



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

NOTICE TO BIDDERS

ST. TAMMANY PARISH

Sealed bids will be received by the Department of Procurement, until 2:00 p.m., **Wednesday, May 14, 2025**, and then opened and read publicly at that time by the Procurement Staff for the following project:

Bid # 25-13-2 - Coroner Chiller Addition

Each paper bid must be submitted in a sealed envelope. The outside of the envelope shall show the Name and Address of the Bidder, the State Contractor's License Number of the Bidder (if the work is estimated at \$50k or more), the Bid Name and the Bid Number.

The project classification is:

Mechanical

This bid package is available online at www.bidexpress.com or LaPAC <https://wwwcfprd.doa.louisiana.gov/osp/lapac/pubmain.cfm>. It is the Vendor's responsibility to check Bid Express, or LaPAC frequently for any possible addenda that may be issued. The Parish is not responsible for a Vendor's failure to download any addenda documents required to complete a submission.

A Mandatory pre-bid meeting will be held at the St. Tammany Parish Coroner's Office, located at 65278 Hwy 434, Lacombe, LA 70445 on Tuesday, April 29, 2025, at 10:00 AM.

Bids will be received at 21454 Koop Dr., Suite 2F, Mandeville, LA 70471 from each bidder or his agent and given a written receipt, by certified mail with return receipt requested, or electronically at www.bidexpress.com.

Procurement Department

BID PROPOSAL

ST. TAMMANY PARISH
GOVERNMENT



BID PACKAGE FOR

Coroner Chiller Addition

BID NO.: 25-13-2

March 27, 2025

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Instructions to Bidders

Bidders are urged to promptly review the requirements of this specification and submit questions for resolution as early as possible during the bid period. Questions or concerns must be submitted in writing to the Procurement Department no later than 2:00 CST seven (7) working days prior to the bid opening date. Otherwise, this will be construed as acceptance by the bidders that the intent of the specifications is clear and that competitive bids may be obtained as specified herein. Protests with regard to the specification documents will not be considered after bids are opened.

1. Bid security is required. Be sure that your bid includes such security as is necessary to meet Parish requirements and is properly signed. The bid must be fully completed. All applicable Louisiana license numbers must be affixed.
2. The Owner is the St. Tammany Parish Government (the “Parish”).
3. The terms “he/his” and “it/its” may be used interchangeably.
4. The terms “Owner,” the “Parish,” and “St. Tammany Parish” may be used interchangeably.
5. The successful Bidder understands the limited contract time in the contract is **one hundred eighty (180) calendar days** and shall submit any request for an extension of time in accordance with the General and Supplementary Conditions. Said request will reflect the days requested and the reason for same. No extension request is guaranteed or absolute.
6. Bidder specifically understands that acknowledgment of the General Conditions is required. Bidder specifically understands that signature of receipt of the General Conditions is mandated. **The Bidder’s signature on the “Louisiana Uniform Public Work Bid Form” will serve as acknowledgment of the Bidder’s receipt and understanding of the General Conditions as well as any Supplementary Conditions.**
7. ***If any additional work is performed by the contractor without written approval by owner, the cost of the work will be borne by the contractor and will not be reimbursed by the Parish.***
8. **Only** the Louisiana Uniform Public Bid Form, the Unit Price Form (if necessary), the bid security, and written evidence of authority of person signing the bid shall be submitted on or before the bid opening time and date provided for in the Bid Documents. Necessary copies of the Louisiana Uniform Public Work Forms and Unit Price Forms (if necessary) will be furnished for Bidding. Bound sets of the Contract Documents are for Bidder’s information and should not be used in submitting Bids.
9. All other documents and information required are to be submitted by the low Bidder within ten (10) days after the opening of the bids, and at the same time of day and location as given for the opening of the bids in the Bid Documents.
10. Each Bid must be submitted in a sealed envelope, unless submitted electronically. The outside of the envelope shall show the name and address of the Bidder, the State Contractor’s License Number of the Bidder (if work requires contractor’s license), and the Project name and the Bid number. In the case of an electronic bid proposal, a contractor may submit an authentic digital signature on the electronic bid proposal accompanied by the contractor's license number, Project name and the Bid number.
11. The price quoted for the Work shall be stated in words and figures on the Bid Form, and in figures only on the Unit Price Form. The price in the Bid shall include all costs necessary for the complete performance of the Work in full conformity with the conditions of the Contract Documents, and shall include all applicable Federal, State, Parish, Municipal or other taxes. The price bid for the items listed on the Unit Price Form will include the cost of all related items not listed, but which are normally required to do the type of Work bid.
12. The Bid shall be signed by the Bidder. The information required on the Louisiana Uniform Public Work Bid Form must be provided. Evidence of agency, corporate, or partnership authority is required and shall be provided in conformance with LSA-R.S. 38:2212(B).

13. Only a Contractor licensed by the State to do the type of Work as indicated on the Notice to Bidders can submit a Bid. The Bidder's signature on the Bid Form certifies that he holds an active license under the provisions of Chapter 24 of Louisiana Revised Statutes Title 37. Failure to be properly licensed constitutes authority for the Owner to reject the Bid.
14. Bidders shall not attach any conditions or provisions to the Bid. Any conditions or provisions so attached may, at the sole option of the Owner, cause rejection of the Bid.
15. A Bid Guarantee of five percent (5%) of the amount of the total Bid, including Alternates, must accompany the Proposal and, at the option of the Bidder, may be a cashier's check, certified check or a satisfactory Bid Bond. The Bid Guarantee must be attached to the Louisiana Uniform Public Work Bid Form. No Bid will be considered unless it is so guaranteed. Cashier's check or certified check must be made payable to the order of the Owner. Cash deposits will not be accepted. The Owner reserves the right to cash or deposit the cashier's check or certified check. Such guarantees shall be made payable to the Parish of St. Tammany. In accordance with LSA-R.S. 38:2218(C), if a bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, 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 to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company in good standing licensed to write bid bonds which is either domiciled in Louisiana or owned by Louisiana residents. It is **not** required to be on any AIA form.
16. Bid securities of the three (3) lowest Bidders will be retained by the Owner until the Contract is executed or until final disposition is made of the Bids submitted. Bid securities of all other Bidders will be returned promptly after the canvas of Bids. Bids shall remain binding for forty-five (45) days after the date set for Bid Opening. The Parish shall act within the forty-five (45) days to award the contract to the lowest responsible bidder or reject all bids. However, the Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days. In the event the Owner issued the Letter of Award during this period, or any extension thereof, the Bid accepted shall continue to remain binding until the execution of the Contract.
17. A Proposal may be withdrawn at any time prior to the scheduled closing time for receipt of Bids, provided the request is in writing, executed by the Bidder or its duly authorized representative and is filed with the Owner prior to that time. When such a request is received, the Proposal will be returned to the Bidder unopened. A bid withdrawn under the provisions of LSA-R.S. 38:2214(C) cannot be resubmitted.
18. Written communications, over the signature of the Bidder, to modify Proposals will be accepted and the Proposal corrected in accordance therewith if received by the Owner prior to the scheduled closing time for receipt of Bids. Oral, telephonic or telegraphic Modifications will not be considered.
19. No oral interpretation obligating the Owner will be made to any Bidder as to the meaning of the Drawings, Specifications and Contract Documents. Every request for such an interpretation shall be made in writing and addressed and forwarded to the Owner. Inquiries received within seven (7) days prior to the day fixed for opening of the Bids may not be given consideration. Every interpretation made to the Bidder shall be in the form of an addendum to the Specifications. All such Addenda shall become part of the Contract Documents. Failure of the Owner to send or failure of Bidder to receive any such interpretation shall not relieve any Bidder from any obligation under this Bid as submitted without Modification. All Addenda shall be issued in accordance with the Public Bid Law, LSA-R.S. 38:2212(O).
20. The Owner reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal, illegible, or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause

for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.

21. Contractor shall be liable without limitation to the Parish for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors.
22. Upon notice of any claim, demand, suit, or cause of action against the Parish, alleged to arise out of or be related to this Contract, Contractor shall investigate, handle, respond to, provide defense for, and defend at its sole expense, even if the claim, demand, suit, or cause of action is groundless, false, or fraudulent. The Parish may, but is not required to, consult with or assist the Contractor, but this assistance shall not affect the Contractor's obligations, duties, and responsibilities under this section. Contractor shall obtain the Parish's written consent before entering into any settlement or dismissal.
23. It is understood and agreed that neither party can foresee the exigencies beyond the control of each party which arise by reason of an Act of God or force majeure; therefore, neither party shall be liable for any delay or failure in performance beyond its control resulting from an Act of God or force majeure. The Parish shall determine whether a delay or failure results from an Act of God or force majeure based on its review of all facts and circumstances. The parties shall use reasonable efforts, including but not limited to, use of continuation of operations plans (COOP), business continuity plans, and disaster recovery plans, to eliminate or minimize the effect of such events upon the performance of their respective duties under this Contract.
24. Contractor shall fully indemnify and hold harmless the Parish, without limitation, for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors. The Contractor shall not indemnify for the portion of any loss or damage arising from the Parish's act or failure to act.
25. Contractor shall fully indemnify and hold harmless the Parish, without limitation, from and against damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities in any action for infringement of any intellectual property right, including but not limited to, trademark, trade-secret, copyright, and patent rights.

When a dispute or claim arises relative to a real or anticipated infringement, the Contractor, at its sole expense, shall submit information and documentation, including formal patent attorney opinions, as required by the Parish.

If the use of the product, material, service, or any component thereof is enjoined for any reason or if the Contractor believes that it may be enjoined, Contractor, while ensuring appropriate migration and implementation, data integrity, and minimal delays of performance, shall at its sole expense and in the following order of precedence: (i) obtain for the Parish the right to continue using such product, material, service, or component thereof; (ii) modify the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; (iii) replace the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; or, (iv) provide the Parish monetary compensation for all payments made under the Contract related to the infringing product, material, service, or component, plus for all costs incurred to procure and implement a non-infringing product, material, or service of at least equal quality and performance. Until this obligation has been satisfied, the Contractor remains in default.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon the Parish's unauthorized: i) modification or alteration of the product, material or service; ii) use of the product, material or service in combination with other products not furnished by Contractor; or, iii) use of the product, material or service in other than the specified operating conditions and environment.

26. Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project, which may directly or indirectly affect the Work or its prosecution. These laws and/or ordinances will be deemed to be included in the Contract, as though herein written in full.
27. Each Bidder shall visit the site of the proposed Work and fully acquaint itself with all surface and subsurface conditions as they may exist so that it may fully understand this Contract. Bidder shall also thoroughly examine and be familiar with drawings, Specifications and Contract Documents. The failure or omission of any Bidder to receive or examine any form, instrument, Drawing or document or to visit the site and acquaint itself with existing conditions shall in no way relieve any Bidder from any obligation with respect to its Bid and the responsibility in the premises.
28. The standard contract form enclosed with the Proposal documents is a prototype. It is enclosed with the Contract Documents for the guidance of the Owner and the Contractor. It has important legal consequences in all respects and consultation with an attorney is encouraged. Contractor shall be presumed to have consulted with its own independent legal counsel.
29. When one set of Contract plans show the Work to be performed by two or more prime Contractors, it is the responsibility of each Bidder to become knowledgeable of the Work to be performed by the other where the Work upon which this bid is submitted is shown to come into close proximity or in conflict with the Work of the other. In avoiding conflicts, pressure pipe lines must be installed to avoid conflict with gravity pipe lines and the Bidder of the smaller gravity pipe line in conflict with the larger gravity pipe line must include in his Bid the cost of a conflict box at these locations. The location of and a solution to the conflicts do not have to be specifically noted as such on the plans.
30. Bidder shall execute affidavit(s) attesting compliance with LSA-R.S. 38:2212.10, 38:2224, 38:2227, each as amended, and other affidavits as required by law, prior to execution of the contract.
31. In accordance with Louisiana Law, all Corporations (See LA R.S. 12:26.1) and Limited Liability Companies (See LA R.S. 12:1308.2) should be registered and in good standing with the Louisiana Secretary of State in order to hold a contract.
32. Sealed Bids shall be delivered to St. Tammany Parish Government at the office of **St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471**, and a receipt given, until the time and date denoted in Notice to Bidders, at which time and place the Bids shall be publicly opened and read aloud to those present. In accordance with LSA-R.S. 38:2212(H), the designer's final estimated cost of construction shall be read aloud upon opening bids. Sealed Bids may also be mailed by certified mail to **St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471**, and must be received before the bid opening. Bids may also be submitted electronically. Information concerning links for electronic bidding is contained in the Notice to Bidders. It is the responsibility of the Bidders to ensure that bids are delivered in a timely fashion. **Late bids, regardless of reason, will not be considered, and will be returned to bidder.**
33. Paper bids shall be placed in a sealed envelope, marked plainly and prominently as indicated in the Notice to Bidders, and these Instructions, and addressed:

**St. Tammany Parish Government
Department of Procurement
21454 Koop Drive, Suite 2-F
Mandeville, LA 70471**
34. See Notice to Bidders for availability of Drawings, Specifications and Contract Documents via electronic methods.
35. The successful Bidder shall be required to post in each direction a public information sign, 4' x 4' in size, at the location of the project containing information required by the Owner. The Owner shall supply this information.

36. The award of the Contract, if it is awarded, will be to the lowest responsible Bidder, in accordance with State Law. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility and qualifications of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed as established by the Department based upon the amount of work to be performed and the conditions of same. The written contract and bond shall be issued in conformance with LSA-R.S. 38:2216. If the Contract is awarded, the Owner shall give the successful Bidder written notice of the award within forty-five (45) calendar days after the opening of the Bids in conformance with LSA-R.S. 38:2215(A), or any extension as authorized thereunder.
37. At least three days prior to the execution of the Contract, the Contractor shall deliver to the Owner the required Bonds.
38. Failure of the successful Bidder to execute the Contract and deliver the required Bonds within ten (10) days of the Notice of the Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited. Award may then be made to the next lowest responsible bidder.
39. In order to ensure the faithful performance of each and every condition, stipulation and requirement of the Contract and to indemnify and hold harmless the Owner from any and all damages, either directly or indirectly arising out of any failure to perform same, the successful Bidder to whom the Contract is awarded shall furnish a Performance and Payment Bond in an amount of at least equal to one hundred percent (100%) of the Contract Price. The Contract shall not be in force or binding upon the Owner until such satisfactory Bond has been provided to and approved by the Parish. The cost of the Bond shall be paid for by the Contractor unless otherwise stipulated in the Special Provisions.
40. No surety Company will be accepted as a bondsman which has no permanent agent or representative in the State upon whom notices referred to in the General Conditions of these Specifications may be served. Service of said notice on said agent or representative in the State shall be equal to service of notice on the President of the Surety Company, or such other officer as may be concerned.
41. In conformance with LSA-R.S. 38:2219(A)(1)(a), (b), and (c):
- Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, 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, to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.
- For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.
- In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. All contractors must comply with any other applicable provisions of LSA-R.S. 38:2219.
42. Should the Contractor's Surety, even though approved and accepted by the Owner, subsequently remove its agency or representative from the State or become insolvent, bankrupt, or otherwise fail, the Contractor shall immediately furnish a new Bond in another company approved by the Owner, at no cost to the Owner. The new Bond shall be executed under the same terms and conditions as the original Bond. The new bond shall be submitted within thirty (30) days of such time as the Owner notifies Contractor or from the time

Contractor learns or has reason to know that the original surety is no longer financially viable or acceptable to the Parish, whichever occurs first. In the event that Contractor fails or refuses to timely secure additional surety, then the Owner may secure such surety and thereafter deduct such cost or expense from any sum due, or to become due to Contractor.

43. The Contractor's bondsman shall obligate itself to all the terms and covenants of these Specifications and of contracts covering the Work executed hereunder. The Owner reserves the right to do Extra Work or make changes by altering, adding to deducting from the Work under the conditions and in the manner herein before described without notice to the Contractor's surety and without in any manner affecting the liability of bondsman or releasing it from any of its obligations hereunder.
44. The Bond shall also secure for the Owner the faithful performance of the Contract in strict accordance with plans, specifications, and other Contract Documents. It shall protect the Owner against all lien laws of the State and shall provide for payment of reasonable attorney's fees for enforcement of Contract and institution or concursus proceedings, if such proceedings become necessary. Likewise, it shall provide for all additional expenses of the Owner occurring through failure of the Contractor to perform.
45. The surety of the Contractor shall be and does hereby declare and acknowledge itself by acceptance to be bound to the Owner as a guarantor, jointly and in solido, with the Contractor, for fulfillment of terms of the Contract.
46. The performance Bond and Labor and Material Bond forming part of this Contract shall be continued by Contractor and its Surety for a period of one (1) year from date of acceptance of the Work/Project by Owner to assure prompt removal and replacement of all defective material, equipment, components thereof, workmanship, etc., and to assure payment of any damage to property of Owner or others as a result of such defective materials, equipment, workmanship, etc.
47. Contractor authorizes Parish to deduct from any payment due herein costs and service fees for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law. Contractor agrees to execute an excerpt or extract of this agreement for recordation purposes. If Contractor fails to execute such an excerpt, then the Parish shall file and record the entire Contract and all attachments at the expense of Contractor and Parish is hereby authorized to deduct all related costs from any proceeds due to the Contractor.
48. Contractor shall secure and maintain at its expense such insurance that will protect it and the Parish from claims for injuries to persons or damages to property which may arise from or in connection with the performance of Services or Work hereunder by the Contractor, his agents, representatives, employees, and/or subcontractors. The cost of such insurance shall be included in Contractor's bid.
49. The Contractor shall not commence work until it has obtained all insurance as required for the Parish Project. If the Contractor fails to furnish the Parish with the insurance protection required and begins work without first furnishing Parish with a currently dated certificate of insurance, the Parish has the right to obtain the insurance protection required and deduct the cost of insurance from the first payment due the Contractor. Further deductions are permitted from future payments as are needed to protect the interests of the Parish including, but not limited to, renewals of all policies.
50. Payment of Premiums: The insurance companies issuing the policy or policies shall have no recourse against the Parish of St. Tammany for payment of any premiums or for assessments under any form of policy.
51. Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.
52. Authorization of Insurance Company(ies) and Rating: All insurance companies must be authorized to do business in the State of Louisiana and shall have an A.M. Best rating of no less than A-, Category VII.
53. Policy coverages and limits must be evidenced by Certificates of Insurance issued by Contractor's carrier to the Parish and shall reflect:

Date of Issue: Certificate must have current date.

Named Insured: The legal name of Contractor under contract with the Parish and its principal place of business shall be shown as the named insured on all Certificates of Liability Insurance.

Name of Certificate Holder: St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434

Project Description: A brief project description, including Project Name, Project Number and/or Contract Number, and Location.

Endorsements and Certificate Reference: All policies must be endorsed to provide, and certificates of insurance must evidence the following:

Waiver of Subrogation: The Contractor's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance. *Policy endorsements required for all coverages.*

Additional Insured: The Parish of St. Tammany shall be named as additional named insured with respect to general liability, marine liability, pollution/environmental liability, automobile liability and excess liability coverages. *Policy endorsements required.*

Hold Harmless: Contractor's liability insurers shall evidence their cognizance of the Hold Harmless and Indemnification in favor of St. Tammany Parish Government by referencing same on the face of the Certificate(s) of Insurance.

Cancellation Notice: Producer shall provide thirty (30) days prior written notice to the Parish of policy cancellation or substantive policy change.

54. The types of insurance coverage the Contractor is required to obtain and maintain throughout the duration of the Contract shall be designated by a separate document issued by the Office of Risk Management.
55. It is the intent of these instructions that they are in conformance with State Bid Laws. Should there be any discrepancy or ambiguity in these provisions, the applicable State Bid Law shall apply.
56. The letting of any public contract in connection with funds that are granted or advanced by the United States of America shall be subject to the effect, if any, of related laws of said United States and valid rules and regulations of federal agencies in charge, or governing use and payment of such federal funds.
57. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals must be filed with and received by the Procurement Department BEFORE two (2) working days of the bid opening. Any other protest shall be filed no later than ten (10) calendar days after: the opening of the bid; the basis of the protest is known; or the basis of the protest should have been known (whichever is earlier).
58. It is the Parish's policy to provide a method to protest exclusion from a competition or from the award of a contract, or to challenge an alleged solicitation irregularity. It is always better to seek a resolution within the Parish system before resorting to outside agencies and/or litigation to resolve differences. All protests must be made in writing, and shall be concise and logically presented to facilitate review by the Parish. The written protest shall include:

The protester's name, address, and fax and telephone numbers and the solicitation, bid, or contract number;

A detailed statement of its legal and factual grounds, including a description of the resulting prejudice to the protester;

Copies of relevant documents;

All information establishing that the protester is an interested party and that the protest is timely; and

A request for a ruling by the agency; and a statement of the form of relief requested.

The protest shall be addressed to St. Tammany Parish Government Department of Procurement, P.O. Box 628, Covington, LA 70434

The protest review shall be conducted by the Parish Legal Department.

Only protests from interested parties will be allowed. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals, must be filed with and received by the Department of Procurement BEFORE those deadlines.

Any other protest shall be filed no later than ten (10) calendar days after the basis of the protest is known, or should have been known (whichever is earlier).

The Parish will use its best efforts to resolve the protest within thirty (30) days of the date that it is received by the Parish. The written response will be sent to the protestor via mail and fax, if a fax number has been provided by the protestor. The protester can request additional methods of notification.

- 59. The last day to submit questions to Procurement shall be no later than 2:00 pm CST, seven (7) working days prior to the opening of bids, and verification on comparable products will be no later than 2:00 pm CST, fourteen (14) working days prior to the opening date of the bid/proposal due date. Further, any questions or inquiries must be submitted via fax to 985-898-5227, or via email to Procurement@stpgov.org. Any questions or inquiries received after the required deadline to submit questions or inquiries will not be answered.

Schedule of Events

	<u>Date</u>	<u>Time (CT)</u>
Bid Due Date	May 14, 2025	2:00 PM
Mandatory Pre-Bid	April 29, 2025	10:00 AM
Inquiry Deadline	May 5, 2025	2:00 PM
Addendum Deadline	May 9, 2025	2:00 PM

NOTE: The Parish reserves the right to revise this schedule. Any such revision will be formalized by the issuance of an addendum to the Bid Request.

- 60. St. Tammany Parish Government contracts to be awarded are dependent on the available funding and/or approval by members designated and/or acknowledged by St. Tammany Parish Government. At any time, St. Tammany Parish Government reserves the right to cancel the award of a contract if either or both of these factors is deficient.
- 61. Any action by the Parish to disqualify any Bidder on the grounds that they are not a responsible Bidder shall be conducted in accordance with LSA-R.S. 38:2212(X).
- 62. Failure to complete or deliver within the time specified or to provide the services as specified in the bid or response will constitute a default and may cause cancellation of the contract. Where the Parish has determined the contractor to be in default. The Parish reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor the cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid or response from the defaulting contractor will be considered.
- 63. If any part of the provisions contained herein and/or in the Specifications and Contract for the Work shall for any reason be held invalid, illegal or unenforceable in any respect, such

invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement or attachment, but it shall be construed as if such invalid, illegal, or unenforceable provision or part of a provision had never been contained herein.

Section 03

Summary of Work

I. Work to Include:

This Project consists of the addition of one 200-ton Chiller and the furnishing and installation of new piping systems to connect to existing piping in existing building systems as shown on the drawings. The Project also consists of removing the existing and providing new Temperature Control devices as shown on drawings.

II. Location of Work:

St Tammany Coroner Office located at 65278 LA – 434, Lacombe, LA 70445.

III. Documents:

Bid Documents prepared by Lucien T Vivien Jr & Associates Construction
Documents dated March 27, 2025 and entitled:

Coroner Chiller Addition

Bid No.: 25-13-2

IV. OTHER REQUIREMENTS (as applicable)

When not otherwise specified herein, all work and materials shall conform to the requirements of the Louisiana Department of Transportation and Development hereafter called LDOTD (2016 Edition of Louisiana Standard Specifications for Roads and Bridges).

Table 3.1

Liquidated Damages	
Original Contract Amount	Daily Charge
Dollars	Dollars
0 - 250,000	500
250,000 – 1 Million	1,000
> 1 Million – 5 Million	1,500
> 5 Million – 10 Million	2,000
> 10 Million	3,000

- Parish reserves the right to increase the Daily charge rate due to additional provisions required in order to complete the project as described in the specifications

Section 04

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: St. Tammany Parish Government
21454 Koop Dr., Suite 2F
Mandeville, La 70471

(Owner to provide name and address of owner)

BID FOR: Coroner Chiller Addition
Bid No.: 25-13-2

(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: Lucien T Vivien Jr & Associates and dated: March 27,2025.

(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 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A _____Dollars (\$ _____)

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A _____Dollars (\$ _____)

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

N/A _____Dollars (\$ _____)

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 05

**AFFIDAVIT PURSUANT TO LSA-R.S. 38:2224 and 38:2227
FOR BIDDERS FOR PUBLIC WORKS CONTRACTS**

STATE OF _____

PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, who is seeking a public contract with St. Tammany Parish Government.
2. 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 of their duties for affiant; and
3. 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.
4. If affiant is a sole proprietor, that after July 2, 2010, he/she has not been convicted of, or has not entered a plea of guilty or *nolo contendere* to any of the crimes or equivalent federal crimes listed in LSA-R.S. 38:2227(B).
5. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no individual partner, incorporator, director, manager, officer, organizer, or member, who has a minimum of a ten percent ownership in the bidding entity, has been convicted of, or has entered a plea of guilty or *nolo contendere* to any

of the crimes or equivalent federal crimes listed in LSA-R.S. 38:2227(B).

