systems must be supported independently of both (a) tie wires supporting ceiling grid system, and (b) ceiling grid system into which ceiling panels are placed. Supporting means shall not be shared between electrical raceways and mechanical piping or ducts. Installation shall be coordinated with above-ceiling mechanical systems to assure maximum accessibility to all systems. Spring-steel fasteners may be used for lighting branch circuit conduit supports in suspended ceilings in dry locations. Where conduit crosses building expansion joints, provide suitable expansion fitting that maintains conduit electrical continuity by bonding jumpers or other means.

2. Directional Changes in Conduit Runs: Make changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of obstructions.

3. Pull Wire: Install pull wires in empty conduits. Pull wire shall be plastic having minimum 200 pound tensile strength. Leave minimum 36 inches of slack at each end of pull wire.

4. Locknuts and Bushings: Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by NFPA 70, where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least minimum single locknut and bushing. Locknuts shall have sharp edges for digging into wall of metal enclosures. Install bushings on ends of conduits, and provide insulating type where required by NFPA 70.

5. Flexible Connections: Provide flexible steel conduit between 3 and 6 feet in length for equipment subject to vibration, noise transmission, or movement; and for motors. Install flexible conduit to allow 20 percent slack. Minimum flexible steel conduit size shall be 1/2 inch diameter. Provide liquidtight flexible conduit in wet and damp locations for equipment subject to vibration, noise transmission, movement or motors. Provide separate ground conductor across flexible connections.

D. Boxes, Outlets, and Supports: Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be cast-metal, hub-type when located in wet locations, when surface mounted on outside of exterior surfaces, and when specifically indicated. Boxes in other locations shall be sheet steel. Each box shall have volume required by NFPA 70 for number of conductors enclosed in box. Boxes for mounting lighting fixtures shall be minimum 4 inches square, or octagonal, except that smaller boxes may be installed as required by fixture configurations, as approved. Boxes for use in masonry-block or tile walls shall be square-cornered, tile-type, or standard boxes having square-cornered, tile-type covers. Provide gaskets for cast-metal boxes installed in wet locations and boxes installed flush with outside of exterior surfaces. Provide separate boxes for flush or recessed fixtures when required by fixture terminal operating temperature; fixtures shall be readily removable for access to boxes unless ceiling access panels are provided. Support boxes and pendants for surface-mounted fixtures on suspended ceilings independently of ceiling supports, or make adequate provisions for distributing load over ceiling support members in an approved manner. Fasten boxes and supports with wood screws on wood, with bolts and expansion shields on concrete or brick, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel. In open overhead spaces, cast boxes threaded to raceways need not be separately supported except where used for fixture support; support sheet metal boxes directly from building structure or by bar hangers. Where bar hangers are used,

attach bar to raceways on opposite sides of box, and support raceway with approved-type fastener maximum 24 inches from box. When penetrating reinforced concrete members, avoid cutting reinforcing steel.

1. Boxes: Boxes for use with raceway systems shall be minimum 1 1/2 inches deep, except where shallower boxes required by structural conditions are approved. Boxes shall be minimum 4 inches square, except that 4 by 2 inch boxes may be used where only one raceway enters outlet.

2. Pull Boxes: Construct of at least minimum size required by NFPA 70 of code-gauge aluminum or galvanized sheet steel, except where cast-metal boxes are required in locations specified herein. Provide boxes with screw-fastened covers. Where several feeders pass through common pull box, tag feeders to indicate clearly electrical characteristics, circuit number, and panel designation.

E. Mounting Heights: Mount panelboards, circuit breakers, and disconnecting switches so height of operating handle at its highest position is maximum 78 inches above floor. Mount receptacles 18 inches above finished floor, and other devices, as indicated. Measure mounting heights of wiring devices and outlets to center of device or outlet.

F. Conductor Identification: Provide conductor identification within each enclosure where tap, splice, or termination is made. For conductors No. 6 AWG and smaller diameter, color coding shall be by factory-applied, color-impregnated insulation. For conductors No. 4 AWG and larger diameter, color coding shall be by plastic-coated, self-sticking markers; colored nylon cable ties and plates; or heat shrink-type sleeves.

G. Splices: Make splices in accessible locations. Make splices in conductors No. 10 AWG and smaller diameter with insulated, pressure-type connector. Make splices in conductors No. 8 AWG and larger diameter with solderless connector, and cover with insulation material equivalent to conductor insulation.