- 6. If affiant is a sole proprietor, that neither affiant, nor his/her immediate family is a public servant of St. Tammany Parish Government or the Contract is not under the supervision or jurisdiction of the public servant’s agency.
- 7. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no public servant of St. Tammany Parish Government, or his/her immediate family, either individually or collectively, has more than a 25% ownership interest in the entity seeking the Contract with St. Tammany Parish Government if the Contract will be under the supervision or jurisdiction of the public servant’s agency.

Printed Name: _____
Title: _____
Entity name: _____

THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.

Notary Public
Print Name: _____
Notary I.D./Bar No.: _____
My commission expires: _____

**AFFIDAVIT PURSUANT TO LSA-R.S. 38:2212.10 CONFIRMING
REGISTRATION AND PARTICIPATION IN A STATUS VERIFICATION
SYSTEM**

STATE OF _____
PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

- 1. That affiant is appearing on behalf of _____,
a private employer seeking a bid or a contract with St. Tammany Parish Government for the physical performance of services within the State of Louisiana.

- 2. That affiant 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; and

- 3. That affiant 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.

- 4. That affiant shall require all subcontractors to submit to the affiant a sworn affidavit verifying compliance with this law.

Printed Name: _____
Title: _____
Name of Entity: _____

THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, **DAY OF** _____, **202**__.

Notary Public
Print Name: _____
Notary I.D./Bar No.: _____
My commission expires: _____



INSURANCE REQUIREMENTS*

Construction Project: Coroner Chiller Addition

Project/Quote/Bid#: 25-13-2

*****IMPORTANT – PLEASE READ*****

Prior to submitting your quote or bid, it is recommended that you review these insurance requirements with your insurance broker/agent.

These requirements modify portions of the insurance language found in the General Conditions and/or Supplementary General Conditions; however, there is no intention to remove all sections pertaining to insurance requirements and limits set forth in the General Conditions and/or Supplementary General Conditions, only to amend and specify those items particular for this Project.

- A. The Provider shall secure and maintain at its expense such insurance that will protect it and St. Tammany Parish Government (the "Parish") from claims for bodily injury, death or property damage as well as from claims under the Workers' Compensation Acts that may arise from the performance of services under this agreement. All certificates of insurance shall be furnished to the Parish and provide thirty (30) days prior notice of cancellation to the Parish, in writing, on all of the required coverage.

- B. All policies shall provide for and certificates of insurance shall indicate the following:
 - 1. Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance.
 - 2. Additional Insured: St. Tammany Parish Government shall be named as Additional Insured with respect to general liability, automobile liability and excess liability coverages, as well as marine liability and pollution/environmental liability, when those coverages are required or necessary.
 - 3. Payment of Premiums: The insurance companies issuing the policy or policies will have no recourse against St. Tammany Parish Government for payment of any premiums or for assessments under any form of policy.
 - 4. Project Reference: The project(s) and location(s) shall be referenced in the Comment or Description of Operations section of the Certificate of Insurance (Project ##-###, or Bid # if applicable, Type of Work, Location).

- C. Coverage must be issued by insurance companies authorized to do business in the State of Louisiana. Companies must have an A.M. Best rating of no less than A-, Category VII. St. Tammany Parish Risk Management Department may waive this requirement only for Workers Compensation coverage at their discretion.

Provider shall secure and present proof of insurance on forms acceptable to St. Tammany Parish Government, Office of Risk Management no later than the time of submission of the Contract to the Parish. However, should any work performed under this Contract by or on behalf of Provider include exposures that are not covered by those insurance coverages, Provider is not relieved of its obligation to maintain appropriate levels and types of insurance necessary to protect itself, its agents and employees, its subcontractors, St. Tammany Parish Government (Owner), and all other interested third parties, from any and all claims for damage or injury in connection with the services performed or provided throughout the duration of this Project, as well as for any subsequent periods required under this Contract.

The insurance coverages checked (✓) below are those required for this Contract.

- ☒ 1. **Commercial General Liability*** insurance – **Occurrence Form** - with a Combined Single Limit for bodily injury and property damage of at least \$1,000,000 per Occurrence / \$2,000,000 General Aggregate and \$2,000,000 Products-Completed Operations. Contracts over \$1,000,000 may require higher limits. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
- a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal/Advertising Injury;
 - e) Broad form property damage (for Projects involving work on Parish property);
 - f) Explosion, Collapse and Damage to underground property.
 - g) Additional Insured forms CG 2010 and CG 2037 in most current edition are required.
- ☒ 2. **Business Automobile Liability*** insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
- a) Any auto;
 - or**
 - b) Owned autos; **and**
 - c) Hired autos; **and**
 - d) Non-owned autos.
- ☒ 3. **Workers' Compensation/Employers Liability insurance*** - Workers' Compensation coverage as required by State law. Employers' liability limits shall be a minimum of \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate. When water activities are expected to be performed in connection with this project, coverage under the USL&H Act, Jones Act and/or Maritime Employers Liability (MEL) must be included. **Coverage for owners, officers and/or partners in any way engaged in the Project shall be included in the policy.** The names of any excluded individual must be shown in the Description of Operations/Comments section of the Certificate.
- ☒ 4. **Pollution Liability and Environmental Liability*** insurance in the minimum amount of \$1,000,000 per occurrence / \$2,000,000 aggregate including full contractual liability and third party claims for bodily injury and/or property damage, for all such hazardous waste, pollutants and/or environmental exposures that may be affected by this project stemming from pollution/environmental incidents as a result of Contractor's operations.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.



5. **Contractor's Professional Liability/Errors and Omissions*** insurance in the sum of at least \$1,000,000 per claim / \$2,000,000 aggregate is required when work performed by Contractor or on behalf of Contractor includes professional or technical services including, but not limited to, construction administration and/or management, engineering services such as design, surveying, and/or inspection, technical services such as testing and laboratory analysis, and/or environmental assessments. An occurrence basis policy is preferred.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.



6. **Marine Liability/Protection and Indemnity*** insurance is required for any and all vessel and/or marine operations in the minimum limits of \$1,000,000 per occurrence / \$2,000,000 per project general aggregate. The coverage shall include, but is not limited to, the basic coverages found in the Commercial General Liability insurance and coverage for third party liability

***Excess/Umbrella Liability** insurance may be provided to meet the limit requirements for any Liability coverage. For example: if the General Liability requirement is \$3,000,000 per occurrence, but the policy is only \$1,000,000 per occurrence, then the excess policy should be at least \$2,000,000 per occurrence thereby providing a combined per occurrence limit of \$3,000,000.)



7. **Owners Protective Liability (OPL)** shall be furnished by the Contractor and shall provide coverage in the minimum amount of \$1,000,000 CSL each occurrence / \$1,000,000 aggregate. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be the first named insured on the policy.**



8. **Builder's Risk Insurance** written as an "all-risk" policy providing coverage in an amount at or greater than one hundred percent (100%) of the completed value of the contracted project. Any contract modifications increasing the contract cost will require an increase in the limit of the Builder's Risk policy. Deductibles should not exceed \$5,000 and Contractor shall be responsible for all policy deductibles. This insurance shall cover materials at the site, stored off the site, and in transit. The Builder's Risk Insurance shall include the interests of the Owner, Contractor and Subcontractors and shall terminate only when the Project is accepted in writing. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be named as a Loss Payee on the policy.**



9. **Installation Floater Insurance**, on an "all-risk" form, shall be furnished by Contractor and carried for the full value of the materials, machinery, equipment and labor for each location. The Contractor shall be responsible for all policy deductibles. The Installation Floater Insurance shall provide coverage for property owned by others and include the interests of the Owner, Contractor and Subcontractors and shall terminate only when the Project is accepted in writing. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be named as a Loss Payee on the policy.**

- D. All policies of insurance shall meet the requirements of the Parish prior to the commencing of any work. The Parish has the right, but not the duty, to approve all insurance coverages prior to commencement of work. If any of the required policies are or become unsatisfactory to the Parish as to form or substance; or if a company issuing any policy is or becomes unsatisfactory to the Parish, the Provider shall promptly obtain a new policy, timely submit same to the Parish for approval, and submit a certificate thereof as provided above. The Parish agrees not to unreasonably withhold approval of any insurance carrier selected by Provider. In the event that Parish cannot agree or otherwise authorize a carrier, Provider shall have the option of selecting and submitting a new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish shall have the unilateral opportunity to thereafter select a responsive and responsible insurance carrier all at the cost of Provider and thereafter deduct from Provider's fee the cost of such insurance.
- E. Upon failure of Provider to furnish, deliver and/or maintain such insurance as above provided, this contract, at the election of the Parish, may be declared suspended, discontinued or terminated. Failure of the Provider to maintain insurance shall not relieve the Provider from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligation of the Provider concerning indemnification.
- F. Provider shall maintain a current copy of all annual insurance policies and agrees to provide a certificate of insurance to the Parish on an annual basis or as may be reasonably requested for the term of the contract or any required Extended Reporting Period. Provider further shall ensure that all insurance policies are maintained in full force and effect throughout the duration of the Project and shall provide the Parish with annual renewal certificates of insurance evidencing continued coverage, without any prompting by the Parish.
- G. It shall be the responsibility of Provider to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Provider. Provider shall further ensure the Parish is named as an additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project.
- H. Certificates of Insurance shall be issued as follows:

**St. Tammany Parish Government
Attn: Risk Management
P O Box 628
Covington, LA 70434**

To avoid contract processing delays, be certain the project name/number is included on all correspondence including Certificates of Insurance.

***NOTICE: St. Tammany Parish Government reserves the rights to remove, replace, make additions to and/or modify any and all of the insurance requirements at any time.**

Any inquiry regarding these insurance requirements should be addressed to:

**St. Tammany Parish Government
Office of Risk Management
P O Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

Section 07

Project Signs

1. General

- a. Work to include providing and installing project sign(s) at the beginning of the project. Some projects may require multiple signs. Should more than one sign be required, it will be reflected in the bidding documents.


2. Materials

- a. The printed project sign(s) shall be 3/8" primed Medium Density Overlay (MDO) **OR** 3-millimeter corrugated plastic secured to exterior plywood (4' x 4').
- b. Contractor shall not use previously provided templates and/or fonts.

3. Execution

- a. The sign(s) shall be printed on a project-by-project basis in black and white, using the template and font provided to the Contractor by the St. Tammany Parish Government Project Manager.
- b. All signage proofed and approved by State Tammany Parish Government before project sign(s) are to be produced by the Contractor.
- c. Exact placement of the project sign(s) must be coordinated with, and approved by, the St. Tammany Parish Government Project Manager prior to sign installation.
- d. The sign(s) is to be installed such that the bottom of the sign is a minimum of 5' above the existing ground elevation.
- e. Sign(s) is to be maintained throughout the period of construction. If sign(s) is damaged or destroyed, repair and/or replacement of sign(s) will be at Contractor's expense.
- f. Contractor is responsible for the removal of all project signs upon issuance of final acceptance by the St. Tammany Parish Government Project Manager at no direct pay.
- g. Cost to be included in "Temporary Signs and Barricades

Blank Template of Parish Project Sign:



MICHAEL B. COOPER
Parish President

Councilmember Name
Council District X

Total Dollar \$
amount specified here

\$XXX,XXX.XX

Project Name
Description of
Project Work

Name of Street, Bridge,
Subdivision, etc. stated here

Short Description of Project stated here
(if deemed applicable by the Parish)

Example of a Completed Parish Project Sign:



MICHAEL B. COOPER
Parish President

RYKERT O. TOLEDANO, JR
Council District 5

\$514,444.40

Dove Park
Subdivision Drainage
Drainage Improvements along
Swallow St., Sparrow St.,
Partridge St. and Egret St.

Section 08

General Conditions for St. Tammany Parish Government

This index is for illustrative purposes only and is not intended to be complete nor exhaustive.

All bidders/contractors are presumed to have read and understood the entire document. Some information contained in these conditions may not be applicable to all projects.

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01.00 DEFINITIONS OF TERMS

Whenever used in these General Conditions or in other Contract Documents, the following terms shall have the meanings indicated, and these shall be applicable to both the singular and plural thereof.

- 01.01 A.A.S.H.T.O American Association of State Highway and Transportation Officials. When A.A.S.H.T.O. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this association and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.02 A.C.I American Concrete Institute. When A.C.I. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this institute and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.03 Addenda Written or graphic instruments issued prior to the opening of bids which clarify, correct, modify or change the bidding or Contract Documents.
- 01.04 Advertisement The written instrument issued by the Owner at the request of the Owner used to notify the prospective bidder of the nature of the Work. It becomes part of the Contract Documents.
- 01.05 Agreement The written agreement or contract between the Owner and the Contractor covering the Work to be performed and the price that the Owner will pay. Other documents, including the Proposal, Addenda, Specifications, plans, surety, insurance, etc., are made a part thereof.
- 01.06 Application for Payment The form furnished by the Owner which is to be used by the Contractor in requesting incremental (progress) payments and which is to include information required by Section 28.01 and an affidavit of the Contractor. The affidavit shall stipulate that progress payments theretofore received from the Owner on account of the Work have been applied by Contractor to discharge in full of all Contractor's obligations reflected in prior applications for payment.
- 01.07 A.S.T.M. American Society of Testing Materials. When A.S.T.M. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this society and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.08 Bid The offer or Proposal of the Bidder submitted on the prescribed form setting forth all the prices for the Work to be performed.
- 01.09 Bidder Any person, partnership, firm or corporation submitting a Bid for the Work.
- 01.10 Bonds Bid, performance and payment bonds and other instruments of security, furnished by the Contractor and its surety in accordance with the Contract Documents and Louisiana law.
- 01.11 Change Order A written order to the Contractor signed by the Owner authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time after execution of the Agreement.
- 01.12 Contract Documents The Agreement, Addenda, Contractor's Bid and any documentation accompanying or post-bid documentation when attached as an exhibit, the Bonds, these General Conditions, the Advertisement for Bid, Notice to Contractor, all supplementary conditions, the Specifications, the Drawings, together with all Modifications issued after the execution of the Agreement.
- 01.13 Contract Price The total monies payable to the Contractor under the Contract Documents.

- 01.14 Contract Time The number of consecutive calendar days stated in the Agreement for the completion of the Work.
- 01.15 Contractor The person, firm, corporation or Contractor with whom the Owner has executed the Agreement.
- 01.16 Defective Work When work which is unsatisfactory, faulty or deficient for any reason whatsoever, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Owner's recommendation or acceptance.
- 01.17 Drawings The Drawings and plans which show the character and scope of the Work to be performed and which have been prepared or approved by the Owner and are referred to in the Contract Documents.
- 01.18 Field Order A written order issued by the Owner or his agent which clarifies or interprets the Contract Documents.
- 01.19 Modification (a) A written amendment of the Contract Documents signed by both parties, (b) A Change Order, (c) A written clarification or interpretation issued by the Owner or his agent. Modification may only be issued after execution of the Agreement.
- 01.20 Notice of Award The written notice by Owner to the lowest responsible Bidder stating that upon compliance of the conditions enumerated in the Notice of Award, or enumerated in the Bid documents, the Owner will deliver the Contract Documents for signature. The time for the delivery of the Contract Documents can be extended in conformance with Louisiana Law.
- 01.21 Notice to Contractor Instructions, written or oral given by Owner to Contractor and deemed served if given to the Contractor's superintendent, foreman or mailed to Contractor at his last known place of business.
- 01.22 Notice to Proceed A written notice given by the Owner fixing the date on which the Contract Time will commence, and on which date the Contractor shall start to perform his obligation under the Contract Documents. Upon mutual consent by both parties, the Notice to Proceed may be extended.
- 01.23 Owner St. Tammany Parish Government, acting herein through its duly constituted and authorized representative, including but not limited to the Office of the Parish President or its designee, its Chief Administrative Officer, and/or Legal Counsel. St. Tammany Parish Government (hereinafter, the "Parish") and Owner may be used interchangeably.
- 01.24 Project The entire construction to be performed as provided in the Contract Documents.
- 01.25 Project Representative The authorized representative of the Owner who is assigned to the Project or any parts thereof.
- 01.26 Proposal The Bid submitted by the Bidder to the Owner on the Proposal form setting forth the Work to be done and the price for which the Bidder agrees to perform the Work.
- 01.27 Shop Drawings All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, Subcontractor, Manufacturer, Supplier or Distributor and which illustrate the equipment, material or some portion of the Work.
- 01.28 Specifications The Instructions to Bidders, these General Conditions, the Special Conditions and the Technical Provisions. All of the documents listed in the "Table of Contents."
- 01.29 Subcontractor An individual, firm or corporation having a direct Contract with the Contractor or with any other Subcontractor for the performance of a part of the Project Work.
- 01.30 Substantial Completion The date as certified by the Owner or its agent when the construction of the Project or a specified part thereof is sufficiently complete in accordance with the Contract Documents so that the Project or specified part can be utilized for the

purposes for which it was intended; or if there is no such certification, the date when final payment is due in accordance with Section 28.

- 01.31 Superintendent Contractor's site representative. The person on the site who is in full and complete charge of the Work.
- 01.32 Time Unless specifically stated otherwise, all time delays shall be calculated in calendar days.
- 01.33 Work Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by the Contractor under the Contract Documents, usually including the furnishing of all labor, materials, equipment and other incidentals.
- 01.34 The terms "he/himself" may be used interchangeably with "it/itself."

02.00 PROPOSAL

- 02.01 All papers bound with or attached to the Proposal Form are a necessary part thereof and must not be detached.
- 02.02 For submitting Bids, the only forms allowed shall be the "Louisiana Uniform Public Work Bid Form", "Louisiana Uniform Public Works Bid Form Unit Price Form" (if necessary), the Bid Bond, and written evidence of authority of person signing the bid. Necessary copies of the Louisiana Uniform Public Work Forms will be furnished for Bidding. Bound sets of the Contract Documents are for Bidder's information and should not be used in submitting Bids.
- 02.03 Proposal forms must be printed in ink or typed, unless submitted electronically. Illegibility or ambiguity therein may constitute justification for rejection of the Bid.
- 02.04 Each Bid must be submitted in a sealed envelope, unless submitted electronically. The outside of the envelope shall show the name and address of the Bidder, the State Contractor's License Number of the Bidder (if work requires contractor's license), and the Project name and number for which the Bid is submitted, along with the Bid number.
- 02.05 The price quoted for the Work shall be stated in words and figures on the Bid Form, and in numbers only on the Unit Price Form. The price in the Proposal shall include all costs necessary for the complete performance of the Work in full conformity with the conditions of the Contract Documents, and shall include all applicable Federal, State, Parish, Municipal or other taxes. The price bid for the items listed on the Unit Price Form will include the cost of all related items not listed, but which are normally required to do the type of Work bid.
- 02.06 The Bid shall be signed by the Bidder. The information required on the Louisiana Uniform Public Work Bid Form must be provided. Evidence of agency, corporate, or partnership authority is required and shall be provided in conformance with LSA-R.S. 38:2212(B).
- 02.07 Only the Contractors licensed by the State to do the type of Work involved can submit a Proposal for the Work. The envelope containing the Proposal shall have the Contractor's license number on it. Failure to be properly licensed constitutes authority by the Owner for rejection of Bid.
- 02.08 Bidders shall not attach any conditions or provisions to the Proposal. Any conditions or provisions so attached may, at the sole option of the Owner, cause rejection of the Bid or Proposal.
- 02.09 A Bid Guarantee of five percent (5%) of the amount of the total Bid, including Alternates, must accompany the Proposal and, at the option of the Bidder, may be a cashier's check, certified check or a satisfactory Bid Bond. The Bid Guarantee must be attached to the Louisiana Uniform Public Work Bid Form. No Bid will be considered unless it is so guaranteed. Cashier's check or certified check must be made payable to the order of the Owner. Cash deposits will not be accepted. The Owner reserves the right to cash or deposit the cashier's check or certified check. Such guarantees shall be made payable to the Parish of St. Tammany. In accordance with LSA-R.S. 38:2218(C), if a bid bond is used, it shall

be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, 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 to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide, or by an insurance company in good standing licensed to write bid bonds which is either domiciled in Louisiana or owned by Louisiana residents. It is **not** required to be on any AIA form.

- 02.10 Bid securities of the three (3) lowest Bidders will be retained by the Owner until the Contract is executed or until final disposition is made of the Bids submitted. Bid securities of all other Bidders will be returned promptly after the canvas of Bids. Bids shall remain binding for forty-five (45) days after the date set for Bid Opening. The Parish shall act within the forty-five (45) days to award the contract to the lowest responsible bidder or reject all bids as permitted by Public Bid Law. However, the Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days. In the event the Owner issued the Letter of Award during this period, or any extension thereof, the Bid accepted shall continue to remain binding until the Execution of the Contract.
- 02.11 A Proposal may be withdrawn at any time prior to the scheduled closing time for receipt of Bids, provided the request is in writing, executed by the Bidder or its duly authorized representative and is filed with the Owner prior to that time. When such a request is received, the Proposal will be returned to the Bidder unopened.
- 02.12 Written communications, over the signature of the Bidder, to modify Proposals will be accepted and the Proposal corrected in accordance therewith if received by the Owner prior to the scheduled closing time for receipt of Bids. Oral, telephonic or telegraphic Modifications will not be considered.
- 02.13 No oral interpretation obligating the Owner will be made to any Bidder as to the meaning of the Drawings, Specifications and Contract Documents. Every request for such an interpretation shall be made in writing and addressed and forwarded to the Owner. No inquiry received within seven (7) days prior to the day fixed for opening of the Bids shall be given consideration. Every interpretation made to the Bidder shall be in the form of an addendum to the Specifications. All such Addenda shall become part of the Contract Documents. Failure of Bidder to receive any such interpretation shall not relieve any Bidder from any obligation under this Bid. All Addenda shall be issued in accordance with the Public Bid Law, LSA-R.S. 38:2212(O)(2)(a) and (b).
- 02.14 The Owner reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.
- 02.15 The Contractor shall indemnify and hold harmless the Owner from any and all suits, costs, penalties or claims for infringement by reason of use or installation of any patented design, device, material or process, or any trademark and copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify and hold harmless the Owner for any costs, expenses and damages which it may be obliged to pay by reason of any such infringement at any time during the prosecution or after completion of the Work.
- 02.16 Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project, which may directly or indirectly affect the Work or its prosecution. These laws and/or ordinances will be deemed to be included in the Contract, as though herein written in full.
- 02.17 Each Bidder shall visit the site of the proposed Work and fully acquaint itself with all surface and subsurface conditions as they may exist so that it may fully understand this Contract. Bidder shall also thoroughly examine and be familiar with drawings,

Specifications and Contract Documents. The failure or omission of any Bidder to receive or examine any form instrument, Drawing or document or to visit the site and acquaint itself with existing conditions, shall in no way relieve any Bidder from any obligation with respect to its Bid and the responsibility in the premises.

- 02.18 The standard contract form enclosed with the Proposal documents is a prototype. It is enclosed with the Contract Documents for the guidance of the Owner and the Contractor. It has important legal consequences in all respects and consultation with an attorney is encouraged. Contractor shall be presumed to have consulted with its own independent legal counsel.
- 02.19 When one set of Contract plans show the Work to be performed by two or more prime Contractors, it is the responsibility of each Bidder to become knowledgeable of the Work to be performed by the other where the Work upon which this bid is submitted is shown to come into close proximity or into conflict with the Work of the other. In avoiding conflicts, pressure pipe lines must be installed to avoid conflict with gravity pipe lines and the Bidder of the smaller gravity pipe line in conflict with the larger gravity pipe line must include in his Bid the cost of a conflict box at these locations. The location of and a solution to the conflicts do not have to be specifically noted as such on the plans.
- 02.20 Bidder shall execute affidavit(s) attesting compliance with LSA-R.S. 38:2212.10, 38:2224, 38:2227, each as amended, and other affidavits as required by law, prior to execution of the contract.
- 02.21 Sealed Proposals (Bid) shall be received by St. Tammany Parish Government at the office of St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471, until the time and date denoted in Notice to Bidders, at which time and place the Proposals (Bids), shall be publicly opened and read aloud to those present. In accordance with LSA-R.S. 38-2212(A)(3)(c)(i), the designer's final estimated cost of construction shall be read aloud upon opening bids. Sealed Proposals (Bids) may also be mailed by certified mail to St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471, and must be received before the bid opening. Bids may also be submitted electronically. Information concerning links for electronic bidding is contained in the Notice to Bidders.
- 02.22 Proposals (Bids) shall be executed on Forms furnished and placed in a sealed envelope, marked plainly and prominently as indicated in the Notice to Bidders, and these General Conditions, and addressed:

St. Tammany Parish Government
Department of Procurement
21454 Koop Drive, Suite 2-F
Mandeville, LA 70471

- 02.23 Complete sets of Drawings, Specifications, and Contract Documents may be secured at the Office of the Owner. See Notice to Bidders for deposit schedule.
- 02.24 The successful bidder shall be required to post in each direction a public information sign, 4' x 8' in size, at the location of the project containing information required by the Owner. The Owner shall supply this information.
- 03.00 AWARD, EXECUTION OF DOCUMENTS, BONDS, ETC.

- 03.01 The award of the Contract, if it is awarded, will be to the lowest responsible Bidder, in accordance with State Law. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility, qualifications and financial ability and stability of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed as established by the Department based upon the amount of work to be performed and the conditions of same. The written contract and bond shall be issued in conformance with LSA-R.S. 38:2216. The Owner reserves the right to reject the Bid of any Bidder in accordance with the Public Bid Law, LSA-R.S. 38:2214. If the Contract is awarded, the Owner shall give the successful Bidder written notice of the award within forty-five (45) calendar days after the opening of the Bids in conformance with LSA-R.S. 38:2215(A), or any extension as authorized thereunder.

- 03.02 At least three counterparts of the Agreement and of such other Contract Documents as practicable shall be signed by the Owner and the Contractor. The Owner shall identify those portions of the Contract Documents not so signed and such identification shall be binding on both parties. The Owner and the Contractor shall each receive an executed counterpart of the Contract Documents.
- 03.03 Prior to the execution of the Agreement, the Contractor shall deliver to the Owner the required Bonds.
- 03.04 Failure of the successful Bidder to execute the Agreement and deliver the required Bonds within twenty (20) days of the Notice of the Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited.
- 03.05 In order to ensure the faithful performance of each and every condition, stipulation and requirement of the Contract and to indemnify and save harmless the Owner from any and all damages, either directly or indirectly arising out of any failure to perform same, the successful Bidder to whom the Contract is awarded shall furnish a surety Bond in an amount of at least equal to one hundred percent (100%) of the Contract Price. The Contract shall not be in force or binding upon the Owner until such satisfactory Bond has been provided to and approved by the Parish. The cost of the Bond shall be paid for by the Contractor unless otherwise stipulated in the Special Provisions.
- 03.06 No surety Company will be accepted as a bondsman who has no permanent agent or representative in the State upon whom notices referred to in the General Conditions of these Specifications may be served. Services of said notice on said agent or representative in the State shall be equal to service of notice on the President of the Surety Company, or such other officer as may be concerned.
- 03.07 In conformance with LSA-R.S. 38:2219(A)(1)(a), (b), and (c):

Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, 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, to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. All contractors must comply with any other applicable provisions of LSA-R.S. 38:2219.

- 03.08 Should the Contractor's Surety, even though approved and accepted by the Owner, subsequently remove its agency or representative from the State or become insolvent, bankrupt, or otherwise fail, the Contractor shall immediately furnish a new Bond in another company approved by the Owner, at no cost to the Owner. The new Bond shall be executed under the same terms and conditions as the original Bond. The new bond shall be submitted within thirty (30) days of such time as the Owner notifies Contractor or from the time Contractor learns or has reason to know that the original surety is no longer financially viable or acceptable to the Parish, whichever occurs first. In the event that Contractor fails or refuses to timely secure additional surety, then the Owner may secure such surety and thereafter deduct such cost or expense from any sum due or to become due Contractor.

- 03.09 The Contractor's bondsman shall obligate itself to all the terms and covenants of these Specifications and of contracts covering the Work executed hereunder. The Owner reserves the right to do Extra Work or make changes by altering, adding to deducting from the Work under the conditions and in the manner herein before described without notice to the Contractor's surety and without in any manner affecting the liability of bondsman or releasing it from any of its obligations hereunder.
- 03.10 The Bond shall also secure for the Owner the faithful performance of the Contract in strict accordance with plans and Specifications. It shall protect the Owner against all lien laws of the State and shall provide for payment of reasonable attorney fees for enforcement of Contract and institution or concursus proceedings, if such proceedings become necessary. Likewise, it shall provide for all additional expenses of the Owner occurring through failure of the Contractor to perform.
- 03.11 The surety of the Contractor shall be and does hereby declare and acknowledge itself by acceptance to be bound to the Owner as a guarantor, jointly and in solido, with the Contractor, for fulfillment of terms of Section 03.00.
- 03.12 The performance Bond and Labor and Material Bond forming part of this Contract shall be continued by Contractor and its Surety for a period of one (1) year from date of acceptance of this Contract by Owner to assure prompt removal and replacement of all defective material, equipment, components thereof, workmanship, etc., and to assure payment of any damage to property of Owner or others as a result of such defective materials, equipment, workmanship, etc.
- 03.13 Contractor shall pay for the cost of recording the Contract and Bond and the cost of canceling same. Contractor shall also secure and pay for all Clear Lien and Privilege Certificates (together with any updates) which will be required before any final payment is made, and that may be required before any payment, at the request of the Owner, its representative, agent, architect, engineer and the like. All recordation and Clear Lien and Privilege Certificate requirements shall be in accordance with those requirements noted herein before in contract Specifications.

04.00 SUBCONTRACTS

- 04.01 Contractor shall be fully responsible for all acts and omissions of its Subcontractors and of persons and organizations for whose acts any of them may be liable to the same extent that it is responsible for the acts and omissions of persons directly employed by it. Nothing in the Contract Documents shall create any contractual relationship between Owner and any Subcontractor or other person or organization having a direct Contract with Contractor, nor shall it create any obligation on the part of the Owner to pay or to see to the payment of any monies due any Subcontractor.
- 04.02 Nothing in the Contract Documents shall be construed to control the Contractor in dividing the Work among approved Subcontractors or delineating the Work to be performed by any trade.
- 04.03 The Contractor agrees to specifically bind every Subcontractor to all of the applicable terms and conditions of the Contract Documents prior to commencing Work. Every Subcontractor, by undertaking to perform any of the Work, shall thereby automatically be deemed bound by such terms and conditions.
- 04.04 The Contractor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses including Attorney's fees arising out of or resulting from the Contractor's failure to bind every Subcontractor and Contractor's surety to all of the applicable terms and conditions of the Contract Documents.

05.00 ASSIGNMENT

- 05.01 Neither party to this Contract shall assign or sublet its interest in this Contract without prior written consent of the other, nor shall the Contractor assign any monies due or to become due to it under this Contract without previous written consent of the Owner, nor without the consent of the surety unless the surety has waived its right to notice of assignment.

06.00 CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS.

- 06.01 It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between Owner and Contractor. Alterations, modifications and amendments shall only be in writing between these parties.
- 06.02 The Contract Documents are intended to be complimentary and to be read *in pari materii*, and what is called for by one is as binding as if called for by all. If Contractor finds a conflict, error or discrepancy in the Contract Documents, it shall call it to the Owner's attention, in writing, at once and before proceeding with the Work affected thereby; however, it shall be liable to Owner for its failure to discover any conflict, error or discrepancy in the Specifications or Drawings. In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Special Conditions, General Conditions, Construction Specifications and Drawings. The general notes on the plans shall be considered special provisions. Figure dimensions on Drawings shall govern over scale dimensions and detail Drawings shall govern over general Drawings. Where sewer connections are shown to fall on a lot line between two lots, the Contractor shall determine this location by measurement not by scale. Any Work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described herein which so applied to this Project are covered by a well-known technical meaning or specification shall be deemed to be governed by such recognized standards unless specifically excluded.
- 06.03 Unless otherwise provided in the Contract Documents, the Owner will furnish to the Contractor (free of charge not to exceed ten (10) copies) Drawings and Specifications for the execution of Work. The Drawings and Specifications are the property of the Owner and are to be returned to it when the purpose for which they are intended have been served. The Contractor shall keep one copy of all Drawings and Specifications, including revisions, Addenda, details, Shop Drawings, etc. on the Work in good order and available to the Owner or the regulatory agency of the governmental body having jurisdiction in the area of the Work.

07.00 SHOP DRAWINGS, BROCHURES AND SAMPLES

- 07.01 After checking and verifying all field measurements, Contractor shall submit to Owner for approval, five copies (or at Owner's option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of Contractor and identified as Owner may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable Owner to review the information as required.
- 07.02 Contractor shall also submit to Owner, for review with such promptness as to cause no delay in Work, all samples as required by the Contract Documents. All samples will have been checked by and stamped with the approval of Contractor identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended. At the time of each submission, Contractor shall in writing call Owner's attention to any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents.
- 07.03 Owner will review with reasonable promptness Shop Drawings and samples, but its review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The review of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make any corrections required by Owner and shall return the required number of corrected copies of Shop Drawings and resubmit new samples for review. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by Owner on previous submissions. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner that Contractor has determined and verified all quantities, dimensions, field construction criteria, materials catalog numbers and similar data and thereafter assumes full responsibility for doing so, and that it has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

07.04 Where a Shop Drawing or sample submission is required by the Specifications, no related Work shall be commenced until the submission has been reviewed by Owner. A copy of each reviewed shop Drawing and each inspected sample shall be kept in good order by Contractor at the site and shall be available to Owner.

07.05 Owner's review of Shop Drawings or samples shall not relieve Contractor from its responsibility for any deviations from the requirements of the Contract Documents unless Contractor has in writing called Owner's attention to such deviation at the time of submission and Owner has given written approval to the specific deviation, nor shall any review by Owner relieve Contractor from responsibility for errors or omissions in the Shop Drawings. The mere submittal of shop drawings which contain deviations from the requirements of plans, specifications and/or previous submittals in itself does not satisfy this requirement.

08.00 RECORD DRAWINGS

08.01 The Contractor shall keep an accurate record in a manner approved by the Owner of all changes in the Contract Documents during construction. In Work concerning underground utilities, the Contractor shall keep an accurate record in a manner approved by the Owner of all valves, fittings, etc. Before the Work is accepted by the Owner, and said acceptance is recorded, the Contractor shall furnish the Owner a copy of this record.

08.02 Contractor shall keep an accurate drawing measured in the field to the nearest 0.1' of the location of all sewer house connections. The location shown shall be the end of the connection at the property line measured along the main line of pipe from a manhole.

08.03 Contractor shall keep an accurate drawing of the storm water drainage collection system. Inverts to the nearest 0.01' and top of castings shall be shown as well as location of all structures to the nearest 0.1'. Upon completion of the Work, the plan will be given to the Owner.

09.00 PROGRESS OF WORK

09.01 Contractor shall conduct the Work in such a professional manner and with sufficient materials, equipment and labor as is considered necessary to ensure its completion within the time limit specified.

09.02 The Owner shall issue a Notice to Proceed to the Contractor within twenty (20) calendar days from the date of execution of the Contract. Upon mutual consent by both parties, the Notice to Proceed may be extended. The Contractor is to commence Work under the Contract within ten (10) calendar days from the date the Notice to Proceed is issued by the Owner.

09.03 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Owner's approval an estimated progress schedule for the work to be performed, as well as a construction signing layout for all roads within the project area. The Contractor shall not start work or request partial payment until the work schedule has been submitted to the Owner for approval.

09.04 Revisions to the original schedule will be made based on extension of days granted for inclement weather or change orders issued under the contract. No other revision shall be made which affects the original completion or updated completion date, whichever is applicable.

09.05 Failure of the Contractor to submit an estimated progress schedule or to complete timely and on schedule the Work shown on the progress schedule negates any and all causes or claims by the Contractor for accelerated completion damages. These accelerated damage claims shall be deemed forfeited.

09.06 Meetings will be held as often as necessary to expedite the progress of the job. Meetings will be held during normal working hours at the jobsite and shall be mandatory for the Contractor and all Sub-Contractors working on the project. Meetings may be requested by the Owner at any time and at the discretion of the Owner.

10.00 OWNER'S RIGHT TO PROCEED WITH PORTIONS OF THE WORK

- 10.01 Upon failure of the Contractor to comply with any notice given in accordance with the provisions hereof, the Owner shall have the alternative right, instead of assuming charge of the entire Work, to place additional forces, tools, equipment and materials on parts of the Work. The cost incurred by the Owner in carrying on such parts of the Work shall be payable by the Contractor. Such Work shall be deemed to be carried on by the Owner on account of the Contractor. The Owner may retain all amounts of the cost of such Work from any sum due Contractor or those funds that may become due to Contractor under this Agreement.
- 10.02 Owner may perform additional Work related to the Project by itself or it may let any other direct contract which may contain similar General Conditions. Contractor shall afford the other contractors who are parties to such different contracts (or Owner, if it is performing the additional Work itself) reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work, and shall properly connect and coordinate its Work with the subsequent work.
- 10.03 If any part of Contractor's Work depends upon proper execution or results upon the Work of any such other contractor (or Owner), Contractor shall inspect and promptly report to Owner in writing any defects or deficiencies in such Work that render it unsuitable for such proper execution and results. Failure to so report shall constitute an acceptance of the other Work as fit and proper for the relationship of its Work except as to defects and deficiencies which may appear in the other Work after the execution of its Work.
- 10.04 Whatever Work is being done by the Owner, other Contractors or by this Contractor, the parties shall respect the various interests of the other parties at all times. The Owner may, at its sole discretion, establish additional rules and regulations concerning such orderly respect of the rights of various interests.
- 10.05 Contractor shall do all cutting, fitting and patching of its Work that may be required to integrate its several parts properly and fit to receive or be received by such other Work. Contractor shall not endanger any Work of others by cutting, excavating or otherwise altering Work and will only alter Work with the written consent of Owner and of the other contractors whose Work will be affected.
- 10.06 If the performance of additional Work by other contractors or Owner is not noted in the Contract Documents, written notice thereof shall be given to Contractor prior to starting any such additional Work. If Contractor believes that the performance of such additional Work by Owner or others may cause additional expense or entitles an extension of the Contract Time, the Contractor may make a claim therefor. The claim must be in writing to the Owner within thirty (30) calendar days of receipt of notice from the Owner of the planned additional Work by others.

11.00 TIME OF COMPLETION

- 11.01 The Notice to Proceed will stipulate the date on which the Contractor shall begin work. That date shall be the beginning of the Contract Time charges.
- 11.02 Contractor shall notify the Owner through its duly authorized representative, in advance, of where Contractor's work shall commence each day. A daily log shall be maintained by Contractor to establish dates, times, persons contacted, and location of work. Specific notice shall be made to the Owner if the Contractor plans to work on Saturday, Sunday, or a Parish approved holiday. If notice is not received, no consideration will be given for inclement weather and same shall be considered a valid work day.
- 11.03 The Work covered by the Plans, Specifications and Contract Documents must be completed sufficiently for acceptance within the number of calendar days specified in the Proposal and/or the Contract, commencing from the date specified in the Notice to Proceed. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the time of completion is an essential condition of this Contract, and it is further mutually understood and agreed that if the Contractor shall neglect, fail or refuse to complete the Work within the time specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as partial consideration for the awarding of this Contract, to pay the Owner based on **Table 3.1** as specified in the Contract, not as

a penalty, but as liquidated damages for such breach of contract for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work. It is specifically understood that the Owner shall also be entitled to receive a reasonable attorney fee and all costs in the event that Contractor fails to adhere to this agreement and this contract is referred to counsel for any reason whatsoever. Reasonable attorney fees shall be the prevailing hourly rate of the private sector, and in no event shall the hourly rate be less than \$175.00 per hour. All attorney fees shall be paid to the operating budget of the Office of the Parish President.

11.04 Prior to final payment, the Contractor may, in writing to the Owner, certify that the entire Project is substantially complete and request that the Owner or its agent issue a certificate of Substantial Completion. See Section 29.00.

11.05 The Owner may grant an extension(s) of time to the Contractor for unusual circumstances which are beyond the control of the Contractor and could not reasonably be foreseen by the Contractor prior to Bidding. Any such request must be made in writing to the Owner within seven (7) calendar days following the event occasioning the delay. The Owner shall have the exclusive and unilateral authority to determine, grant, and/or deny the validity of any such claim.

11.06 Extensions of time for inclement weather shall be processed as follows:

Commencing on the start date of each job, the Parish Inspector assigned to same shall keep a weekly log, indicating on each day whether inclement weather has prohibited the Contractor from working on any project within the specific job, based upon the following:

1. Should the Contractor prepare to begin work on any day in which inclement weather, or the conditions resulting from the weather, prevent work from beginning at the usual starting time, and the crew is dismissed as a result, the Contractor will not be charged for a working day whether or not conditions change during the day and the rest of the day becomes suitable for work.
2. If weather conditions on the previous day prevent Contractor from performing work scheduled, provided that no other work can be performed on any project within the package. The Parish Inspector shall determine if it is financially reasonable to require the Contractor to deviate from the schedule and relocate to another location.
3. If the Contractor is unable to work at least 60% of the normal work day due to inclement weather, provided that a normal working force is engaged on the job.

Any dispute of weather conditions as related to a specific job shall be settled by records of the National Weather Service.

11.07 Extensions of time for change orders

When a change order is issued, the Owner and Contractor will agree on a reasonable time extension, if any, to implement such change. Consideration shall be given for, but not limited to, the following:

1. If material has to be ordered;
2. Remobilization and or relocation of equipment to perform task; and
3. Reasonable time frame to complete additional work.

Time extensions for change orders shall be reflected on the official document signed by the Owner and Contractor.

11.08 At the end of each month, the Owner or its agent will furnish to the Contractor a monthly statement which reflects the number of approved days added to the contract. The Contractor will be allowed fourteen (14) calendar days in which to file a written protest setting forth in what respect the monthly statement is incorrect; otherwise, the statement shall be considered accepted by the Contractor as correct.

11.09 Apart from extension of time for unavoidable delays, no payment or allowance of any kind shall be made to the Contractor as compensation for damages because of hindrance or delay for any cause in the progress of the Work, whether such delay be avoidable or unavoidable.

12.00 LIQUIDATED DAMAGES

12.01 In case the Work is not completed in every respect within the time that may be extended, it is understood and agreed that per diem deductions per **Table 3.1** for liquidated damages, as stipulated in the Proposal and/or Contract, shall be made from the total Contract Price for each and every calendar day after and exclusive of the day on which completion was required, and up to the completion of the Work and acceptance thereof by the Owner. It is understood and agreed that time is of the essence to this Contract, and the above sum being specifically herein agreed upon in advance as the measure of damages to the Owner on account of such delay in the completion of the Work. It is further agreed that the expiration of the term herein assigned or as may be extended for performing the Work shall, *ipso facto*, constitute a putting in default, the Contractor hereby waiving any and all notice of default. The Contractor agrees and consents that the Contract Price, reduced by the aggregate of the entire damages so deducted, shall be accepted in full satisfaction of all Work executed under this Contract. It is further understood and agreed that Contractor shall be liable for a reasonable attorney fee and all costs associated with any breach of this agreement, including but not limited to this subsection. In the event that any dispute or breach herein causes referrals to counsel, then Contractor agrees to pay a reasonable attorney fee at the prevailing hourly rate of the private sector. In no event shall the hourly rate be less than \$175.00 per hour.

13.00 LABOR, MATERIALS, EQUIPMENT, SUPERVISION, PERMITS AND TAXES

13.01 The Contractor shall provide and pay for all labor, materials, equipment, supervision, subcontracting, transportation, tools, fuel, power, water, sanitary facilities and all incidentals necessary for the completion of the Work in substantial conformance with the Contract Documents.

13.02 The Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. It shall at all times maintain good discipline and order at the site.

13.03 Unless otherwise specifically provided for in the Specifications, all workmanship, equipment, materials, and articles incorporated in the Work covered by this Contract are to be new and of the best grade of their respective kinds for the purpose intended. Samples of materials furnished under this Contract shall be submitted for approval to the Owner when and as directed.

13.04 Whenever a material or article required is specified or shown on the plans by using the name of a proprietary product or of a particular manufacturer or Contractor, any material or article which shall perform adequately the duties imposed by the general design will be considered equal, and satisfactory, providing the material or article so proposed is of equal substance and function and that all technical data concerning the proposed substitution be approved by the Owner prior to the Bidding. The Owner shall have the exclusive and unilateral discretion to determine quality and suitability in accordance with LSA-R.S. 38:2212(T)(2).

13.05 Materials shall be properly and securely stored so as to ensure the preservation of quality and fitness for the Work, and in a manner that leaves the material accessible to inspection. Materials or equipment may not be stored on the site in a manner such that it will interfere with the continued operation of streets and driveways or other contractors working on the site.

13.06 The Contractor, by entering into the Contract for this Work, sets itself forth as an expert in the field of construction and it shall supervise and direct the Work efficiently and with its best skill and attention. It shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

13.07 Contractor shall keep on the Work, at all times during its progress, a competent resident Superintendent, who shall not be replaced without written Notice to Owner except under

extraordinary circumstances. The Superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the Superintendent shall be as binding as if given to the Contractor. Owner specifically reserves the right to approve and/or disapprove the retention of a new superintendent, all to not be unreasonably withheld.

- 13.08 Any foreman or workman employed on this Project who disregards orders or instructions, does not perform his Work in a proper and skillful manner, or is otherwise objectionable, shall, at the written request of the Owner, be removed from the Work and shall be replaced by a suitable foreman or workman.
- 13.09 The Contractor and/or its assigned representative shall personally ensure that all subcontracts and divisions of the Work are executed in a proper and workmanlike manner, on scheduled time, and with due and proper cooperation.
- 13.10 Failure of the Contractor to keep the necessary qualified personnel on the Work shall be considered cause for termination of the Contract by the Owner.
- 13.11 Only equipment in good working order and suitable for the type of Work involved shall be brought onto the job and used by the Contractor. The Contractor is solely responsible for the proper maintenance and use of its equipment and shall hold the Owner harmless from any damages or suits for damages arising out of the improper selection or use of equipment. No piece of equipment necessary for the completion of the Work shall be removed from the job site without approval of the Owner.
- 13.12 All Federal, State and local taxes due or payable during the time of Contract on materials, equipment, labor or transportation, in connection with this Work, must be included in the amount bid by the Contractor and shall be paid to proper authorities before acceptance. The Contractor shall furnish all necessary permits and certificates and comply with all laws and ordinances applicable to the locality of the Work. The cost of all inspection fees levied by any governmental entity whatsoever shall be paid for by the Contractor.
- 13.13 In accordance with St. Tammany Police Jury Resolution 86-2672, as amended, the Contractor must provide in a form suitable to the Owner an affidavit stating that all applicable sales taxes for materials used on this project have been paid.
- 13.14 During the period that this Contract is in force, neither party to the Contract shall solicit for employment or employ an employee of the other.
- 13.15 All materials or equipment shown on the Drawings or included in these specifications shall be furnished unless written approval of a substitute is obtained from the Designer, or Owner if no separate designer.
- 13.16 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 fourteen working days prior to the opening of bids. Within ten 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. The burden of proof of the equality of the proposed substitute is upon the proposer and only that information formally submitted shall be used by the Designer in making its decision.
- 13.17 The decision of the Designer/Owner shall be given in good faith and shall be final.

14.00 QUANTITIES OF ESTIMATE, CHANGES IN QUANTITIES, EXTRA WORK

- 14.01 Whenever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents, including the Proposal, such are given for use in comparing Bids and the right is especially reserved, except as herein otherwise specifically limited, to increase or diminish same not to exceed twenty-five percent (25%) by the Owner to complete the Work contemplated by this Contract. Such increase or diminution shall in no way vitiate this Contract, nor shall such increase or diminution give cause for claims or liability for damages.
- 14.02 The Owner shall have the right to make alterations in the line, grade, plans, form or dimensions of the Work herein contemplated, provided such alterations do not change the

total cost of the Project, based on the originally estimated quantities, and the unit prices bid by more than twenty-five percent (25%) and provided further that such alterations do not change the total cost of any major item, based on the originally estimated quantities and the unit price bid by more than twenty-five (25%). (A major item shall be construed to be any item, the total cost of which is equal to or greater than ten percent (10%) of the total Contract Price, computed on the basis of the Proposal quantity and the Contract unit price). Should it become necessary, for the best interest of the Owner, to make changes in excess of that herein specified, the same shall be covered by supplemental agreement either before or after the commencement of the Work and without notice to the sureties. If such alterations diminish the quantity of Work to be done, such shall not constitute a claim for damages for anticipated profits for the Work dispensed with, but when the reduction in amount is a material part of the Work contemplated, the Contractor shall be entitled to only reasonable compensation as determined by the Owner for overhead and equipment charges which it may have incurred in expectation of the quantity of Work originally estimated, unless specifically otherwise provided herein; if the alterations increase the amount of Work, the increase shall be paid according to the quantity of Work actually done and at the price established for such Work under this Contract except where, in the opinion of the Owner, the Contractor is clearly entitled to extra compensation.