H. Covers and Device Plates: Install with edges in continuous contact with finished wall surfaces without use of mats or similar devices. Plaster fillings are not permitted. Install plates with alignment tolerance of 1/16 inch. Use of sectional-type device plates are not permitted. Provide gasket for plates installed in wet locations.

I. Electrical Penetrations: Seal openings around electrical penetrations through fire resistance-rated walls, partitions, floors, and ceilings utilizing proper firestopping materials to maintain fire resistive integrity.

J. Grounding and Bonding: In accordance with NFPA 70. Ground exposed, non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in metallic and nonmetallic raceways, and neutral conductor of wiring systems. Make ground connection to driven ground rods on exterior of building.

1. Resistance: Maximum resistance-to-ground of grounding system shall not exceed 5 ohms under dry conditions. Where resistance obtained exceeds 5 ohms, contact Design Professional for further instructions.

K. Repair of Existing Work: Repair of existing work, demolition, and modification of existing electrical distribution systems shall be performed as follows:

1. Workmanship: Lay out work in advance. Exercise care where cutting, channeling, chasing, or drilling of floors, walls, partitions, ceilings, or other surfaces is necessary for proper installation, support, or anchorage of conduit, raceways, or other electrical work. Repair damage to buildings, piping, and equipment using skilled craftsmen of trades involved.

2. Existing Concealed Wiring to be Removed: Existing concealed wiring to be removed shall be disconnected from its source. Remove conductors; cut conduit flush with floor, underside of floor, and through walls; and seal openings.

3. Removal of Existing Electrical Distribution System: Removal of existing electrical distribution system equipment shall include equipment's associated wiring, including conductors, cables, exposed conduit, surface metal raceways, boxes, and fittings, back to equipment's power source as indicated.

4. Continuation of Service: Maintain continuity of existing circuits of equipment to remain. Existing circuits of equipment shall remain energized. Circuits which are to remain but were disturbed during demolition shall have circuits wiring and power restored back to original condition.

L. Panelboard Modifications: At the completion of the project, the Contractor shall provide a new typed index for all panels in this building affected by this work.

3.2 FIELD QUALITY CONTROL

A. Devices Subject to Manual Operation: Each device subject to manual operation shall be operated at least five times, demonstrating satisfactory operation each time.

B. 600-Volt Wiring Test: Test wiring rated 600 volt and less to verify that no short circuits or accidental grounds exist. Perform insulation resistance tests on wiring No. 6 AWG and larger diameter using instrument which applies voltage of approximately 500 volts to provide direct reading of resistance. Minimum resistance shall be 250,000 ohms.

C. Transformer Tests: Perform test classified as routine in accordance with NEMA ST 20 on each transformer.

D. GFI Receptacle Test: Test GFI receptacles with a "load" (such as a plug in light) to verify that the "line" and "load" leads are not reversed.

E. Grounding System Test: Test grounding system to ensure continuity, and that resistance to ground is not excessive. Test each ground rod for resistance to ground before making connections to rod; tie grounding system together and test for resistance to ground. Make resistance measurements in dry weather, not earlier than 48 hours after rainfall. Submit written results of each test to Design Professional, and indicate location of rods as well as resistance and soil conditions at time measurements were made.

END OF SECTION 26 20 00

SECTION 26 56 00

EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 REFERENCES

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

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO LTS	(2013; 6th Edition; Rev 2022) Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C136.3	(2020) Roadway and Area Lighting Equipment Luminaire Attachments
ANSI C136.21	(2024) Roadway Lighting Equipment - Vertical Tenons Used with Post-Top-Mounted Luminaires

ASTM INTERNATIONAL (ASTM)

ASTM A123/A123M	(2017) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153/A 153M	(2016a) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA)

IESNA HB-10-11	(ERRATA 1 AND 2:2015) Lighting Handbook, 10th Edition

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C2	(2023) National Electrical Safety Code

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 6	(1993; R2016) Standard for Industrial Controls and Systems Enclosures

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2020) National Electrical Code

UNDERWRITERS LABORATORIES INC. (UL)

UL 1598 (2021) Luminaires

1.2 RELATED REQUIREMENTS

Section 26 00 00, "Basic Electrical Materials and Methods," applies to this section, with the additions and modifications specified herein.