- 14.03 Without invalidating the Contract, the Owner may order Extra Work or make changes by altering, adding to, or deducting from the Work, the Contract sum being adjusted accordingly. The consent of the surety must first be obtained when necessary or desirable, all at the exclusive discretion of the Owner. All the Work of the kind bid upon shall be paid for at the price stipulated in the Proposal, and no claims for any Extra Work or material shall be allowed unless the Work is ordered in writing by the Owner.
- 14.04 Extra Work for which there is no price or quantity included in the Contract shall be paid for at a unit price or lump sum to be agreed upon in advance in writing by the Owner and Contractor. Where such price and sum cannot be agreed upon by both parties, or where this method of payment is impracticable, the Owner may, at its exclusive and unilateral discretion, order the Contractor to do such Work on a Force Account Basis.
- 14.05 In computing the price of Extra Work on a Force Account Basis, the Contractor shall be paid for all foremen and labor actually engaged on the specific Work at the current local rate of wage for each and every hour that said foremen and labor are engaged in such Work, plus ten percent (10%) of the total for superintendence, use of tools, overhead, direct & indirect costs/expenses, pro-rata applicable payroll taxes, pro-rata applicable workman compensation benefits, pro-rata insurance premiums and pro-rata reasonable profit. The Contractor shall furnish satisfactory evidence of the rate or rates of such insurance and tax. The Contractor will not be able to collect any contribution to any retirement plans or programs.
- 14.06 For all material used, the Contractor shall receive the actual cost of such material delivered at the site of the Work, as shown by original receipted bill, to which shall be added five percent (5%). There will be absolutely no additional surcharges or additional fees attached hereto with respect to this subsection.
- 14.07 For any equipment used that is owned by the Contractor, the Contractor shall be allowed a rental based upon the latest prevailing rental price, but not to exceed a rental price as determined by the Associated Equipment Distributors (A.E.D. Green Book).
- 14.08 The Contractor shall also be paid the actual costs of transportation for any equipment which it owns and which it has to transport to the Project for the Extra Work. There will be absolutely no additional surcharges or additional fees attached hereto with respect to this subsection.
- 14.09 If the Contractor is required to rent equipment for Extra Work, but not required for Contract items, it will be paid the actual cost of rental and transportation of such equipment to which no percent shall be added. The basis upon which rental cost are to be charged shall be agreed upon in writing before the Work is started. Actual rental and transportation costs shall be obtained from receipted invoices and freight bills.
- 14.10 No compensation for expenses, fees or costs incurred in executing Extra Work, other than herein specifically mentioned herein above, will be allowed.

- 14.11 A record of Extra Work on Force Account basis shall be submitted to the Owner on the day following the execution of the Work, and no less than three copies of such record shall be made on suitable forms and signed by both the Owner or his representative on the Project and the Contractor. All bids for materials used on extra Work shall be submitted to the Owner by the Contractor upon certified statements to which will be attached original bills covering the costs of such materials.
- 14.12 Payment for Extra Work of any kind will not be allowed unless the same has been ordered in writing by the Owner.
- 15.00 STATUS OF THE ENGINEER (NOT APPLICABLE)
- 16.00 INJURIES TO PERSONS AND PROPERTY
- 16.01 The Contractor shall be held solely and exclusively responsible for all injuries to persons and for all damages to the property of the Owner or others caused by or resulting from the negligence of itself, its employees or its agents, during the progress of or in connection with the Work, whether within the limits of the Work or elsewhere under the Contract proper or as Extra Work. This requirement will apply continuously and not be limited to normal working hours or days. The Owner's construction review is for the purpose of checking the Work product produced and does not include review of the methods employed by the Contractor or to the Contractor's compliance with safety measures of any nature whatsoever. The Contractor agrees to pay a reasonable attorney fee and other reasonable attendant costs of the Owner in the event it becomes necessary for the Owner to employ an attorney to enforce this section or to protect itself against suit over the Contractor's responsibilities. Attorney fees shall be at the prevailing hourly rate of the private sector. The attorney fee hourly rate shall not be less than \$175.00 per hour. All attorney fees collected shall be paid to the operating budget of the Office of the Parish President.
- 16.02 The Contractor must protect and support all utility infrastructures or other properties which are liable to be damaged during the execution of its Work. It shall take all reasonable and proper precautions to protect persons, animals and vehicles or the public from the injury, and wherever necessary, shall erect and maintain a fence or railing around any excavation, and place a sufficient number of lights about the Work and keep same burning from twilight until sunrise, and shall employ one or more watchmen as an additional security whenever needed. The Contractor understands and agrees that the Owner may request that security be placed on the premises to ensure and secure same. The Owner shall have exclusive authority to request placement of such security. Contractor agrees to retain and place security as requested, all at the sole expense of Contractor. Additional security shall not be considered a change order or reason for additional payment by the Owner. The Contractor must, as far as practicable and consistent with good construction, permit access to private and public property and leave fire hydrants, catch basins, streets, etc., free from encumbrances. The Contractor must restore at its own expense all injured or damaged property caused by any negligent act of omission or commission on its part or on the part of its employees or subcontractors, including, but not limited to, sidewalks, curbing, sodding, pipes conduits, sewers, buildings, fences, bridges, retaining walls, tanks, power lines, levees or any other building or property whatsoever to a like condition as existed prior to such damage or injury.
- 16.03 In case of failure on the part of the Contractor to restore such property or make good such damage, the Owner may upon forty-eight (48) hours' notice proceed to repair or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any monies due or which may become due under its Contract.
- 16.04 Contractor agrees to protect, defend, indemnify, save, and hold harmless St. Tammany Parish Government, its elected and appointed officials, departments, agencies, boards and commissions, their officers, agents servants, employees, including volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property to the extent caused by any negligent act or omission or willful misconduct of Contractor, its agents, servants, employees, and subcontractors, or any and all costs, expense and/or attorney fees incurred by St. Tammany Parish Government as a result of any claim, demands, and/or causes of action that results from the negligent performance or non-performance by Contractor, its agents, servants, employees, and subcontractors of this contract. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand,

or suit at its sole expense and agrees to bear all other costs and expenses related thereto caused by any negligent act or omission or willful misconduct of Contractor, its agents, servants, employees, and subcontractors.

- 16.05 As to any and all claims against Owner, its agents, assigns, representatives or employees by any employee of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts as may be liable, the indemnification obligation under Paragraph 16.04 shall not be limited in any way or by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 16.06 No road shall be closed by the Contractor to the public except by written permission of the Owner. If so closed, the Contractor shall maintain traffic over, through and around the Work included in his Contract, with the maximum practical convenience, for the full twenty-four hours of each day of the Contract, whether or not Work has ceased temporarily. The Contractor shall notify the Owner at the earliest possible date after the Contract has been executed and, in any case, before commencement of any construction that might in any way inconvenience or endanger traffic, in order that necessary and suitable arrangements may be determined. Any and all security, maintenance, labor or costs associated with traffic control herein shall be at the sole expense of Contractor. This expense shall be paid directly by the Contractor. This expense shall not be considered as a change order nor shall it allow the Contractor any additional cost reimbursement whatsoever. All traffic deviations herein shall be coordinated with the appropriate law enforcement officials of this Parish.
- 16.07 The convenience of the general public and residents along the Works shall be provided for in a reasonable, adequate and satisfactory manner. Where existing roads are not available as detours, and unless otherwise provided, all traffic shall be permitted to pass through the Work. In all such cases, the public shall have precedence over Contractor's vehicles insofar as the traveling public's vehicles shall not be unduly delayed for the convenience of the Contractor. In order that all unnecessary delay to the traveling public may be avoided, the Contractor shall provide and station competent flagmen whose sole duties shall consist of directing and controlling the movement of public traffic either through or around the Work. Any and all security, maintenance, labor or costs associated with traffic control herein shall be at the sole expense of Contractor. This expense shall be paid directly by the Contractor. This expense shall not be considered as a change order nor shall it allow the Contractor any additional cost reimbursement whatsoever. All traffic deviations herein shall be coordinated with the appropriate law enforcement officials of this Parish.
- 16.08 The Contractor shall arrange its Work so that no undue or prolonged blocking of business establishments will occur.
- 16.09 Material and equipment stored on the right of way or work site shall be so placed and the Work at times shall be so conducted as to ensure minimum danger and obstruction to the traveling public.
- 16.10 During grading operations when traffic is being permitted to pass through construction, the Contractor shall provide a smooth, even surface that will provide a satisfactory passageway for use of traffic. The road bed shall be sprinkled with water if necessary to prevent a dust nuisance, provided the dust nuisance is a result of the Work.
- 16.11 Fire hydrants shall be accessible at all times to the Fire Department. No material or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules or regulations or within fifteen (15) feet of a fire hydrant, in the absence of such ordinance, rules or regulations.
- 16.12 The Contractor shall not, without the written permission of the Owner, do Work for a resident or property owner abutting the Work at the time that this Work is in progress.
- 16.13 No Work of any character shall be commenced on railroad right-of-way until the Railroad Company has issued a permit to the Owner and has been duly notified by the Contractor in writing (with a copy forwarded to the Owner) of the date it proposes to begin Work, and until an authorized representative of the Railroad Company is present, unless the Railroad Company waives such requirements. All Work performed by the Contractor within the

right-of-way limits of the railroad shall be subject to the inspection and approval of the chief engineer of the Railroad Company or its authorized representative. Any precautions considered necessary by said chief engineer to safeguard the property, equipment, employees and passengers of the Railroad Company shall be taken by the Contractor without extra compensation. The Contractor shall, without extra compensation, take such precautions and erect and maintain such tell-tale or warning devices as the Railroad Company considers necessary to safeguard the operation of its trains. The temporary vertical and horizontal clearance specified by the chief engineer of the Railroad Company in approving these shall be maintained at all times. No steel, brick, pipe or any loose material shall be left on the ground in the immediate vicinity of the railway track. Before any Work is done within Railroad right of way, the Contractor shall provide and pay all costs of any special insurance requirements of the Railroad.

- 16.14 The Contractor, shall, without extra compensation, provide, erect, paint and maintain all necessary barricades. Also, without extra compensation, the Contractor shall provide suitable and sufficient lights, torches, reflectors or other warning or danger signals and signs, provide a sufficient number of watchmen and flagmen and take all the necessary precautions for the protection of the Work and safety of the Public.
- 16.15 The Contractor shall erect warning signs beyond the limits of the Project, in advance of any place on the Project where operations interfere with the use of the road by traffic, including all intermediate points where the new Work crosses or coincides with the existing road. All barricades and obstructions shall be kept well painted and suitable warning signs shall be placed thereon. All barricades and obstructions shall be illuminated at night and all lights or devices for this purpose shall be kept burning from sunset to sunrise.
- 16.16 Whenever traffic is maintained through or over any part of the Project, the Contractor shall clearly mark all traffic hazards. No direct payment will be made for barricades, signs and illumination therefore or for watchmen or flagmen.
- 16.17 The Contractor will be solely and completely responsible for conditions on the job site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. The duty of the Owner to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, or near the construction site.

17.00 SANITARY PROVISIONS

- 17.01 The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees as may be necessary to comply with the rules and regulations of the State Health Agency or of the other authorities having jurisdiction and shall permit no public nuisance.

18.00 RIGHTS OF WAY

- 18.01 The Owner will furnish the Contractor with all necessary rights-of-way for the prosecution of the Work. The rights of way herein referred to shall be taken to mean only permission to use or pass through the locations or space in any street, highway, public or private property in which the Contractor is to prosecute the Work.
- 18.02 It is possible that all lands and rights of way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin its Work upon such land and rights of way as the Owner may have previously acquired. Any delay in furnishing these lands by the Owner can be deemed proper cause for adjustment in the Contract amount and/or in the time of completion.

19.00 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

- 19.01 The Contractor shall not enter upon private property for any purpose without first obtaining permission from the Owner, as well as the private property owner and/or and private property Lessees. The Contractor shall use every precaution necessary for the preservation of all public and private property, monuments, highway signs, telephone lines, other utilities, etc., along and adjacent to the Work; the Contractor shall use every precaution necessary to prevent damage to pipes, conduits, and other underground structures; and shall

protect carefully from disturbance or damage all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed. The street and highway signs and markers that are to be affected by the Work shall be carefully removed when the Work begins and stored in a manner to keep them clean and dry. The Contractor must obtain all necessary information in regard to existing utilities and shall give notice in writing to the owners or the proper authorities in charge of streets, gas, water, pipes, electric, sewers and other underground structures, including conduits, railways, poles and pole lines, manholes, catch basins, fixtures, appurtenances, and all other property that may be affected by the Contractor's operations, at least forty-eight (48) hours before its operations will affect such property. The Contractor shall not hinder or interfere with any person in the protection of such Work or with the operation of utilities at any time. When property, the operation of railways, or other public utilities are endangered, the Contractor shall at its own expense, maintain flagmen or watchmen and any other necessary precautions to avoid interruption of service or damage to life or property, and it shall promptly repair, restore, or make good any injury or damage caused by its negligent operations in an acceptable manner. The Contractor must also obtain all necessary information in regard to the installation of new cables, conduits, and transformers, and make proper provisions and give proper notifications, in order that same can be installed at the proper time without delay to the Contractor or unnecessary inconvenience to the Owner.

19.02 The Contractor shall not remove, cut or destroy trees, shrubs, plants, or grass that are to remain in the streets or those which are privately owned, without the proper authority. Unless otherwise provided in the Special Provisions or the Proposal, the Contractor shall replace and replant all plants, shrubs, grass and restore the grounds back to its original good condition to the satisfaction of the Owner and/or the property owner. The Contractor shall assume the responsibility of replanting and guarantees that plants, shrubs, grass will be watered, fertilized and cultivated until they are in a growing condition. No direct payment will be made for removing and replanting of trees, shrubs, plants or grass unless such items are set forth in the Proposal.

19.03 When or where direct damage or injury is done to public or private property by or on account of any negligent act, omission, neglect or otherwise of the Contractor, it shall make good such damage or injury in an acceptable manner.

20.00 CONTRACTORS RESPONSIBILITY FOR WORK

20.01 Until final acceptance of the Work by the Owner as evidence by approval of the final estimate, the Work shall be in the custody and under the charge and care of the Contractor and it shall take every necessary precaution against injury or damage to any part thereof by the action of the elements or from the non-execution of the Work; unless otherwise provided for elsewhere in the Specifications or Contract. The Contractor shall rebuild, repair, restore and make good, without extra compensation, all injuries or damages to any portion of the Work occasioned by any of the above causes before its completion and acceptance, and shall bear the expenses thereof. In case of suspension of the Work from any cause whatever, the Contractor shall be responsible for all materials and shall properly and securely store same, and if necessary, shall provide suitable shelter from damage and shall erect temporary structures where necessary. If in the exclusive discretion of the Owner, any Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of its Subcontractors to so protect the Work, such materials shall be removed and replaced at the sole expense of the Contractor. Such amount shall be deducted from any sum due or to be due Contractor.

20.02 The Contractor shall give all notice and comply with all Federal, State, and local laws, ordinances, and regulations in any manner affecting the conduct of the Work, and all such orders and decrees as exist, or may be enacted by bodies or tribunals having any jurisdiction or authority over the Work, and shall indemnify and hold harmless the Owner against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, order or decree, whether by itself, its employees or Subcontractors.

21.00 TESTS AND INSPECTIONS CORRECTION & REMOVAL OF DEFECTIVE WORK

21.01 Contractor warrants and guarantees to Owner that all materials and equipment will be new unless otherwise specified and that all Work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents. All

unsatisfactory Work, all faulty or Defective Work and all Work not conforming to the requirements of the Contract Documents at the time of acceptance shall be considered Defective. Prompt and reasonable notice of all defects shall be given to the Contractor.

- 21.02 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested or approved by some public body, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish Owner the required certificates of inspection, testing or approval. All other inspections, tests and approval required by the Contract Documents shall be performed by organizations acceptable to Owner and Contractor and the costs thereof shall be borne by the Contractor unless otherwise specified.
- 21.03 Contractor shall give Owner timely notice of readiness of the Work for all inspections, tests or approvals. If any such Work required to be inspected, tested or approved is covered without written approval of Owner, it must, if requested by Owner, be uncovered for observation, and such uncovering shall be at Contractor's expense unless Contractor has given Owner timely notice of its intention to cover such Work and Owner has not acted with reasonable promptness in response to such notice.
- 21.04 Neither observations by Owner nor inspections, tests or approvals shall relieve Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Document.
- 21.05 Owner and its representatives will at reasonable times have access to the Work. Contractor shall provide proper and safe facilities for such access and observation of the Work and also for any inspection or testing thereof by others.
- 21.06 If any Work is covered contrary to the written request of Owner, it must, be uncovered for Owner's observation and replaced at Contractor's expense. If any Work has been covered which Owner has not specifically requested to observe prior to its being covered, or if Owner considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at Owner's request, shall uncover, expose or otherwise make available for observations, inspections or testing as Owner may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is Defective, Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be Defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.
- 21.07 If the Work is Defective, or Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payments to Subcontractors or for labor, materials or equipment, Owner may order Contractor to stop the Work, or any portion thereof, until the cause of such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.
- 21.08 Prior to approval of final payment, Contractor shall promptly, without cost to Owner and as specified by Owner, either correct any Defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not correct such Defective Work or remove and replace such rejected Work within a reasonable time, all as specified in a written notice from Owner, Owner may have the deficiency corrected or the rejected Work removed and replaced. All direct or indirect costs of such correction or removal and replacement including compensation for additional professional services shall be paid by Contractor, and an appropriate deductive Change Order shall be issued. Contractor shall also bear the expense of making good all Work of others destroyed or damaged by its correction, removal or replacement of its Defective Work.
- 21.09 If, after the approval of final payment and prior to the expiration of one year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be Defective, Contractor shall promptly, without cost to Owner and in

accordance with Owner's written instructions, either correct such Defective Work or if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, Owner may have the Defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by Contractor. The Contractor agrees to pay a reasonable attorney fee and other reasonable attendant costs of the Owner in the event it becomes necessary for the Owner to employ an attorney to enforce this section or to protect itself against suit over the Contractor's responsibilities. Attorney fees shall be at the prevailing hourly rate of the private sector. The attorney fee hourly rate shall not be less than \$175.00 per hour. All attorney fees collected shall be paid to the operating budget of the Office of the Parish President.

- 21.10 If, instead of requiring correction or removal and replacement of Defective Work, Owner (and prior to approval of final payment) prefers to accept it, the Owner may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price, or, if the acceptance occurs after approval of final payment, an appropriate amount shall be paid by Contractor to Owner.
- 21.11 If Contractor should fail to progress the Work in accordance with the Contract Documents, including any requirements of the Progress Schedule, Owner, after seven (7) days written Notice to Contractor, may, without prejudice to any other remedy Owner may have, make good such deficiencies and the cost thereof including compensation for additional professional services shall be charged against Contractor. In such cases, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents including an appropriate reduction in the Contract Price. If the payments then or thereafter due Contractor are not sufficient to cover such amount, Contractor shall pay the difference to Owner.
- 21.12 The Owner may appoint representatives to make periodic visits to the site and observe the progress and quality of the executed Work. These representatives shall be governed by the same restrictions placed on the Owner by these Specifications. The governing body of the Federal, State or local government exercising authority in the area of the Work may appoint representatives to observe the progress and quality of the Work. Contractor shall cooperate with and assist these representatives in the performance of their duties.
- 21.13 The Contractor shall be responsible for the faithful execution of its Contract and the presence or absence of the Owner's or Government's Representative is in no way or manner to be presumed or assumed to relieve in any degree the responsibility or obligation of the Contractor.
- 21.14 The Contractor shall notify the Owner and the Governmental Agency having jurisdiction as to the exact time at which it is proposed to begin Work so the Owner may provide for inspection of all materials, foundations, excavations, equipment, etc., and all or any part of the Work and to the preparation or manufacture of materials to be used whether within the limits of the Work or at any other place.
- 21.15 The Owner or its representatives shall have free access to all parts of the Work and to all places where any part of the materials to be used are procured, manufactured or prepared. The Contractor shall furnish the Owner all information relating to the Work and the material therefor, which may be deemed necessary or pertinent, and with such samples of materials as may be required. The Contractor, at its own expense, shall supply such labor and assistance as may be necessary in the handling of materials for proper inspection or for inspection of any Work done by it.
- 21.16 No verbal instructions given to the Contractor by the Owner, Project Representative or any of their agents shall change or modify the written Contract. Contractors shall make no claims for additional payments or time based upon verbal instructions.

22.00 SUBSURFACE CONDITIONS

- 22.01 It is understood and agreed that the Contractor is familiar with the subsurface conditions that will be encountered and its price bid for the Work includes all of the costs involved for Work in these conditions and it is furthermore agreed that it has taken into

consideration, prior to its Bid and acceptance by Owner, all of the subsurface conditions normal or unusual that might be encountered in the location of the Work.

- 22.02 Should the Contractor encounter during the progress of the Work subsurface conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, the attention of the Owner shall be directed to such conditions before the conditions are disturbed. If the Owner finds that the conditions materially differ from those shown on the Drawings or indicated in the Specifications, it shall at once make such changes in the Drawings or Specifications as it may find necessary, and any increase or decrease in cost or extension of time resulting from such changes shall be adjusted in the same manner as provided for changes for Extra Work. The Contractor shall submit breakdowns of all costs in a manner as instructed and approved by the Owner.

23.00 REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS

- 23.01 Bidder shall thoroughly examine the site of the Work and shall include in its Bid the cost of removing all structures and obstructions in the way of the Work.
- 23.02 The Contractor shall remove any existing structures or part of structures, fence, building or other encumbrances or obstructions that interfere in any way with the Work. Compensations for the removal of any structure shall be made only if the item(s) to be removed was/were listed as pay item(s) on the Proposal.
- 23.03 If called for in the Special Conditions, all privately and publicly owned materials and structures removed shall be salvaged without damage and shall be piled neatly and in an acceptable manner upon the premises if it belongs to an abutting property owner, otherwise at accessible points along the improvements. Materials in structures which is the property of the Owner or property of any public body, private body or individual which is fit for use elsewhere, shall remain property of the original Owner. It shall be carefully removed without damage, in sections which may be readily transported; same shall be stored on or beyond the right of way. The Contractor will be held responsible for the care and preservation for a period of ten (10) days following the day the last or final portion of the materials stored at a particular location are placed thereon. When privately owned materials are stored beyond the right of way, the Contractor will be held responsible for such care and preservation for a period of ten (10) days responsibility period for care and preservation of the materials begins. The Contractor must furnish the Owner with evidence satisfactory that the proper owner of the materials has been duly notified by the Contractor that the said owner must assume responsibility for its materials on the date following the Contractor's ten (10) day responsibility.

24.00 INSURANCE

- 24.01 Contractor shall secure and maintain at its expense such insurance that will protect it and the Parish from claims for injuries to persons or damages to property which may arise from or in connection with the performance of Services or Work hereunder by the Contractor, his agents, representatives, employees, and/or subcontractors. The cost of such insurance shall be included in Contractor's bid.
- 24.02 The Contractor shall not commence work until it has obtained all insurance as required for the Parish Project. If the Contractor fails to furnish the Parish with the insurance protection required and begins work without first furnishing Parish with a currently dated certificate of insurance, the Parish has the right to obtain the insurance protection required and deduct the cost of insurance from the first payment due the Contractor. Further deductions are permitted from future payments as are needed to protect the interests of the Parish including, but not limited to, renewals of all policies.
- 24.03 Payment of Premiums: The insurance companies issuing the policy or policies shall have no recourse against the Parish of St. Tammany for payment of any premiums or for assessments under any form of policy.
- 24.04 Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.

- 24.05 Authorization of Insurance Company(ies) and Rating: All insurance companies must be authorized to do business in the State of Louisiana and shall have an A.M. Best rating of no less than A-, Category VII.
- 24.06 Policy coverages and limits must be evidenced by Certificates of Insurance issued by Contractor's carrier to the Parish and shall reflect:

Date of Issue: Certificate must have current date.

Named Insured: The legal name of Contractor under contract with the Parish and its principal place of business shall be shown as the named insured on all Certificates of Liability Insurance.

Name of Certificate Holder: St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434

Project Description: A brief project description, including Project Name, Project Number and/or Contract Number, and Location.

Endorsements and Certificate Reference: All policies must be endorsed to provide, and certificates of insurance must evidence the following:

Waiver of Subrogation: The Contractor's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance. *Policy endorsements required for all coverages.*

Additional Insured: The Parish of St. Tammany shall be named as additional named insured with respect to general liability, marine liability, pollution/environmental liability, automobile liability and excess liability coverages. *Policy endorsements required.*

Hold Harmless: Contractor's liability insurers shall evidence their cognizance of the Hold Harmless and Indemnification in favor of St. Tammany Parish Government by referencing same on the face of the Certificate(s) of Insurance.

Cancellation Notice: Producer shall provide thirty (30) days prior written notice to the Parish of policy cancellation or substantive policy change.

- 24.07 The types of insurance coverage the Contractor is required to obtain and maintain throughout the duration of the Contract, include, but is not limited to:

1. Commercial General Liability insurance with a Combined Single Limit for bodily injury and property damage of at least \$1,000,000 per Occurrence/\$2,000,000 General Aggregate/Products-Completed Operations Per Project. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
 - a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal Injury;
 - e) Broad form property damage;
 - f) Explosion and collapse.
2. Marine Liability/Protection and Indemnity insurance is required for any and all vessel and/or marine operations in the minimum limits of \$1,000,000 per occurrence/\$2,000,000 per project general aggregate. The coverage shall include, but is not limited to, the basic coverages found in the Commercial General Liability insurance and coverage for third party liability.

3. Contractors' Pollution Liability and Environmental Liability insurance in the minimum amount of \$1,000,000 per occurrence, \$2,000,000 general aggregate and include coverage for full contractual liability and for all such environmental and/or hazardous waste exposures affected by this project.
 4. Business Automobile Liability insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
 - a) Any automobiles;
 - b) Owned automobiles;
 - c) Hired automobiles;
 - d) Non-owned automobiles;
 - e) Uninsured motorist.
 5. Workers' Compensation/Employers Liability insurance: worker's compensation insurance coverage and limits as statutorily required; Employers' Liability Coverage shall be not less than \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate, except when projects include exposures covered under the United States Longshoremen and Harbor Workers Act, Maritime and/or Jones Act and/or Maritime Employers Liability (MEL) limits shall be not less than \$1,000,000/\$1,000,000/\$1,000,000. *Coverage for owners, officers and/or partners shall be included in the policy and a statement of such shall be made by the insuring producer on the face of the certificate.*
 6. Owners Protective Liability (OPL) (formerly Owners and Contractors Protective Liability (OCP) Insurance) shall be furnished by the Contractor naming St. Tammany Parish Government as the Named Insured and shall provide coverage in the minimum amount of \$1,000,000 combined single limit (CSL) each occurrence, \$2,000,000 aggregate. Any project valued in excess of \$3,000,000 shall be set by the Office of Risk Management. The policy and all endorsements shall be addressed to St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434.
 7. Builder's Risk Insurance shall be required on buildings, sewage treatment plants and drainage pumping stations, and shall be written on an "all-risk" or equivalent policy form in the amount of the full value of the initial Contract sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising 100% total value for the entire project including foundations. Deductibles should not exceed \$5,000 and Contractor shall be responsible for any and all policy deductibles. This insurance shall cover portions of the work stored off the site, and also portions of the work in transit. In addition, Installation Floater Insurance, on an "all-risk" form, will be carried on all pumps, motors, machinery and equipment on the site or installed. Both the Builder's Risk Insurance and the Installation Floater Insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors and shall terminate only when the Project has been accepted. St. Tammany Parish Government, P. O. Box 628, Covington, LA 70434 shall be the first named insured on the Builder's Risk and Installation Floater Insurance.
 8. Professional Liability (errors and omissions) insurance in the sum of at least One Million Dollars (\$1,000,000) per claim with Two Million Dollars (\$2,000,000) annual aggregate.
 9. An umbrella policy or excess policy may be required and/or allowed to meet minimum coverage limits, subject to the review and approval by St. Tammany Parish Government, Office of Risk Management.
- 24.08 All policies of insurance shall meet the requirements of the Parish of St. Tammany prior to the commencing of any work. The Parish of St. Tammany has the right, but not the duty, to approve all insurance policies prior to commencing of any work. If at any time, it becomes known that any of the said policies shall be or becomes unsatisfactory to the Parish of St. Tammany as to form or substance; or if a company issuing any such policy shall be or become unsatisfactory to the Parish of St. Tammany, the Contractor shall promptly obtain a new policy, timely submit same to the Parish of St. Tammany for

approval and submit a certificate thereof as provided above. The Parish agrees to not unreasonably withhold approval of any insurance carrier selected by Contractor. In the event that Parish cannot agree or otherwise authorize said carrier, Contractor shall have the option of selecting and submitting new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish shall have the unilateral opportunity to thereafter select a responsive and responsible insurance carrier all at the cost of Contractor and thereafter deduct from Contractor's fee the cost of such insurance.

- 24.09 Upon failure of Contractor to furnish, deliver and/or maintain such insurance as above provided, the contract, at the election of the Parish of St. Tammany, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor to maintain insurance shall not relieve the Contractor from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligation of the Contractor concerning indemnification.
- 24.10 Contractor shall maintain a current copy of all annual insurance policies and provide same to the Parish of St. Tammany as may be reasonably requested.
- 24.11 It shall be the responsibility of Contractor to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Contractor. Contractor shall further ensure the Parish is named as additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project, and that renewal certificates for any policies expiring prior to the Parish's final acceptance of the project shall be furnished to St. Tammany Parish Government, Department of Legal, Office of Risk Management, without prompting.

NOTICE:

These are only an indication of the coverages that are generally required. Additional coverages and/or limits may be required for projects identified as having additional risks or exposures. Please note that some requirements listed may not necessarily apply to your specific services. St. Tammany Parish Government reserves the right to remove, replace, make additions to and/or modify any and all of the insurance requirement language upon review of the final scope of services presented to Office of Risk Management prior to execution of a contract for services.

For inquiries regarding insurance requirements, please contact:

**St. Tammany Parish Government
Office of Risk Management
P. O. Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

- 24.12 Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's Responsibility for payment of damages resulting from its operations under this Contract.

25.00 OWNER'S RIGHT TO OCCUPANCY

- 25.01 The Owner shall have the right to use, at any time, any and all portions of the Work that have reached such a stage of completion as to permit such occupancy, provided such occupancy does not hamper the Contractor or prevent its efficient completion of the Contract or be construed as constituting an acceptance of any part of the Work.
- 25.02 The Owner shall have the right to start the construction of houses, structures or any other building concurrent with the Contractor's Work.

26.00 SURVEY HORIZONTAL AND VERTICAL CONTROL

- 26.01 The Owner shall provide surveys for construction to establish reference points which in its judgment are necessary to enable Contractor to layout and proceed with its Work. Contractor shall be responsible for surveying and laying out the Work and shall protect and preserve the established reference points and shall make no changes or relocations without

the prior written approval of the Owner. Contractor shall report to Owner whenever any reference point is lost or destroyed and the Owner shall decide if the reference point shall be replaced by its or the Contractor's forces.

26.02 The Contractor shall establish lines and grades with its own forces in sufficient number and location for the proper execution of the Work.

26.03 If the Contractor, during the construction, damages the established property corners and/or other markers and thereafter requests the Owner to re-stake same in order to complete the project, this expense will be borne solely by the Contractor.

27.00 TERMINATION OF THE CONTRACT, OWNER'S AND CONTRACTORS RIGHT TO STOP WORK.

27.01 If the Contractor should be adjudged bankrupt (voluntarily or involuntarily) or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should persistently or repeatedly refuse or should fail (except in cases for which extension of time is provided) to supply enough properly skilled workmen or proper materials, or if it should fail to make prompt payment to Subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of the Contract, then the Owner, upon the certificate of the Owner that, in its unilateral discretion and judgment, believes sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor ten (10) calendar days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances thereon and finish the Work by whatever method the Owner may deem expedient.

27.02 Failure of the Contractor to start the Work within the time limit specified herein or substantial evidence that the progress being made by the Contractor is sufficient to complete the Work within the specified time shall be grounds for termination of the Contract by the Owner.

27.03 Before the Contract is terminated, the Contractor and its surety will first be notified in writing by the Owner of the conditions which make termination of the Contract imminent. When after ten (10) calendar days' notice is given and if satisfactory effort has not been made by the Contractor or its surety to correct the conditions, the Owner may declare, in its exclusive discretion, that the Contract is terminated and so notify the Contractor and its surety accordingly.

27.04 Upon receipt of notice from the Owner that the Contract has been terminated, the Contractor shall immediately discontinue all operations. The Owner may then proceed with the Work in any lawful manner that it may elect until Work is finally completed.

27.05 The exclusive right is reserved to the Owner to take possession of any machinery, implements, tools or materials of any description that shall be found upon the Work, to account for said equipment and materials, and to use same to complete the Project. When the Work is finally completed, the total cost of same will be computed. If the total cost is less than the Contract Price, the difference will not be paid to the Contractor or its surety.

27.06 In case of termination, all expenses incident to ascertaining and collecting losses under the Bond, including legal services, shall be assessed against the Bond.

27.07 If the Work should be stopped under any order of any court or public authority for period of sixty (60) calendar days, through no act or fault of the Contractor or anyone employed by it, or if the Owner shall fail to pay the Contractor within a reasonable time any sum certified by the Owner, then the Contractor may, upon ten (10) calendar days written notice to the Owner, stop Work or terminate this Contract and recover from the Owner payment for all Work properly and professionally executed in a workmanlike manner. This loss specifically includes actual cost of materials and equipment, together with all wages inclusive of all federal, state, and local tax obligations. This loss specifically includes reimbursement of all insurances on a pro-rata basis from the date of termination to date of policy period. This loss excludes and specifically does not include recovery by the Contractor for lost profit, indirect & direct expenses, overhead, and the like.

28.00 PAYMENTS TO THE CONTRACTOR

- 28.01 Monthly certificates for partial payment, in a form approved by the Owner, shall be transmitted to the Owner upon receipt from the Contractor and acceptance by the Owner. In accordance with LSA-R.S. 38:2248(A), when the Contract Price is less than five hundred thousand dollars, these certificates shall be equal to ninety percent (90%) of both the Work performed and materials stored at the site; and when the Contract Price is five hundred thousand dollars or more, these certificates shall be equal to ninety-five percent (95%) of both the Work performed and materials stored at the site. Partial payment certificates shall include only Work, materials and equipment that are included in official Work Order and which meet the requirements of plans, Specifications and Contract Documents. These monthly estimates shall show the amount of the original estimate for each item, the amount due on each item, the gross total, the retained percentage, the amount previously paid and the net amount of payment due.
- 28.02 After final completion and acceptance by the Owner of the entire Work, and when the Contract Price is less than five hundred thousand dollars, the Owner shall issue to the Contractor Certificate of Payment in sum sufficient to increase total payments to ninety percent (90%) of the Contract Price. After final completion and acceptance by the Owner of the entire Work, and when the Contract Price is five hundred thousand dollars or more, the Owner shall issue to the Contractor Certificate of Payment in sum sufficient to increase total payments to ninety-five percent (95%) of the Contract Price.
- 28.03 When the Contract Price is less than five hundred thousand dollars, the final payment certificate of the remaining ten percent (10%) of the Contract Price, minus any deduction for deficient or Defective Work or other applicable deductions, will be issued by the Owner forty-five (45) days after filing acceptance in the Mortgage Office of the Parish and a Clear Liens and Privilege Certificate has been secured. When the Contract Price is five hundred thousand dollars or more, the final payment certificate of the remaining five percent (5%) of the Contract Price, minus any deduction for deficient or Defective Work or other applicable deductions, will be issued by the Owner forty-five (45) days after filing acceptance in the Mortgage Office of the Parish and a Clear Liens and Privilege Certificate has been secured. Before issuance of the final payment certificate, the Contractor shall deposit with the Owner a certificate from the Clerk of Court and Ex-Officio Recorder of Mortgages from the Parish in which the Work is performed to the effect that no liens have been registered against Contract Work.
- 28.04 When, in the opinion of the Contractor, the Work provided for and contemplated by the Contract Documents has been substantially completed, the Contractor shall notify the Owner in writing that the Work is substantially complete and request a final inspection. The Owner shall proceed to perform such final inspection accompanied by the Contractor. Any and all Work found by this inspection to be Defective or otherwise not in accordance with the plans and Specifications shall be corrected to the entire satisfaction of the Owner and at the sole expense of the Contractor. If the Contract is found to be incomplete in any of its details, the Contractor shall at once remedy such defects, and payments shall be withheld and formal acceptance delayed until such Work has been satisfactorily completed.
- 28.05 If payment is requested on the basis of materials and equipment not incorporated in the Work, but delivered and suitably stored and protected from damage and theft at the site, the Request for Payment shall also be accompanied by such data, satisfactory to the Owner, as will establish Owner's title to the material and equipment and protect its interest therein, including applicable insurance.
- 28.06 Each subsequent Request for Payment shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied to discharge in full all of Contractor's obligations reflected in prior Request for Payment.
- 28.07 Each subsequent request for payment shall include an affidavit by Contractor that Contractor, all subcontractors, agents, material suppliers and all other persons supplying material to the project upon which State of Louisiana and/or St. Tammany sales taxes are lawfully due have paid these taxes and that all supplies and materials purchased for this project and for which Contractor has been paid have had all lawfully due State and/or St. Tammany sales taxes paid.

- 28.08 The Bid Proposal, unless otherwise modified in writing, and the Contract constitute the complete Project. The Contract Prices constitute the total compensation payable to Contractor and the cost of all of the Work and materials, taxes, permits and incidentals must be included into the Bid submitted by the Contractor and included into those items listed on the Proposal.
- 28.09 Any additional supporting data required by the Owner in order to substantiate Contractor's request for payment shall be furnished by Contractor at no cost to the Owner.
- 28.10 Owner may withhold from payment to Contractor as may be necessary to protect itself from loss on account of:
- (1) Defective and/or inferior work;
 - (2) Damage to the property of Owner or others caused by Contractor;
 - (3) Failure by Contractor to make payments properly to sub-contractors or to pay for labor, materials or equipment used on this project;
 - (4) Failure by Contractor to pay taxes due on materials used on this project;
 - (5) Damage by Contractor to another Contractor;
 - (6) Insolvency;
 - (7) Bankruptcy, voluntary or involuntary;
 - (8) Revocation of corporate status;
 - (9) Failure to follow corporate formalities;
 - (10) Unprofessional activities;
 - (11) Unworkmanlike performance;
 - (12) Fraud and/or misrepresentation of any kind.

29.00 ACCEPTANCE AND FINAL PAYMENT(S)

- 29.01 Upon receipt of written notice from Contractor that the work is substantially complete and usable by Owner or the Public in suitable manner, the Owner and the Contractor shall jointly inspect the work.
- 29.02 If the Owner by inspection determines that the work is not substantially complete in a suitable manner for use by the Owner or the Public, then the Owner shall so notify the Contractor in writing stating such reason. All reasons need not be disclosed unless actually known. The Owner is afforded an opportunity to amend said notices as are reasonably possible.
- 29.03 If the Owner by its inspection determines that the work is substantially complete, it shall prepare a list of all items not satisfactorily completed and shall notify the Contractor and Owner in writing that the work is substantially complete and subject to satisfactory resolution of those items on the list (punch list). Punch lists may be amended from time to time by Owner in the event that additional deficiencies are discovered. In accordance with LSA-R.S. 38:2248(B), any punch list generated during a construction project shall include the cost estimates for the particular items of work the design professional has developed based on the mobilization, labor, material, and equipment costs of correcting each punch list item. The design professional shall retain his working papers used to determine the punch list items cost estimates should the matter be disputed later. The contract agency shall not withhold from payment more than the value of the punch list. Punch list items completed shall be paid upon the expiration of the forty-five (45) day lien period. The provisions of this Section shall not be subject to waiver.
- 29.04 Upon determination of substantial completeness with the punch list, the Contract Time is interrupted and the Contractor is given a reasonable time not to exceed thirty (30) consecutive calendar days to effect final completion by correcting or completing all of those items listed on the punch list. If the items on the punch list are not completed in a satisfactory manner within the thirty day period, then the Contract Time will begin to run again and will include for purposes of determining liquidated damages the thirty day period the grace period being withdrawn.
- 29.05 Upon receipt by Owner of written determination that all work embraced by the contract has been completed in a satisfactory manner, the Owner shall provide a written acceptance to Contractor who shall record Owner's written acceptance with the recorder of Mortgages, St. Tammany Parish. The Contractor shall properly prepare, submit and pay for all costs associated with said Acceptance. The Contractor is also responsible for preparation, re-

submission and payment of any and all updated certificates.

29.06 Retainage monies, minus those funds deducted in accordance to the requirements of this agreement including but not limited to Paragraph 28.10, shall be due Contractor not earlier than forty-six (46) calendar days after recordation of certificate of Owner's acceptance provided the following:

- (1) Contractor shall prepare, secure, pay for and submit clear lien and privilege certificate, signed and sealed by Clerk of Court or Recorder of Mortgages, Parish of St. Tammany and dated at least forty-six (46) days after recordation of certificate of acceptance;
- (2) Ensure that the official representative of the Owner has accepted as per LSA-R.S. 38:2241.1, *et seq.* and that all following sub-sections have been properly satisfied as per law;
- (3) Ensure that all signatures are affixed and that there exists the requisite authority for all signatures;
- (4) Ensure accurate and proper legal descriptions;
- (5) Properly identify all parties and/or signatories;
- (6) Properly identify all mailing addresses;
- (7) Correctly set for the amount of the contract, together with all change orders;
- (8) Set out a brief description of the work performed;
- (9) Reference to any previously recorded contract, lien or judgment inscription that may affect the property;
- (10) Certification that substantial completion has occurred, together with any applicable date(s);
- (11) Certification that no party is in default and/or that the project has been abandoned.

29.07 After securing the clear lien and privilege certificate the Contractor shall prepare its final application for payment and submit to Owner. The Owner shall approve application for payment, or state its objections in writing and forward to Contractor for resolution.

30.00 NOTICE AND SERVICE THEREOF

30.01 Any Notice to Contractor from the Owner relative to any part of this Contract shall be in writing and shall be considered delivered and the service thereof completed when said notice is posted; by certified mail, return receipt requested to the said Contractor at its last given address, or delivered in person to said Contractor or its authorized representative on the Work.

31.00 INTENTION OF THESE GENERAL CONDITIONS

31.01 These General Conditions shall be applicable to all contracts entered into by and between the Owner and Contractors, except as may be altered or amended with the consent of the Owner, and/or provided for in the Special Conditions of each contract. Contractor shall be presumed to have full knowledge of these General Conditions which shall be applicable to all contracts containing these General Conditions, whether Contractor has obtained a copy thereof or not.

32.00 SEVERABILITY

32.01 If any one or more or part of any of the provisions contained herein and/or in the Specifications and Contract for the Work shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement or attachment, but it shall be construed as if such

invalid, illegal, or unenforceable provision or part of a provision had never been contained herein.

32.02 CHANGING THESE CONDITIONS: Owner reserves the right to change or modify these General Conditions as it deems best, or as required by law. The General Conditions may also be modified for a particular project by the use of Special Conditions prior to the issuance of the Advertisement for Bid. However, once an advertisement for bid is made for any specific project, any changes to the General Conditions as they affect that specific project must be made in writing and issued via an addendum in accordance with State Law.

33.00 LAW OF THE STATE OF LOUISIANA

33.01 The Contract Documents shall be governed by the Law of the State of Louisiana.

33.02 The Contractor agrees to pay reasonable attorney's fees and other reasonable attendant costs, in the event that it becomes necessary for the Owner to employ an attorney in order to enforce compliance with or any remedy relating to any covenants, obligations, or conditions imposed upon the Contractor by this Agreement. Attorney fees shall be based upon the prevailing hourly rate of attorney rates in the private sector. In no case shall the hourly rate be less than \$175.00 per hour. All attorney fees collected shall be paid the operating budget of the Office of the Parish President.

33.03 The jurisdiction and venue provisions shall apply to all contractors, sureties, and subcontractors. The 22nd Judicial District for the Parish of St. Tammany shall be the court of exclusive jurisdiction and venue for any dispute arising from these General Conditions and/or any contract executed in conjunction with these General Conditions. All parties specifically waive any rights they have or may have for removal of any disputes to Federal Court, or transfers to different State District Court.

33.04 Contractor warrants that it has and/or had received a copy of these General Conditions at all times material hereto; Contractor further agrees that it has read and fully and completely understands each and every condition herein.

33.05 The property description will be more fully set out by an attached exhibit.

33.06 The Contractor warrants that it has the requisite authority to sign and enter this agreement.

33.07 It is specifically understood and agreed that in the event Contractor seeks contribution from the Parish or pursues its legal remedies for any alleged breach of this agreement by the Parish, then the following list of damages SHALL NOT BE RECOVERABLE BY CONTRACTOR. This list includes, but is not limited to:

1. indirect costs and/or expenses;
2. direct costs and/or expenses;
3. time-related costs and/or expenses;
4. award of extra days;
5. costs of salaries or other compensation of Contractor's personnel at Contractor's principal office and branch offices;
6. expenses of Contractor's principal, branch and/or field offices;
7. any part of Contractor's capital expenses, including any interest on Contractor's capital employed for the work;
8. any other charges related to change orders;
9. overhead and general expenses of any kind or the cost of any item not specifically and expressly included in Cost of Work.

33.08 DEFAULT AND WAIVERS

It is understood that time is of the essence. It is specifically understood between the parties that Contractor waives any and all notice to be placed in default by the Owner. This subsection shall supersede and prime any other subsection herein above that is in conflict. The Owner specifically reserves its right and specifically does not waive the requirement to be placed in default by the Contractor as per law.

33.09 St. Tammany Parish Government contracts to be awarded are dependent on the available funding and/or approval by members designated and/or acknowledged by St. Tammany

Parish Government. At any time St. Tammany Parish Government reserves the right to cancel the award of a contract if either or both of these factors is deficient.

33.10 It is the Parish's policy to provide a method to protest exclusion from a competition or from the award of a contract, or to challenge an alleged solicitation irregularity. It is always better to seek a resolution within the Parish system before resorting to outside agencies and/or litigation to resolve differences. All protests must be made in writing, and shall be concise and logically presented to facilitate review by the Parish. The written protest shall include:

1. The protester's name, address, and fax and telephone numbers and the solicitation, bid, or contract number;
2. A detailed statement of its legal and factual grounds, including a description of the resulting prejudice to the protester;
3. Copies of relevant documents;
4. All information establishing that the protester is an interested party and that the protest is timely; and
5. A request for a ruling by the agency; and a statement of the form of relief requested.

The protest shall be addressed to Director of Procurement, St. Tammany Parish Government, P.O. Box 628, Covington, LA 70434.

The protest review shall be conducted by the Parish Procurement Department.

Only protests from interested parties will be allowed. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals must be filed with and received by the Procurement Department BEFORE those deadlines.

Any other protest shall be filed no later than ten (10) calendar days after the basis of the protest is known, or should have been known (whichever is earlier).

The Parish will use its best efforts to resolve the protest within thirty (30) days of the date that it is received by the Parish. The written response will be sent to the protestor via mail and, fax, if a fax number has been provided by the protestor. The protester can request additional methods of notification.

Section 09

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 PARISH OF ST. TAMMANY 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 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 BEEN REVOKED OR RESCINDED.

SECRETARY-TREASURER

DATE

Certificate of Insurance Instructions

The below information is intended to guide Contractors on what information is needed to be listed on the Certificate of Insurance. All Insurance limit requirements can be found in Attachment D.

- **Certificate Holder** – STPG must be listed as the certificate holder, and it must include our address of: P.O. Box 628, Covington, LA 70434
 - Reason: the certificate holder is where cancellations of coverage, or updated certificates are mailed. If a vendor terminates a policy, we will be notified.
- **Additional Insured** – We must be named as an additional insured so that if there is a lawsuit against the vendor for a project, their coverage will cover STPG as well if we are named in the lawsuit.
 - We must be named in the Description of Operations box – reason: there could be other additional insureds, and we want to have no doubt that we are one of the additional insureds.
 - We must be named as additional insured on the following coverages: General liability, Auto Liability, Umbrella/Excess Liability, Environmental/Pollution Liability.
 - Professional Liability policies do not allow for an additional insured by most carriers.
- **Project Name & Contract #** - We need this listed in the Description of Operations, again so that if there is a lawsuit, we have proof that coverage was active for that project.
- **Waiver of Subrogation** – This can either be listed in the Description of Operations or checked off in the appropriate columns.

From the Insurance Requirement form:

Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance.

- **Owners Protective Liability (OPL) or (OCP)** – Certificate of Insurance for OCP names St. Tammany Parish Government as the Insured and the Certificate Holder.
- Sample of Certificate of Insurance (COI) can be found on page 2.
- Please refer to this section in the package labeled “Insurance Requirements” for limits required for this project

Any questions regarding insurance requirements please contact the Risk Department at 985-898-5226 or email riskman@stpgov.org



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:		FAX (A/C, No):	
	PHONE (A/C, No, Ext):			
INSURED	E-MAIL ADDRESS:			
	INSURER(S) AFFORDING COVERAGE			NAIC #
	INSURER A :			
	INSURER B :			
	INSURER C :			
	INSURER D :			
INSURER E :				
INSURER F :				

COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

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.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY						EACH OCCURRENCE \$
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$
	<input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR						MED EXP (Any one person) \$
							PERSONAL & ADV INJURY \$
							GENERAL AGGREGATE \$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG \$
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						\$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$
	<input type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS	<input type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS	<input type="checkbox"/> NON-OWNED AUTOS					PROPERTY DAMAGE (Per accident) \$
							\$
	UMBRELLA LIAB						EACH OCCURRENCE \$
	<input type="checkbox"/> EXCESS LIAB	<input type="checkbox"/> OCCUR					AGGREGATE \$
	<input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$	<input type="checkbox"/> CLAIMS-MADE					\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/>
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y / N <input type="checkbox"/>	N / A				E.L. EACH ACCIDENT \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Project Name:

Contract #:

(Name St. Tammany Parish Government as an additional insured).

CERTIFICATE HOLDER**CANCELLATION**

St. Tammany Parish Government
P.O. Box 628
Covington, LA 70434

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Bond No.: _____

**CONTRACT AGREEMENT
BETWEEN PARISH AND CONTRACTOR**

BY: ST. TAMMANY PARISH GOVERNMENT

**UNITED STATES OF
AMERICA**

WITH:

**STATE OF LOUISIANA
ST. TAMMANY PARISH**

This agreement is entered into this _____ day of _____,
20____, by and between: «txtREQCompanyName», hereinafter called the "Contractor", whose
business address is «txtREQAddress», «txtREQCity», «txtREQState» «txtREQZip» and the St.
Tammany Parish Government, hereinafter called the "Parish", whose business address is P.O.
Box 628, Covington, LA 70434 (collectively, the "Parties") for «txtPROJECTNAME» project.
Witnessed that the Contractor and the Parish, in consideration of premises and the mutual
covenants, consideration and agreement herein contained, agree as follows:

1. SCOPE OF SERVICES

The Contractor shall furnish all labor and materials and perform all of the work required to build, construct and/or complete in a thorough and workmanlike manner:

«txtScopeSummary»

2. CONSTRUCTION DOCUMENTS

It is recognized by the Parties herein that said Construction Documents, including by way of example and not of limitation, the plans and Specifications, General Conditions, Supplementary General Conditions, any addenda thereto, the drawings (if any), and the bid, quote or other procurement documents impose duties and obligations upon the Parties herein, and said Parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Construction Documents are incorporated herein by reference with the same force and effect as though said Construction Documents were herein set out in full. Copies of the aforementioned Construction Documents are in the possession of both the Contractor and the Parish for reference.