1.3 DEFINITIONS

A. Average Life: Time after which 50 percent will have failed and 50 percent will have survived under normal conditions.

1.4 SUBMITTALS

Submit the following:

A. Manufacturer's Catalog Data.

1. Luminaires
2. Field Lighting Controls (Manual)

B. Drawings

1. Luminaire drawings
2. Poles

a. Luminaire Drawings: Include dimensions, effective projected area (EPA), accessories, and installation and construction details. Photometric data, including zonal lumen data, average and minimum ratio, aiming diagram, and candlepower distribution data shall accompany shop drawings.
b. Poles: Include dimensions, wind load determined in accordance with AASHTO LTS, pole deflection, pole class, and other applicable information.

C. Lighting Performance – Softball Field Lighting

1. The lighting system manufacturer shall furnish computer generated performance drawings that show that their system complies with average footcandle levels, uniformity ratios, coefficient variants, and maximum power consumption data as indicted herein.
2. Luminaires shall be equipped with external glare control shields.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Steel Poles: Do not store poles on ground. Support poles so they are at least one foot above ground level and growing vegetation. Do not remove factory-applied pole wrappings until just before installing pole.

PART 2 – PRODUCTS

2.1 PRODUCT COORDINATION

Products and materials not considered to be lighting equipment or lighting fixture accessories are specified in Section 26 20 00, "Interior Distribution System". Lighting fixtures and accessories mounted on exterior surfaces of buildings are specified in Section 26 51 00, "Interior Lighting."

2.2 LUMINAIRES

UL 1598. Provide luminaires as indicated. Provide luminaires complete with lamps of number, type, and wattage indicated. Details, shapes, and dimensions are indicative of the general type desired, but are not intended to restrict selection to luminaires of a particular manufacturer. Luminaires of similar designs, light distribution, and brightness characteristics, and of equal finish and quality will be acceptable as approved.

2.3 FIELD LIGHTING POLES

Field lighting poles shall be two section steel construction for direct embedment. Poles shall be hot dipped galvanized. Embedded section shall be treated inside and out with a coal tar mastic solution. Poles and crossarms shall be prewired at the factory for connection to pole mounted distribution box. Distribution box shall contain individual fuses for each luminaire. Pole top shall be equipped with a 24" lighting rod (air terminal). Poles shall be equipped with handholes at each crossarm, at each cable guide location, at the distribution box, and at 18" above grade. Provide conduit entry slot at 24" to 36" below grade. Provide two 2" NPT fittings at 10' above grade for mounting and connections to distribution box.

2.4 FIELD LIGHTING EQUIPMENT

A. Field Lighting Requirements: Luminaires shall be installed on new poles, at nominal mounting heights indicated, and aimed to achieve the requirements as indicted on the drawings.

B. Luminaires: Luminaires shall be LED sports light floodlights with external glare control visor as described on the Construction Documents. Luminaires shall be equipped with sufficient length of #14/3 SO cord and three pin plugs to connect to weatherproof receptacle on bottom of crossarm.

2.5 FIELD LIGHTING WIRELESS CONTROL SYSTEM

A. Central Base Station: Provide a Central Base Station as shown on the drawings. Base stations shall be equipped with five button programmable presets for manual control. Base stations shall be provided with Optional Cloud and Remote access services. Base station enclosures shall be IP65 rated and lockable, with antennae as required.

B. Programming and Commissioning: The manufacturer shall program the wireless control system to the Owner’s desires and commission the completed system. At commissioning, the manufacturer shall provide training for the Owners personnel to ensure complete satisfaction.

C. Warranty: The wireless control system shall be warranted for five years from date of commissioning.

PART 3 - EXECUTION

3.1 INSTALLATION OF POLES

IEEE C2, NFPA 70, and to the requirements specified herein.

A. Steel Direct-Embedded: Thoroughly compact backfill with compacting arranged to prevent pressure between conductor, jacket, or sheath and the end of conduit ell. Adjust poles as necessary to provide a permanent vertical position with the bracket arm in proper position for luminaire location.

3.2 GROUNDING

Ground noncurrent-carrying parts of equipment including metal poles, luminaires, mounting arms, brackets, and metallic enclosures as specified in Section 26 20 00, "Interior Distribution System." Where copper grounding conductor is connected to a metal other than copper, provide specially treated or lined connectors suitable for this purpose.

3.3 FIELD QUALITY CONTROL

Upon completion of installation, conduct an operating test to show that the equipment operates in accordance with the requirements of this section.

END OF SECTION 26 56 00