3. TIME FOR COMPLETION

The work shall be commenced on a date to be specified in a written order of the Parish and shall be completed within «intCompletionTime» calendar days from and after said date.

4. COMPENSATION TO BE PAID TO THE CONTRACTOR

The Parish will pay and the Contractor will accept in full consideration for the performance of the Contract the sum of «curREQGrandTotal» dollars.

5. PERFORMANCE AND PAYMENT BOND

To these presents personally came and intervened _____,
(Name of Attorney in Fact)
herein acting for _____, a corporation organized
(Surety)
and existing under the laws of the State of _____, and duly authorized to transact business in the State of Louisiana, as surety, who declared that having taken cognizance of this Contract and of the Construction Documents mentioned herein, he hereby in his capacity as its Attorney in Fact obligates his company, as surety for the said Contractor, unto the said Parish, up to the sum of «curREQGrandTotal». The condition of this performance and payment bond

shall be that should the Contractor herein not perform the Contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Parish from all costs and damages which he may suffer by said Contractor's non-performance or should said Contractor not pay all persons who have fulfilled obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example, workmen, laborers, mechanics, and furnishers of materials, machinery, equipment and fixtures, then said surety agrees and is bound to so perform the Contract and make said payment(s).

Contractor and Parish specifically agree to and recognize (1) the statutory employer relationship existing between the Parish and any employees performing work under this Contract as employees of the Contractor or employees of the "Sub-Contractor", and (2) that the work performed by the employees of the Contractor and the employees of the "Sub-Contractor" is part of the Parish's business, occupation or trade and is essential to the ability of the Parish to generate their products or services, all of which is in accordance with LSA-R.S. 23:1061, and as may be amended.

6. LIABILITY AND INDEMNIFICATION

A. Duty to Defend

Upon notice of any claim, demand, suit, or cause of action against the Parish, alleged to arise out of or be related to this Contract, Contractor shall investigate, handle, respond to, provide defense for, and defend at its sole expense, even if the claim, demand, suit, or cause of action is groundless, false, or fraudulent. The Parish may, but is not required to, consult with or assist the Contractor, but this assistance shall not affect the Contractor's obligations, duties, and responsibilities under this section. Contractor shall obtain the Parish's written consent before entering into any settlement or dismissal.

B. Contractor Liability

Contractor shall be liable without limitation to the Parish for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors.

C. Force Majeure

It is understood and agreed that neither party can foresee the exigencies beyond the control of each party which arise by reason of an Act of God or force majeure; therefore, neither party shall be liable for any delay or failure in performance beyond its control resulting from an Act of God or force majeure. The Parish shall determine whether a delay or failure results from an Act of God or force majeure based on its review of all facts and circumstances. The parties shall use reasonable efforts, including but not limited to, use of continuation of operations plans (COOP), business continuity plans, and disaster recovery plans, to eliminate or minimize the effect of such events upon the performance of their respective duties under this Contract.

D. Indemnification

Contractor shall fully indemnify and hold harmless the Parish, without limitation, for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents,

employees, partners or subcontractors. The Contractor shall not indemnify for the portion of any loss or damage arising from the Parish's act or failure to act.

E. Intellectual Property Indemnification

Contractor shall fully indemnify and hold harmless the Parish, without limitation, from and against damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities in any action for infringement of any intellectual property right, including but not limited to, trademark, trade-secret, copyright, and patent rights.

When a dispute or claim arises relative to a real or anticipated infringement, the Contractor, at its sole expense, shall submit information and documentation, including formal patent attorney opinions, as required by the Parish.

If the use of the product, material, service, or any component thereof is enjoined for any reason or if the Contractor believes that it may be enjoined, Contractor, while ensuring appropriate migration and implementation, data integrity, and minimal delays of performance, shall at its sole expense and in the following

order of precedence: (i) obtain for the Parish the right to continue using such product, material, service, or component thereof; (ii) modify the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; (iii) replace the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; or, (iv) provide the Parish monetary compensation for all payments made under the Contract related to the infringing product, material, service, or component, plus for all costs incurred to procure and implement a non-infringing product, material, or service of at least equal quality and performance. Until this obligation has been satisfied, the Contractor remains in default.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon the Parish's unauthorized: i) modification or alteration of the product, material or service; ii) use of the product, material or service in combination with other products not furnished by Contractor; or, iii) use of the product, material or service in other than the specified operating conditions and environment.

7. MODIFICATION OF CONTRACT TERMS

Provided that any alterations which may be made in the terms of the Contract or in the work to be done under it, or the giving by the Parish of any extensions of time for the performance of the Contract, or any other forbearance on the part of either the Parish or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions or other forbearance being hereby waived.

8. TERMINATION, CANCELLATION, AND SUSPENSION

A. Termination

The term of this Contract shall be binding upon the Parties hereto until the work has been completed by the Contractor and accepted by the Parish, and all payments required to be made to the Contractor have been made. But, this Contract may be terminated upon thirty (30) days written notice under any or all of the following conditions:

- 1) By mutual agreement and consent of the Parties hereto;

- 2) By the Parish as a consequence of the failure of the Contractor to comply with the terms, progress, or quality of the work in a satisfactory manner, proper allowances being made for circumstances beyond the control of the Contractor;
- 3) By either party upon failure of the other party to fulfill its obligations as set forth in this Contract;
- 4) By the Parish with less than thirty (30) days' notice due to budgetary reductions and changes in funding priorities by the Parish;
- 5) In the event of the abandonment of the project by the Parish.

Upon termination, the Contractor shall be paid for actual work performed prior to the Notice of Termination, either based upon the established hourly rate for services actually performed, or on a pro-rata share of the basic fee based upon the phase or percentage of work actually completed, depending on the type of compensation previously established under this Contract.

Upon Termination, the Contractor shall deliver to the Parish all original documents, notes, drawings, tracings, computer files, and other files pertaining to this Contract or the Work performed, except for the Contractor's personal and administrative files.

B. Cancellation

The continuation of this Contract is contingent upon the appropriation of funds to fulfill the requirements of the Contract by the Parish. If the Parish fails to appropriate sufficient monies to provide for the continuation of this or any other Contract, or if such appropriation is reduced by the veto of Parish President by any means provided in the appropriations Ordinance to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the Contract, the Contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated. It is understood and agreed that paragraph (8)(C) below may preempt this paragraph, all at the exclusive and unilateral option of the Parish.

C. Suspension

Should the Parish desire to suspend the work, but not definitely terminate the Contract, the Parish shall supply the Contractor with thirty (30) days' notice. The Parish will also supply Contractor thirty (30) days' notice that the work is to be reinstated and resumed in full force. Contractor shall receive no additional compensation during the suspension period. The Parties may revisit the terms of this Contract during the suspension period.

The suspension shall not exceed six (6) months, unless mutually agreed upon between the Parties.

- D.** Failure to complete or deliver within the time specified or to provide the services as specified in the bid or response will constitute a default and may cause cancellation of the contract. Where the Parish has determined the contractor to be in default. The Parish reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with the cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid or response from the defaulting contractor will be considered.
- E.** In the event of a default and/or breach of this agreement and this matter is forwarded to legal counsel, then the prevailing party may be entitled to collect a reasonable attorney fees and all costs associated therewith whether or not litigation is initiated. Attorney fees shall be based upon the current, reasonable prevailing rate for counsel in the private sector. The Parties agree to be responsible for such attorney fees, together for all with legal interest from date of agreement breach, plus all costs of collection.

- F.** Termination or cancellation of this agreement will not affect any rights or duties arising under any term or condition herein.
- G.** As to the filing of voluntary or involuntary bankruptcy by Contractor, Contractor agrees that if any execution or legal process is levied upon its interest in this Contract, or if any liens or privileges are filed against its interest, or if a petition in bankruptcy is filed against it, or if it is adjudicated bankrupt in involuntary proceedings, or if it should breach this Contract in any material respect, the Parish shall have the right, at its unilateral option, to immediately cancel and terminate this Contract. In the event that Contractor is placed in any chapter of bankruptcy, voluntarily or involuntarily, or otherwise triggers any provision of the preceding sentence herein, it is understood and agreed that all materials, goods and/or services provided shall be and remain the property of the Parish. All rights of Contractor as to goods, wares, products, services, materials and the like supplied to Parish shall be deemed forfeited.

9. RECORDATION OF CONTRACT

Contractor authorizes Parish to deduct from any payment due herein costs and service fees for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law.

10. AUTHORITY TO ENTER CONTRACT

The undersigned representative of Contractor warrants and personally guarantees that he/she has the requisite and necessary authority to enter and sign this Contract on behalf of the corporate entity, partnership, etc. The undersigned Parties warrant and represent that they each have the respective authority and permission to enter this Contract. In the event that Contractor is a member of a corporation, partnership, L.L.C., L.L.P., or any other juridical entity, the Parish requires, as an additional provision, that Contractor supply a certified copy of a corporate resolution authorizing the undersigned to enter and sign this Contract. Another option to fulfill this additional provision he/she can supply Louisiana Secretary of State Business filings confirming that he/she is a managing member of a corporation, partnership, L.L.C., L.L.P., or any other juridical entity which authorizes the undersigned to enter and sign this Contract.

Bond No.:_____

In Witness thereof, the Parties hereto on the day and year first above written have executed this Contract in **One (1)** counterpart, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

WITNESSES:

Signature

Print Name

Signature

Print Name

CONTRACTOR:

Signature

Print Name

Title

Date

Bond No.: _____

WITNESSES:

**ST. TAMMANY PARISH
GOVERNMENT:**

Signature

Print Name

Signature

Print Name

Michael B. Cooper
Parish President

Date

APPROVED BY:

Assistant District Attorney
Civil Division

(Surety)

Signature

Date

Print Name

CORONER CHILLER ADDITION

ST TAMMANY PARISH, LOUISIANA

BID NO : 25-13-2

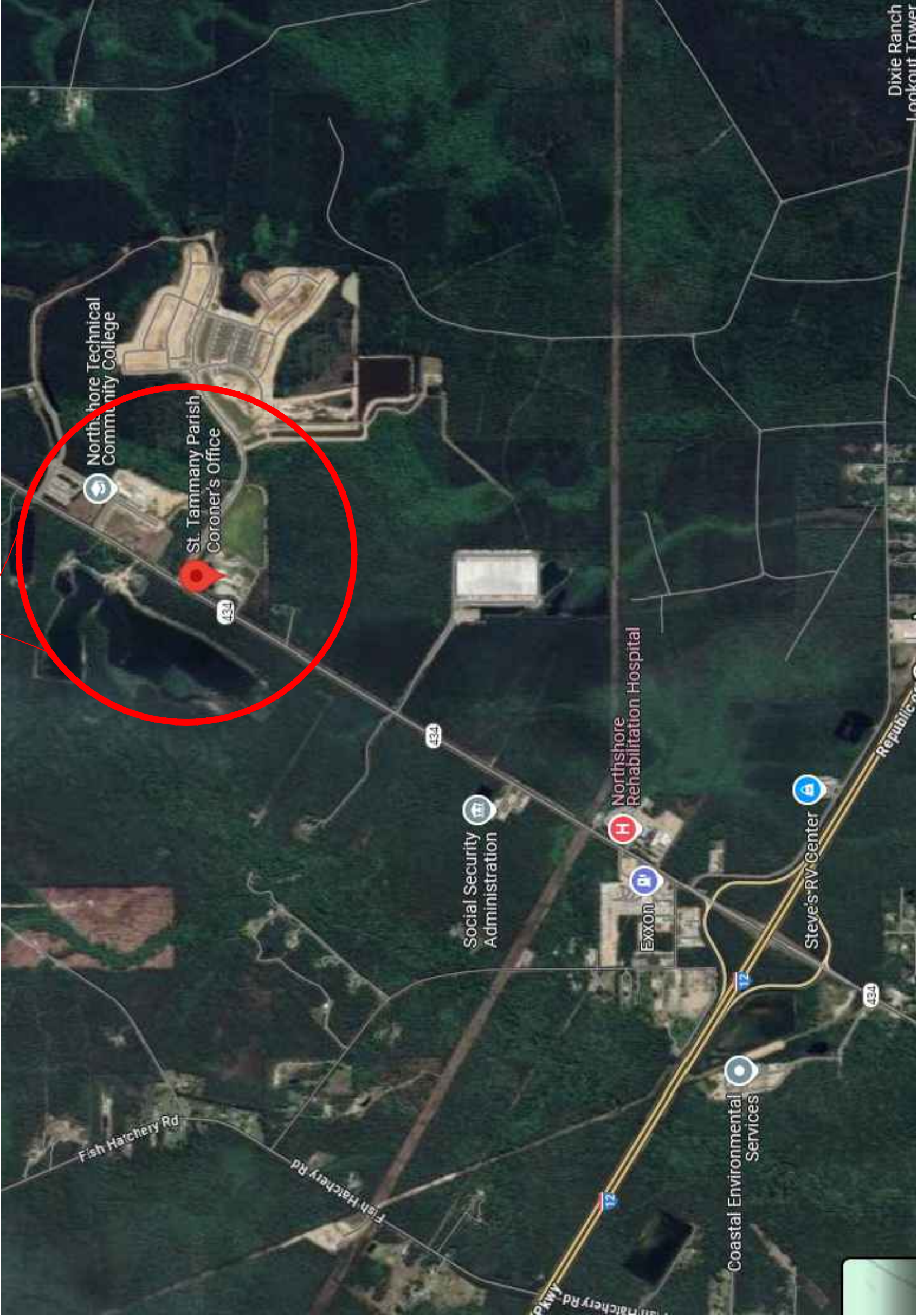
MICHAEL B. COOPER

PARISH PRESIDENT

LUCIEN T. VIVIEN, JR. & ASSOCIATES, INC.

MECHANICAL & ELECTRICAL CONSULTING ENGINEERS

AREA OF
WORK



- CONSTRUCTION NOTES:
1. FOR SCOPE AND PHASING OF WORK, SEE SPECIFICATION SECTION 011100.
 2. ALL SHUTDOWNS MUST BE SCHEDULED WITH SCHOOLS REPRESENTATIVE A MINIMUM OF ONE WEEK BEFORE PERFORMANCE OF WORK.

INDEX	OF	DRAWINGS
SHEET	TITLE	
T-1	TITLE SHEET AND SHEET LIST	
ME101	SITE PLAN - MECHANICAL AND ELECTRICAL	
ME101	CHILLER SITE PLAN - MECHANICAL DEMOLITION AND NEW	
M201	MECHANICAL SCHEDULES AND DETAILS	
E101	CHILLER SITE PLAN - ELECTRICAL NEW	

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CONSENT OF LUCIEN T. VIVIEN, JR. & ASSOC., INC.



CONSTRUCTION DOCUMENTS	REVISION:
CC BY:	DEV
DRAWN BY:	LAR
DESIGNED BY:	DEV
DATE:	3-27-2025
SHEET TITLE:	

TITLE SHEET AND SHEET LIST

VICINITY MAP



T-1

Section 12

CORONER CHILLER
ADDITION
ST. TAMMANY PARISH, LOUISIANA

LUCIEN T. VIVIEN JR.
CONSULTING ENGINEERS, INC.
3510 N CAUSEWAY BLVD., SUITE 612
METairie, LOUISIANA 70002
T (504) 218-5409 F (504) 218-5412
WWW.VIVIEENGINEERS.COM

Lucien T. Vivien Jr.
AND ASSOCIATES, INC.
CONSULTING ENGINEERS

3910 N. CAUSEWAY BLVD., SUITE 612
METairie, LOUISIANA 70002
T (504) 218-5409 F (504) 218-5412
WWW.VIVIENENGINEERS.COM



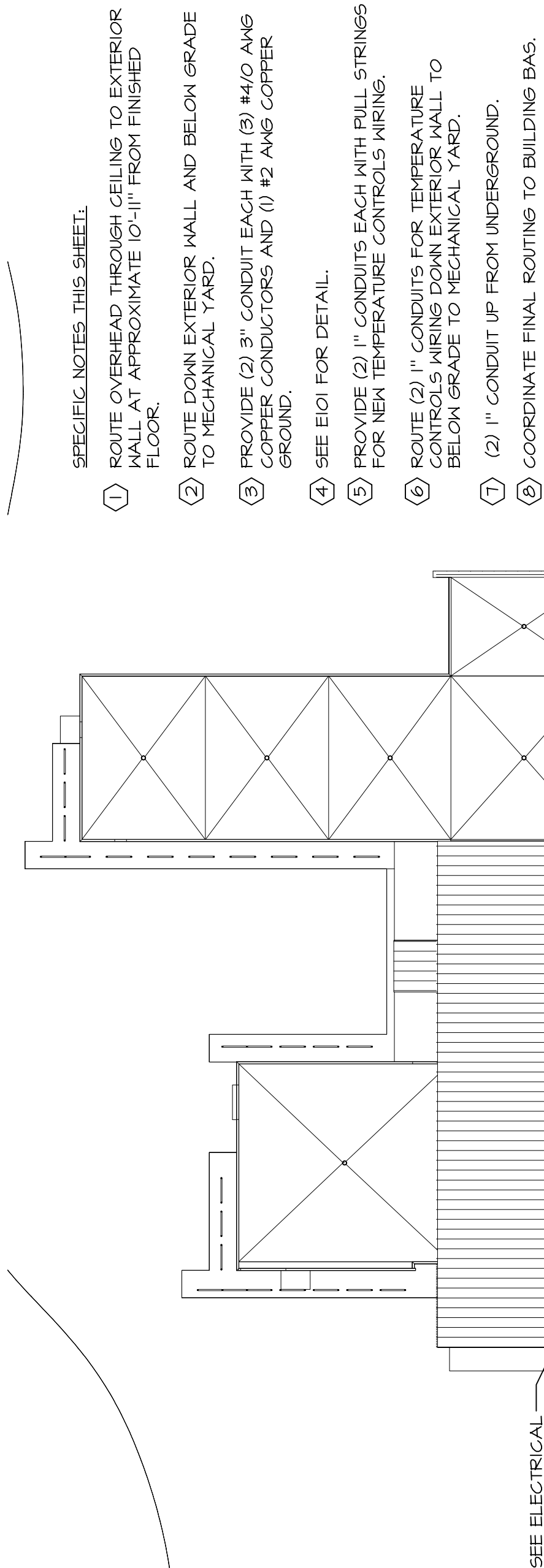
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MARCH 27, 2025



ST. TAMMANY PARISH, LOUISIANA

CORONER CHILLER
ADDITION



CORONER CHILLER
ADDITION

ST. TAMMANY PARISH, LOUISIANA

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CONSTRUCTION DOCUMENTS	
REVISION:	
DESIGNED BY:	DEV
DRAWN BY:	LAR
DATE:	3-27-2025
SHEET TITLE:	
CHILLER SITE PLAN - MECHANICAL DEMO AND NEW	

KEY PLAN

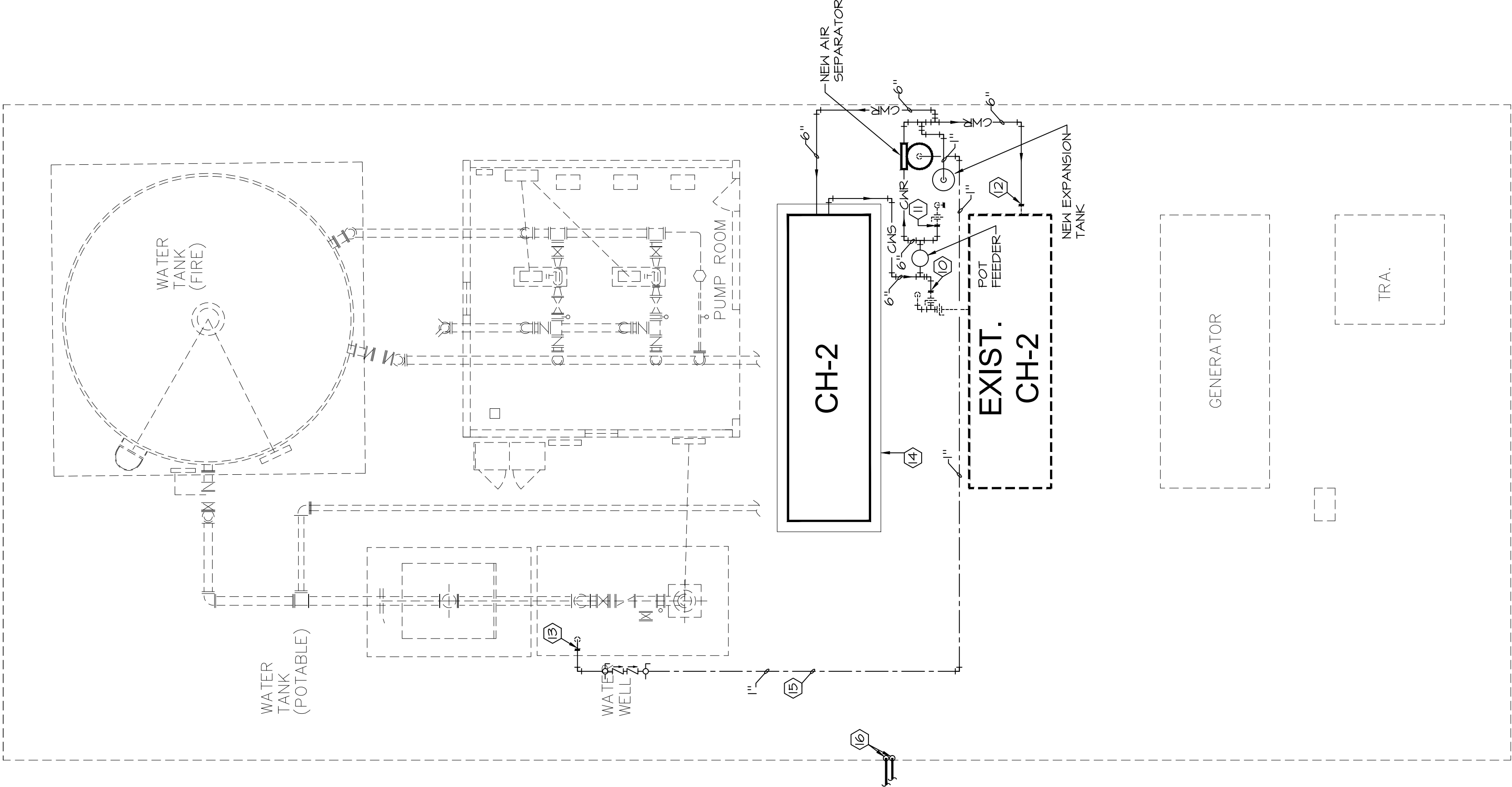
M101

GENERAL NOTES THIS SHEET.

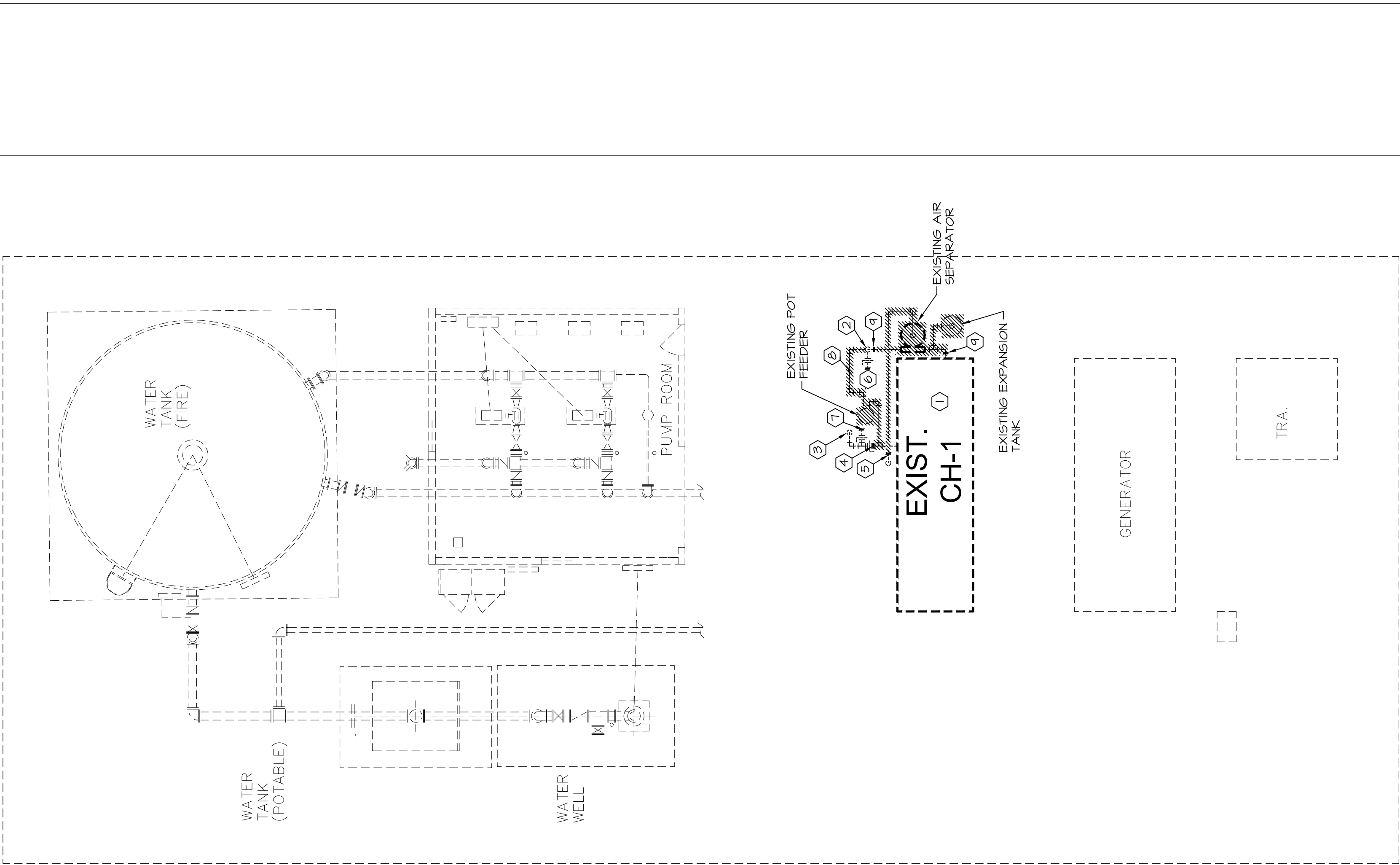
- A. ALL MECHANICAL ITEMS SHOWN DASHED ARE EXISTING.
- B. ALL ITEMS SHOWN HATCHED ARE TO BE REMOVED, UNLESS NOTED OTHERWISE.
- C. COORDINATE EXACT ROUTING OF ALL PIPING SO AS NOT TO CONFLICT WITH OTHER TRADES. ALL DUCTWORK SHALL BE ROUTED TIGHT TO STRUCTURE.

SPECIFIC NOTES THIS SHEET.

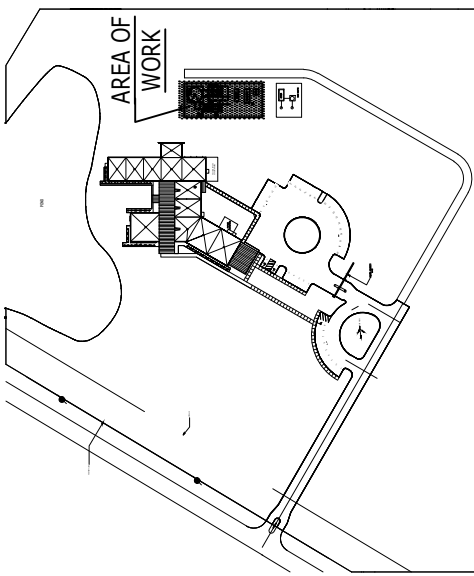
- ① EXISTING CHILLER TO REMAIN. NO PIPE DEMO SHALL BE DONE UNTIL NEW CHILLER AND PIPING HAVE BEEN INSTALLED.
- ② EXISTING 6" CWR UP FROM UNDERGROUND TO REMAIN.
- ③ EXISTING 6" CWS UP FROM UNDERGROUND TO REMAIN.
- ④ EXISTING 6" CWS PIPING TO BE CUT AND CAP.
- ⑤ EXISTING COLD WATER MAKE-UP FROM UNDERGROUND TO CAPPED.
- ⑥ EXISTING CWR VALVE AND CAP TO REMAIN.
- ⑦ EXISTING CWS VALVE AND CAP TO REMAIN.
- ⑧ PIPING SHOWN HATCHED TO BE REMOVED ONLY WHEN NEW CHILLER AND PIPING HAVE BEEN INSTALLED AND OPERATING.
- ⑨ EXISTING 6" CWR PIPING TO BE CUT AND CAP.
- ⑩ CONNECT NEW 6" CWS PIPING TO EXISTING VALVE.
- ⑪ CONNECT NEW 6" CWR PIPING TO EXISTING VALVE.
- ⑫ CONNECT NEW 6" CWR PIPING TO EXISTING CHILLER.
- ⑬ CONNECT NEW 1" MAKE UP WATER TO EXISTING WELL POTABLE WATER PIPING. PROVIDE SHUT OFF VALVE AND BACKFLOW PREVENTER. VERIFY EXACT LOCATION IN FIELD.
- ⑭ PROVIDE REINFORCED CONCRETE 6" HOUSE KEEPING PAD. PAD TO EXTEND 12" BIGGER THAN EQUIPMENT IN ALL DIRECTIONS.
- ⑮ SET PIPING ON PIPE SUPPORT AS MANUFACTURED BY MIFAB MODEL C-1810 OR APPROVED EQUAL. SUPPORTS SHALL BE 5' ON CENTER.
- ⑯ (2) 1" TEMPERATURE CONTROLS CONDUIT UP FROM UNDERGROUND. PROVIDE ADDITIONAL CONDUIT TO EQUIPMENT AS NECESSARY FOR TEMPERATURE CONTROL WIRING CONNECTION.



CHILLER SITE PLAN - MECHANICAL NEW
SCALE 1/8" = 1'-0"



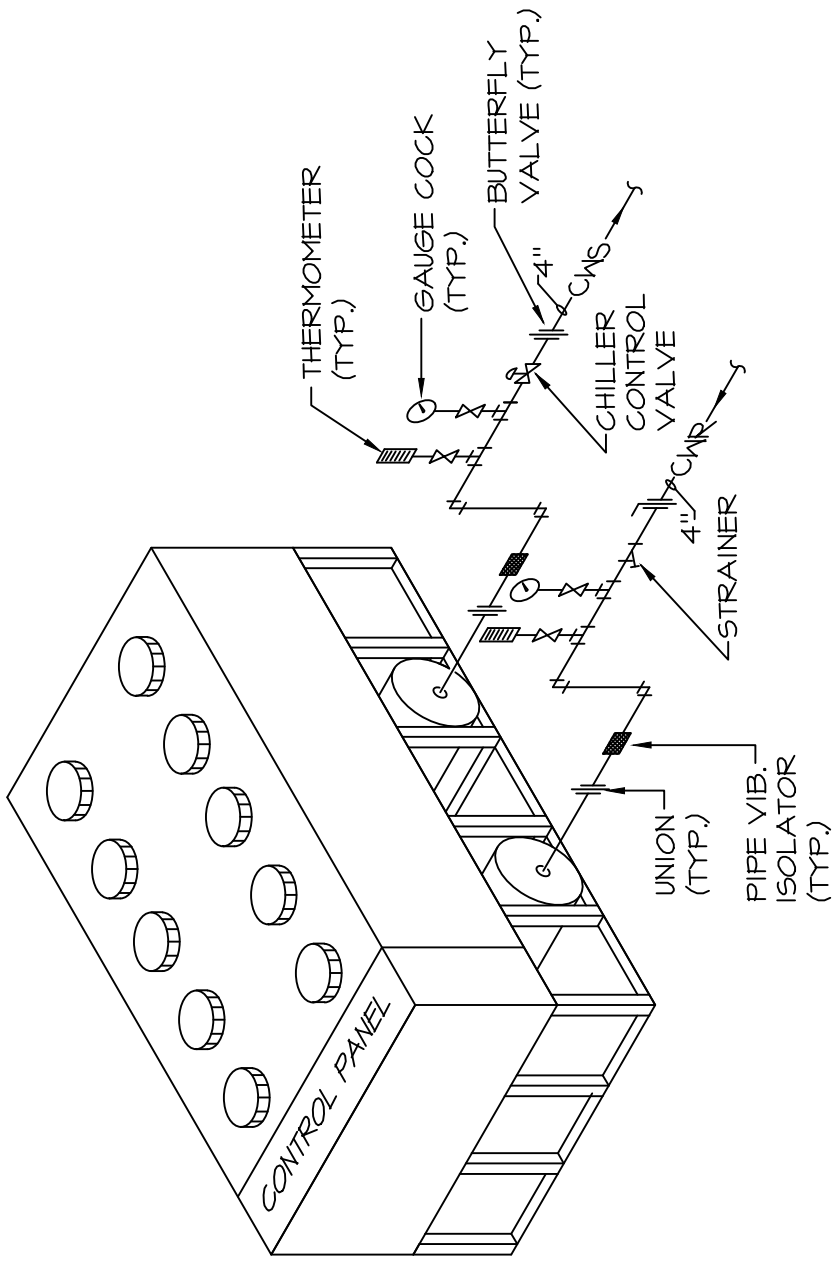
CHILLER SITE PLAN - MECHANICAL DEMO
SCALE 1/8" = 1'-0"



CORONER CHILLER
ADDITION

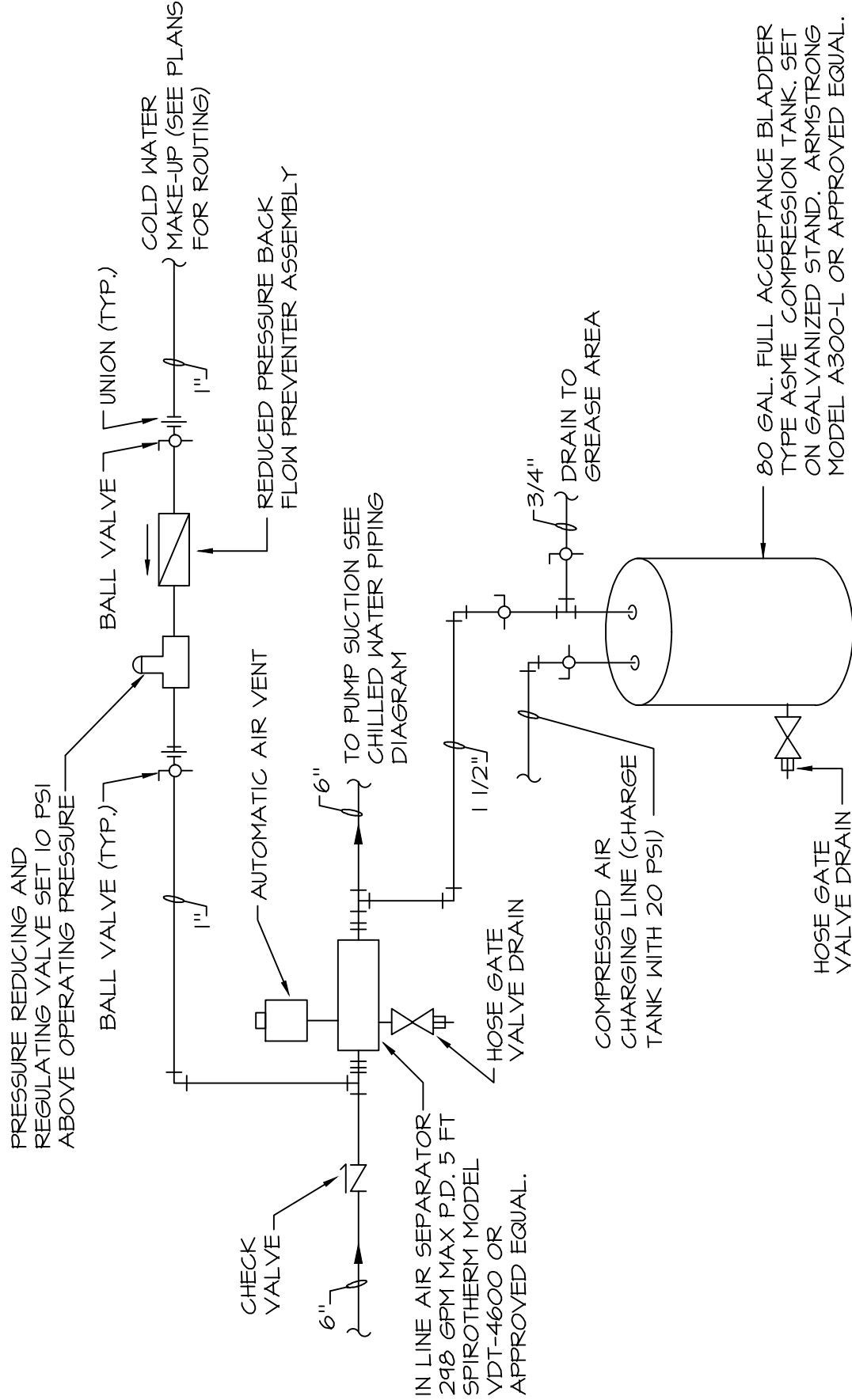
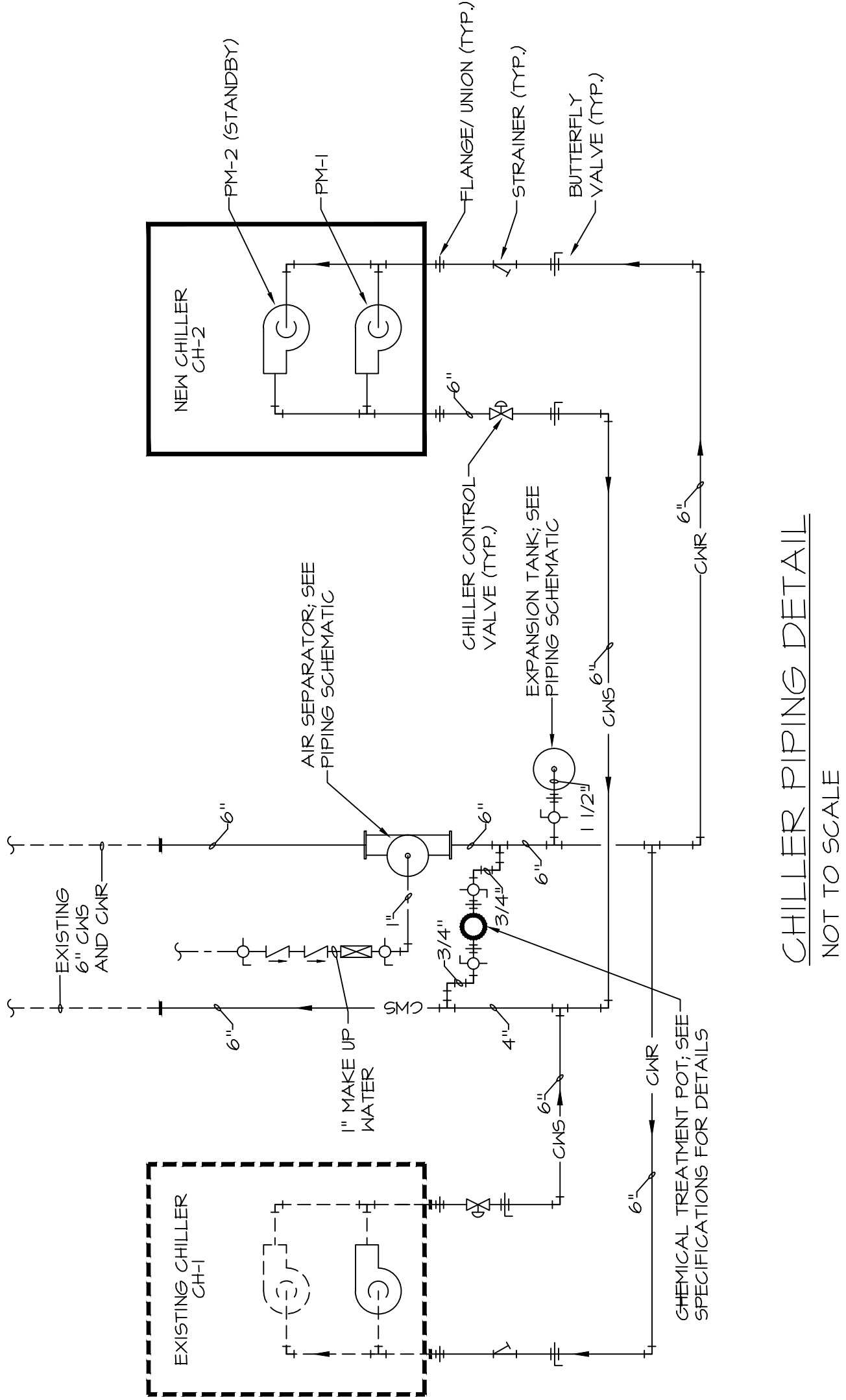
ST. TAMMANY PARISH, LOUISIANA

PACKAGED				AIR		COOLED		CHILLER		SCHEDULE	
MARK	GPM	TONS	LVG. WATER ΔT °F	WATER ΔT °F	PRESS. DROP FT. H ₂ O	COND. AIR ENT. TEMP. °F	I PLV	ELECTRICAL		DATA	
								VOLTS	PH		MCA
CH-2	255	200	43	12	10.4	45	1730	460	3	471	
AIR COOLED CHILLER WITH MULTIPLE CIRCUITS WITH INTEGRAL PUMP PACKAGE, SINGLE POINT POKER, PROVIDE LAG/LEAD PUMP PACKAGE 255 GPM @ 85 H ₂ O WITH VFD DRIVES.											
IRANEI: ACSA2152EJH											



AIR COOLED CHILLER PIPING DETAIL

NOT TO SCALE



SCALE: 1/8" = 1'-0"

Section 13

Technical Specifications

SECTION	TITLE
DIVISION 1	GENERAL REQUIREMENTS:
01 11 00	SUMMARY OF WORK
01 31 00	PROJECT MANAGEMENT AND COORDINATION
01 41 00	REGULATORY REQUIREMENTS
01 42 00	REFERENCES
DIVISION 2	EXISTING CONDITIONS
02 41 00	DEMOLITION
DIVISION 3-4	NOT USED
DIVISION 5	METALS
05 40 00	COLD FORMED METAL FRAMING - NOT USED
05 50 00	METAL FABRICATIONS
DIVISION 6	WOOD & PLASTICS
06 10 00	ROUGH CARPENTRY
DIVISION 7-12	NOT USED
DIVISION 13	SPECIAL CONSTRUCTION
13 05 00	COMMON WORK RESULTS FOR CONSTRUCTION
DIVISION 14-22	NOT USED
DIVISION 21	FIRE SUPPRESSION - NOT USED
DIVISION 22	PLUMBING - NOT USED
DIVISION 23	HVAC
23 00 50	COMMON WORK RESULTS FOR HVAC
23 05 00	HVAC SYSTEMS AND PIPING
23 05 93	TESTING, ADJUSTING, AND BALANCING FOR HVAC
23 07 00	PLUMBING AND HVAC INSULATION
23 09 00	VALVES AND FITTINGS FOR HVAC
DIVISION 25	INTEGRATION AND AUTOMATION
25 55 00	INTEGRATED AUTOMATION CONTROL FOR HVAC
DIVISION 26	ELECTRICAL
26 05 00	COMMON WORK RESULTS FOR ELECTRICAL
26 20 00	LOW VOLTAGE ELECTRICAL MATERIALS AND METHODS
26 47 00	ELECTRICAL EQUIPMENT CONNECTIONS
DIVISION 27	NOT USED
DIVISION 28	NOT USED

SECTION 01 11 00

SUMMARY OF THE WORK

PART 1- GENERAL

1.01 RELATED DOCUMENTS

Drawings, General Provisions of Contract, including AIA General Conditions (AIA document A201 2017 Edition).

1.02 PROJECT WORK AND IDENTIFICATION

Project name is "Coroner Chiller Addition" Bid No. 25-13-2, as shown on Contract Documents prepared by Lucien T. Vivien Jr. and Associates Inc. Dated: 3/27/2025

1.03 SUMMARY BY REFERENCES

Work of the Contract can be summarized by references to the Contract, General Conditions, Supplementary Conditions, Specification Sections, Drawings and/or Diagrams, Addenda and modifications to the Contract Documents issued subsequent to the initial printing of this project manual and including but not necessarily limited to printed material referenced by any of these. Work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the contract documents. ALL WORK SHALL COMPLY WITH APPLICABLE FEDERAL, STATE & LOCAL LAWS & REGULATIONS.

1.04 SUMMARY OF WORK

This Project consists of the addition of one 200-ton Chiller and the furnishing and installation of new piping systems to connect to existing piping in existing building systems as shown on the drawings. The Project also consists of removal of the existing and provide new Temperature Control devices as shown on drawings.

1.05 SITE LOCATION

The Site is located at 65278 LA – 434, Lacombe, LA 70445.

1.06 CONTRACTOR'S INSPECTION

Prior to commencement of work, inspect areas in which work will be performed. Include in bid price all costs required to remove and install equipment shown on the drawings and here in after specified.

1.07 PROJECT SUPERINTENDENT

Provide a full-time Superintendent who is experienced in the removal and installation of equipment required in this project. This person is the Contractor's Representative responsible for compliance with all applicable federal, state and local regulations. The Superintendent shall be equipped with a telephone, either wired or cellular, and a pager and make be available to the Designer for the entire

contract time. Once the Designer attempts contact with the Superintendent, a response back shall be attempted immediately.

1.08 NOTIFICATIONS

Notify emergency service agencies including fire, ambulance, police or other agency that may service this work site in case of an emergency. Notification is to include methods of entering work area, emergency entry and exit locations, modifications to fire notification or fire fighting equipment, and other information needed by agencies providing emergency services.

1.09 STOP WORK

All work shall be performed and completed to the satisfaction of the Designer. The Designer reserves the right to recommend to the Owner to stop all operations being performed by the Contractor and require corrective actions in regard to this Project. If corrective actions are not performed or if further operations do not meet the approval of the Designer, then this Project may be cancelled, solely at the discretion of the Owner. Payment will be made to the Contractor for work performed to that date for an amount determined solely by the Owner; no additional payment will be made to the Contractor. No additional contract time will be granted for downtime due to corrective actions as required by the Designer. Do not recommend work until authorized in writing by the Owner.

PART 2- PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01 31 00**PROJECT MANAGEMENT AND COORDINATION****PART 1- GENERAL****1.01 PREBID CONFERENCE**

Any Contractor submitting a bid for this project must attend the mandatory pre-bid conference. The Conference shall be arranged by the St Tammany Parish Government Procurement Department. Attendees shall be the Owner, User Agency, Designer and prospective Bidders. The purpose of the Prebid Conference is to familiarize the prospective Bidders with the requirements of the Project and the intent of the Contract Documents, and to receive comments and information from those in attendance. Attendees shall be required to sign in at the beginning of this meeting.

1.02 ALLOWANCE

NONE

1.03 ADDENDUM

Any revisions to the Documents resulting from the Prebid Conference shall be issued by Addendum. Addendum shall be sent to all prospective Bidders by electronic email and U. S. Mail. Addenda shall not be issued within three (3) days (36 hours) prior to the opening of proposals. This time period excludes Saturdays, Sundays and legal holidays.

1.04 OVERTIME WORK

All work that would affect the Owner's and the public's normal use and the functioning of the Campus buildings must be performed during "other-than-normal" working hours at no additional cost to the Owner. Specifically, utility interruptions and/or shutdowns and disruptive activities may not occur during weekdays from the hours of 6 AM to 6 PM (NORMAL WORKING HOURS). Contractor must include in the Contract Price overtime work during nights, Saturdays, Sundays, and School holidays required to accommodate required utility shutdowns and/or interruptions and disruptive activities. This overtime work must be scheduled with Owner's representative in advance by 7 days and is subject to restrictions as described in COORDINATION WITH OCCUPANTS and WORK RESTRICTIONS.

1.05 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy the campus during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits.
 - 1. Maintain access to existing interior and exterior walkways, corridors, and other occupied or used facilities. Do not close or obstruct walkways, corridors or other occupied or used facilities without receiving permission from Owner and approval from authorities having jurisdiction.

2. Construct temporary partitions and pathways as needed to protect occupants and to comply with requirements of authorities having jurisdiction. See Section 01500 "Temporary Facilities and Controls."
3. Notify Owner not less than seven days in advance of activities that will affect Owner's operations. Notification must be made for all disruptive activities and for all utility interruptions and/or shutdowns.

1.06 WORK RESTRICTIONS

- A. Work Restrictions General: Review Owner's school calendars which are included herein. Contractor shall provide Owner with a 7 day advance notice of disruptive activities and utility shutdowns that will occur in Clinic and Administration Buildings on nights, Saturdays and Sundays.
- B. Utility Shutdowns: Utilities serving the Campus include power, water and gas. Contractor is restricted to utility shutdowns as described above. Shutdowns include any and all interruptions in service.
- C. Disruptive Activities: Disruptive activities are those activities which occur inside the buildings and include those operations that may result in high levels of noise, vibration, odors or other disruption to occupants of the buildings. Disruptive activities include, but are not limited to:
 1. Use of power saws, especially for cutting metal.
 2. Use of jack hammers or roto-hammers
 3. Coring through floor assemblies
 4. Removing existing flooring and walls with power tools.
 5. Note: Disruptive activities may occur on the exterior of the buildings during normal working hours.
- D. Employee Identification: Verify with User – Contractor logo on shirts will be a minimum requirement.

PART 2- PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01 41 00**REGULATORY REQUIREMENTS****PART 1- GENERAL****1.01 SUMMARY**

This section sets forth governmental regulations and industry standards which are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits which are known to the Owner and which either must be applied for and received, or which must be given to governmental agencies before start of work. Requirements include adherence to work practices and procedures set forth in applicable codes, regulations and standards. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with codes, regulations, and standards.

1.02 CODES AND REGULATIONS

- A. General Applicability of Codes and Regulations, and Standards: Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.
- B. Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor shall hold the Owner and Designer harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees, or his subcontractors.

1.03 SUBMITTALS

- A. Prior to start of work, submit the following to the Designer for review.

Chillers	Complete piping routing diagrams
Valves and Fittings	Complete piping connection to existing piping details

- B. No work shall begin until these submittals are returned with Designer's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.

1.04 LICENSES AND CERTIFICATES

- A. For the Owner's records, submit copies of licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2- PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1- GENERAL

1.01 APPLICABILITY OF STANDARDS

Except where Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

1.02 PUBLICATION DATES

Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.

1.03 CONFLICTING REQUIREMENTS

Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent, to the Designer for a decision before proceeding.

1.04 COPIES OF STANDARDS

Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

1.05 ABBREVIATIONS AND NAMES

Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

PART 2- PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 02 41 00

DEMOLITION

PART 1 - GENERAL

1.01 SCOPE

- A. Perform all demolition and clearing work as specifically indicated and as otherwise required to achieve the results indicated on the Drawings and in the Project Manual. Remove all equipment and any other obstacles to work included in this project.
- B. Demolition indicated on the Drawings is for the purpose of clarifying conditions and is not intended to portray the full scope of all demolition work.

1.02 PRECAUTIONS

Refer to Supplementary Conditions for requirements for protections, for safety, interruption of services. Particular precautions shall be exercised in the demolishing of components above and around occupied spaces to prevent injury to persons and property. Do not leave pipes, stubs, brackets and other components loose without adequate support and anchorage. Safety of persons during and after construction shall be the Contractor's primary concern. The Contractor shall be responsible to determine and assure that execution of the Work under this Contract in no way endangers occupants of the buildings, site, or any workmen. Comply with all applicable requirements of NFPA 241.

1.03 PROTECTION

The Contractor shall be responsible for protecting all components and contents of the building, all building systems and all equipment, both fixed and movable which may be exposed to damage by the work of this Contract. Particular care must be taken with computers and other sensitive equipment which cannot be readily relocated for execution of the work in the areas in which such equipment is located.

1.04 COORDINATION

All demolition work shall be carefully coordinated with the construction schedule and the Owner's activities. Refer to Construction Drawings for any Phasing Requirements.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

2.01 REMOVAL

- A. Limit demolition and removal to the areas and extent necessary to accomplish the finished results intended. Any demolition beyond what is required shall be replaced to match existing. All demolished materials not indicated to be reused or turned over to the Owner shall be removed promptly from the site by the Contractor.
- B. It is impossible to show every detail of demolition on the drawings. However, when removing existing equipment, piping, conduit and structural elements, remove items back to a point where they are structurally secure and back to a point where they are no longer visible or exposed in occupied spaces or in the way of activity or passage or where these elements will no longer pose a safety hazard. All components shall be terminated in a safe and proper manner.

2.02 INTERIOR DEMOLITION

- A. Schedule all interior work carefully with construction work and school activities. Demolition work shall be executed in stages so that areas of the campus are not put out of service for significant period of time while no construction work is being accomplished.
- B. It is imperative that all demolition work be executed with the safety of all who use this campus as the top priority. Work shall be scheduled and managed to limit disruption to normal instructional programs to a minimum. Where demolition can be achieved without undue noise, the work shall be executed in that manner.
- C. All existing building finishes, all equipment and furnishings, and all other components which cannot be readily removed from the areas of the Work under criteria set forth in this Project Manual shall be properly protected from dust and physical damage. Provide necessary dust partitions, dust curtains, plastic drop cloths and other appropriate means of protection.

2.03 SALVAGE

Unless specifically noted on the Drawings or in the Project Manual or indicated at the Pre-Bid Meeting to be saved, all components being removed shall be removed from the site under this Contract. All items indicated to be reused shall be carefully stored for incorporation into the finished project. These items shall be the Contractor's responsibility during the duration of this Contract. All items indicated to be salvaged for the Owner shall be removed in a workmanlike manner and shall be turned over to the Owner at the place of removal or space(s) within the building(s) agreed to in advance by the Owner and Contractor.

END OF SECTION

SECTION 05 50 00

METAL FABRICATIONS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Scope: Shall include structural metals and miscellaneous shop fabricated metals not specified elsewhere, including:
 - 1. Loose angle lintels, plates, channels, shapes, etc.
 - 2. Bolts, nuts, fasteners, attachments, and anchors for items not specifically called out in other Sections.
 - 3. Metal manufactured products and miscellaneous items.
- B. Quality Assurance: Comply with applicable portions of the industry standards.
- C. Submittals: Submit shop drawings as required for the work as indicated on the drawings and herein specified.
 - 1. Show locations of fabricated items, materials, and state quantities of each.
 - 2. Indicate methods of connecting, anchoring, fastening, bracing, and attaching to work of other trades. Show sizes of screws and bolts, and indicate welds by standard indications.
 - 3. Draw profiles, sections, and views at a scale sufficient to show design conformity.
 - 4. Give type and number of shop coats.
 - 5. List manufactured catalog items by manufacturer's name and number

PART 2 – PRODUCTS

2.01 GENERAL

- A. For fabrication of the work which will be exposed to view, use only those materials which are smooth and free from surface blemishes, including pitting, seam marks, roller marks, rolled trade names, and roughness. All welds shall be ground smooth.
- B. Materials:
 - 1. Rolled Steel Plates, Shapes, and Bars: ASTM A36.
 - 2. Steel Pipe and Tubing: ASTM A53 and ASTM A120.

3. Bolts and Nuts: ASTM A307, Grade A. Expansion Bolts: USM Parabolt, Redhead, Quik Bolt, Molly, or Hilti.
4. Steel Primer Paint: Comply with DOD-P-21035 or SSPC-Paint-20.
5. Welding Electrodes: E 70 Series of Specifications for Mild Steel Arc Welding electrodes, ASTM A233.
6. Galvanizing: All steel members permanently exposed to weather (i.e. – masonry lintels, steel supports, miscellaneous shapes, etc.) must be galvanized in accordance with ASTM A 123 and ASTM A 368 for fabricated and unfabricated steel products made of uncoated rolled, pressed, and forged steel shapes, plates, bars, and strip (.0229" and thicker).
7. Fasteners: Provide zinc-coated fasteners for exterior use and where built into exterior walls. Select fasteners for the type, grade, and class required.
8. Vandal Resistant Bolts, Nuts and Fasteners: Vandal resistant bolts, nuts, fasteners, etc. shall be used in all construction when specifically indicated on drawings. Specific types shall meet the requirements of "Bolts and Nuts" and "Fasteners" above, and in addition, shall have special head design to prevent removal without the use of special tools.

C. Fabrication:

1. Form materials to shapes indicated with straight lines, sharp angles, and smooth curves. Drill or punch holes and finish edges smooth.
2. Weld permanent shop connections. High strength bolts for permanent connections permitted only with specific approval. Grind smooth welds that will remain exposed to view when complete.
3. Conceal fastenings where practicable. Punch or drill for temporary field connections and for attachment of work by other trades. Counter-sink holes for bolted connections that will remain exposed.
4. Fabricate in shop in as large assemblies as is practicable. Assemble to eliminate unnecessary field connecting.
5. Comply with requirements for fabricating structural steel for metal work of a structural nature or use.

D. Shop Painting:

1. Clean ferrous metal of scale, rust, oil moisture and dirt before applying paint. Paint one coat with specified primer. Do not paint contact surfaces which are to be welded. Use asphalt paint on non-ferrous metals anchored into concrete or masonry and for ferrous metal in contact with non-ferrous metals.
2. Use organic rich paint for re-galvanizing welds in galvanized steel.
3. Painting specified here does not count as a coat for finish painting except as specifically indicated. Apply two (2) shop coats to metal that will be inaccessible after installing.

4. Shop painting will not be required for stainless steel, chrome, or galvanized surfaces unless specifically noted in drawings.

2.02 MANUFACTURERS

- A. Certain items in this specification are listed by manufacturer and/or manufacturer's model number to establish general style, type, character, and quality of the product desired. Similar items manufactured by other than those listed will be considered, providing submittals are made according to Pre-Bid Approval requirements of Instructions to Bidders Article 4.3.
- B. Where no manufacturer or model number is given, any product meeting performance or design criteria, or referenced trade association standard may be used and Pre-Bid Approval is not required.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Install metal work level, true to a line, plumb or as indicated. Shim bearing plates with metal, and grout solid. Weld field connections where practicable. Grind welds smooth that will be exposed and treat with specified primer. Conceal fastenings where practicable. Flame-cutting of steel on site not permitted except with specific approval.
- B. Install manufactured items according to manufacturer's recommendations. Comply with details and approved shop drawings for installing metal parts. Install items specified in other sections as furnished for installation with miscellaneous metal work.
- C. Comply with requirements specified in reference standards for erecting metal items of a structural nature or use. Do not cover metal work in place until approved. Do not permit use of metal items until work has been approved.
- D. Rough Hardware: Provide bent or otherwise custom-fabricated bolts, plates, anchors, hangers, dowels, and other miscellaneous steel and iron shapes as required for framing and supporting all work, and for securing the work to concrete and other structures. Manufacture of fabricate items of sizes, shapes, and dimensions required. Provide malleable iron washers for heads and nuts which bear on wood structural connections; elsewhere furnish steel washers.
- E. Attachment: Secure metal to wood with lag screws of adequate size, with appropriate washers. Secure metal to concrete or masonry with embedded anchors, sleeves and lead caulking. Expansion bolts and screws permitted for light duty service only. Install manufactured items specified in other Sections as furnished for installation with miscellaneous metal work.
- F. Vandal Resistant Hardware and Attachment: Vandal resistant fasteners shall be used where indicated on drawings, with head-type to be approved by Engineer. In permanent construction only, Engineer will allow the following:
 1. Where steel nuts and bolts are used to secure steel members to substrates, etc., Contractor may use tack welds to prevent bolt or nut removal, rather than using vandal resistant items.

2. Small fasteners may have their head slot distressed or filled with weld (or other approved material) to prevent removal, rather than using vandal resistant items.

G. Touch-Up of Finish Work:

1. Retouch any scraped, abraded, unpainted, and welded places on primed surfaces. Use paint as specified for original shop coat.
2. Retouch in field any scraped, abraded places on galvanized surfaces with approved galvanizing touch-up compound.
3. Remove all rust or dirt before touch-up is applied.

END OF SECTION

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 – GENERAL

1.01 SCOPE

This Section shall include wood framing, blocking, grounds, nailers, furring, plywood, connectors, and rough hardware.

1.02 QUALITY ASSURANCE

- A. Lumber to comply with PS 20 – 70 and National Grading Rules, except as otherwise indicated.

Provide dressed lumber, S4S, with 19 percent maximum moisture content at time of dressing and shipment, for sizes 2” or less in nominal thickness.

- B. Plywood to comply with PS 1 – 83/ANSI A199.1 and APA grade trademarks.

- C. Factory mark each piece of lumber and plywood with grade stamp of inspection agency showing compliance with referenced standards.

1.03 PRODUCT HANDLING

Delivery and Storage: Keep materials dry during delivery and storage. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood and provide air circulation within stacks.

1.04 JOB CONDITIONS

- A. Installer must examine the substrates and supporting structure and the conditions under which the carpentry work is to be installed and notify the Contractor and Engineer in writing of conditions detrimental to the work. Do not proceed with the installation until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
- B. Coordination: Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow proper attachment of other work.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Certain items in this specification are listed by manufacturer and/or manufacturer's model number to establish general style, type, character, and quality of the product desired. Similar items manufactured by other than those listed will be considered, providing submittals are made according to Pre-Bid Approval requirements of Instructions to Bidders Article 4.3.

- B. Where no manufacturer or model number is given, any product meeting performance or design criteria, or referenced trade association standard may be used and Pre-Bid Approval is not required.

2.02 LUMBER

- A. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20 – 70, for the moisture content specified for each use.
1. Provide dressed lumber, S4S, surfaced four sides.
 2. Provide kiln-dried lumber 19% maximum moisture content at time of dressing (lumber 2” or less in nominal thickness), and shall be stamped “S-DRY”, “KD” or “MC15”.
- B. Framing Lumber (2” through 4” thick): Provide No. 2KD or better of the following species:
1. Douglas Fir (WCLB or WWPB).
 2. Southern Yellow Pine (SPIB), with tight knots only.
- C. Wood Grounds, Nailers and Blocking: Provide No. 2KD or better of Southern Yellow Pine (SPIB) or Douglas Fir (WCLB or WWPB). Refer to wood treatment specifications for conditions where pressure treated wood shall be utilized.

2.03 WOOD TREATMENT

- A. Preservative Treatment: Comply with the applicable requirements of the American Wood Preservers Bureau (AWPB). Mark each treated item to comply with the AWPB Quality Mark requirements for the specified requirements.
- B. Pressure-treat above-ground items with water-borne preservatives complying with AWPB LP- 2 – 80. After treatment, kiln-dry to a maximum moisture content of 15%, marked AWPB “Dry”. Treat indicated items and the following:
1. Wood nailers, blocking, stripping and similar members in connection with roofing, flashing, vapor barriers and waterproofing.
 2. Wood sills, blocking, furring, stripping and similar concealed members in contact with masonry, concrete and steel.
 3. Wood framing members set on concrete slab.

2.04 PLYWOOD

Plywood thicknesses are as shown on drawings. Plywood exposed to high humidity shall have an “Exposure 1” exposure durability rating. Uncoated exterior located plywood and plywood exposed to steam shall have an “Exterior” exposure durability rating.

2.05 ACCESSORIES

- A. Rough Hardware: Provide and install all rough hardware and metal fastenings as shown on drawings, specified herein, or required for proper installation of carpentry. Nails, spikes, screws, bolts, and similar items shall be of sizes and type to rigidly secure members in place. Applicable Federal Standards are as follow:

Nails: FS FF-N-105; SD, 13-1/2 gauge cement coated flat head nails, 1-5/8" long for drywall work.

Tacks: FS FF-N-103.

Wood Screws: FS FF-S-111.

Bolts: ASTM A 307, Grade A (Hex head).

Nuts: ASTM A 563 (Hex nut).

Washers: ASTM A 563.

Lag Screws or Lag Bolts: FS FF-S-111.

Masonry Anchoring Devices: See Section 05 50 00.

Toggle Bolts: FS FF-B-588.

Bar or Strap Anchors: ASTM A 575 carbon steel bars.

PART 3 – EXECUTION

3.01 INSTALLATION

A. General:

1. Fit carpentry work to other work. Scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds as necessary for proper attachment of related work.
2. All wood framing shall be cut square, closely fitted, accurately set to levels, and permanently secured in place, employing nails, bolts, or spikes as large as suitable for the conditions.
3. Discard units of material with defects which might impair the quality of the work and units which are too small to fabricate the work with minimum joints or the optimum joint arrangement.
4. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
5. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required by recognized standards. Countersink nail heads on exposed carpentry and fill holes. Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required.
6. Install metal connectors and accessories as required by code and wherever recommended by connector manufacturer (Simpson) and good standard practice of the industry for a complete and structurally sound job.

- B. Plywood: Installation of all plywood shall comply with APA recommendations with respect to rough hardware, clips, spacings, and sheet layout for each type application. Plywood shall have

all joints fully supported by solid wood or metal framing. Nailing patterns shall be in accordance with APA recommendations for each plywood application.

C. Miscellaneous Items:

1. Wood Grounds, Nailers and Blocking:

- a. Provide wherever shown and where required for screeding or attachment of other work. Form to shapes as shown and cuts required for true line and level of work to be attached. Coordinate location with other work involved.
- b. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown. Anchor into masonry with fasteners of suitable size and spacing to carry imposed loads.
- c. Provide adequate solid blocking to support all surface mounted items.
- d. Scaffolding necessary for the proper construction of interior and exterior work shall be furnished and erected, constructed in a thoroughly substantial manner, and providing all requisite safeguards for the protection of life and limb. Meet all requirements as set forth in OSHA.

END OF SECTION

SECTION 13 05 00

COMMON WORK RESULTS FOR CONSTRUCTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the Contract, including General and Supplementary Conditions, and General Requirements apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK

- A. Furnish all labor, materials, tools, and equipment, and perform all operations necessary for cutting and patching work indicated or specified.
- B. Definition: "Cutting-and-Patching" is hereby defined to include but is not necessarily limited to the cutting and patching of nominally completed and previously existing work, in order to accommodate the coordination of the work, or to uncover other work for access or inspection, or to obtain samples for testing, or for similar purposes; and is defined to exclude integral cutting-and-patching during the manufacturing, fabricating, erecting and installing process for individual units of work. Drilling the work to install fasteners and similar operations are excluded from the definition of cutting-and-patching.

1.03 QUALITY ASSURANCE

- A. Requirements for Structural Work

General: Do not cut-and-patch work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio. Do not cut or core existing concrete joists or beams.

- B. Visual Requirements

General: Do not cut-and-patch work which is exposed on the exterior or exposed in occupied spaces of the building, in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of the cut-and-patch work, both as judged solely by the Engineer. Remove and replace work judged by the Engineer to be cut-and-patched in a visually unsatisfactory manner. All concrete shall be saw cut and removed back to nearest expansion joint.

PART 2 - PRODUCTS

2.01 MATERIALS

General: Except as otherwise indicated or approved by the Engineer, provide materials for cutting-and-patching which will result in equal-or-better work than the work being cut-and-patched, in terms of performance characteristics and including visual effect where applicable. Comply with the original materials where feasible and where recognized that satisfactory results can be produced thereby. Provide matching ceiling tile where existing tile is damaged.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Temporary Support: Provide adequate temporary support for work to be cut, to prevent failure. Do not endanger other work.
- B. Protection: Provide adequate protection of other work during cutting-and-patching, to prevent damage; and provide protection of the work from adverse weather exposure.

3.02 CUTTING AND PATCHING

- A. Employ skilled tradesmen to perform cutting and patching. Except as otherwise indicated or approved by the Engineer, proceed with cutting-and-patching at the earliest feasible time, in each instance, and perform the work promptly.
- B. Cut work by methods least likely to damage work to be retained and work adjoining.
- C. Patch with seams that are durable and as invisible as possible. Comply with specified tolerances for the work.
- D. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.
- E. Where patch occurs in a smooth painted surface, extend final paint coat over the entire unbroken surface containing the patch, after patched area has received prime and base coats.

END OF SECTION

SECTION 23 00 50 - COMMON WORK RESULTS FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.
- B. Separation of specifications into sections is for convenience only and is not intended to establish limits of work or liability. The following are the Sections that will apply to this project.

- 23 00 50 - Common Work Results for HVAC
- 23 05 00 - HVAC Systems and Piping
- 23 05 93 - Testing, Adjusting, and Balancing for HVAC
- 23 07 00 – Plumbing and HVAC Insulation
- 23 09 00 - Valves and Fittings for HVAC
- 25 55 00 - Integrated Automation Control For HVAC

1.2 DESCRIPTION OF WORK

- A. The work to be done under this heading includes the furnishing of labor, materials, equipment, and service necessary for and reasonably incidental to the proper completion of all mechanical work as shown on the drawings and herein specified.
- B. Visit and examine the job site, and with all authorities concerned in order to become familiar with all existing conditions pertinent to the work to be performed thereon. No additional compensation will be allowed for failure to be so informed.
- D. Materials and equipment shall be new, except where otherwise indicated, of the best quality, with same brand of manufacturer for all similar material.
- E. All work shall be performed in a neat and workmanlike manner, and in accordance with all codes, standards, and requirements of the industry.
- F. In general, provide the installation of new chiller, piping, controls with all require fittings, fixtures, equipment, etc. provide the complete chilled water system operation.
- G. Regardless of titles and subdivisions herein employed, consider these specifications as one complete document with General Section applying to all other sections. All bidders are cautioned to read entire specifications and to thoroughly familiarize themselves with all requirements thereof.
- H. Check all specifications and all drawings and bring to attention any conflicts or variations as shown as noted.

- I. Specifications and accompanying drawings apply to all contracts or sub-contracts entered into for supplying material or labor for construction of work specified herein and shown on drawings.
- J. Protect Owner and his agents including, Engineer and/or Engineer from any and all damages and expense arising from fulfillment of contract and at completion of work repair all damages done.
- K. For any points which are not clear, or for items and/or details which the Contractor feels are in need of clarification, consult the Engineer before submission of a proposal.
- L. The drawings and the specifications are complementary and what is shown and/or called for on one shall be furnished and installed the same as if shown and/or called for in the other.
- M. In case of discrepancies and/or ambiguities in the drawings and/or in the specifications, the Engineer shall be consulted prior to submission of a proposal. Failure to do so on the part of the successful bidder shall be construed as explicit agreement on his part to abide by the Engineer's decision in such matters.
- N. The word "provide" as used in these Specifications and on the Drawings shall be termed to mean "furnish and install".
- O. Contractor shall include in base bid the connection of all sewer, and water piping to mains as shown on the drawings. Contractor shall include all material and all costs for complete installation, including meter fees and connection fees.
- P. If the Contractor notices during the bidding any items of the contract documents which will violate any applicable code, these items shall be brought to the attention of the Engineer before the bid date. Failure to bring these items to the attention of the Engineer shall be construed as explicit agreement that the Contractor has included in his bid price any and all modifications necessary to complete the project in accordance with all applicable codes.
- Q. The Contractor that is furnishing and installing any of the Mechanical equipment, Mechanical Controls, Plumbing and/or Sprinkler Systems, shall coordinate each complete system with the Performance Standards of School Facilities Master Plan (SFMP) for Orleans Parish for the LRSD and NOPSI. Any deviations between these Specifications and those required by those Specifications shall be installed and provided as required by the SFMP, at NO additional cost to the Owner.

1.3 RELATED WORK SPECIFIED IN OTHER SECTIONS

- A. All new exposed piping, ductwork and other equipment requiring painting will be painted under PAINTING SECTION. Leave all these surfaces clean of oil, dirt, plaster, etc., ready for painting section's work.
- B. Power wiring for all equipment shall be done under ELECTRICAL SECTION.
- C. Provide approved wiring diagrams to the Electrical Contractor showing interlocking of all equipment and controls, assisting in all wiring problems affecting his equipment, checking and verifying that same is wired correctly under the Electrical Section for proper operating of all mechanical items.

- D. Furnish under this section all heating, air conditioning, ventilating and other mechanical systems controls, starters, firestats, relays, and related equipment.
- E. Openings for all access doors, relief and return air grilles, etc., shall be provided under the respective trade sections.
- F. Curbs, flashings, etc., for exhaust fans, vents, etc., shall be provided under the respective sections.
- G. All HVAC control wiring shall be furnished and installed under this Section.
- H. Piping penetrations through fire rated partitions/floors shall be fire sealed in accordance with the UL fire resistance directory

1.4 QUALITY ASSURANCE

- A. The Contractor bidding on this portion of the work must be fully experienced in installations of equal size, complexity, and quality, and must be licensed to perform such work as required by the Louisiana State Legislature, R.S.37:2152-2163.
- B. In bidding he acknowledges that he fully understands the scope of work and design, and has the ability for the contract price to assemble and install the equipment, piping and ductwork shown or specified, so as to mold same into a satisfactory workable system and arrangement.
- C. Contractor shall recognize that a fault or error in his work remains his responsibility regardless of whether such difficulty was discovered after the work had progressed, and shall make corrections at no cost to the Owner.
- D. Adequate and competent constant supervision shall be provided by Contractor to assure that work is done in accordance with good standard practice and workmanship and with intent of drawings and specifications. Contractor shall recognize that amount of information and detail could be provided to contract documents is limitless and could extend into every minute detail and sequence of operations, to a point where only workmen would be required, without drawing on ability, experience and ingenuity of the Contractor.
- E. All work shall be installed in strict accordance, with all existing local and state codes and ordinances, with National Board of Fire Underwriters
- F. Contractor shall maintain and service all equipment until time of acceptance by Owner. Contractor shall include all required service access in the installation as required by the manufacturer and governing codes.
- G. Prior to starting any work, the Contractor shall submit a quality assurance plan for approval by the Engineer. In the quality assurance plan, the Contractor shall provide the following information:
 - 1. List of all subcontractors and equipment suppliers.
 - 2. List of all foreman and job superintendents including job experience for all trades.

3. Construction time schedule demonstrating coordination with other trades and showing detailed time lines for test and balance and commissioning being completed prior to final punch list inspection.
- H. This Contractor shall provide a copy of the APPROVED Mechanical Equipment submittals to the Electrical Contractor. This Contractor shall coordinate and verify that the Electrical wiring is in conformance to the requirements of the approved Mechanical Equipment submittals. Check and verify that same is wired correctly under the Electrical Section for proper operating of all mechanical items. Any conflicts that are encountered shall be referred immediately to Engineer for method of disposition before installation is continued.

1.5 SUBMITTALS

A. Shop Drawings and Submittal Data required:

1. Within thirty (30) days after award of General Contract, Contractor shall submit, in six (6) copies, complete dimensional shop drawings and descriptive literature.
2. Submittals for review shall contain complete descriptive information and dimensional data on all items of equipment, materials and accessories, including duct, equipment and sprinkler layouts. Piecemeal submissions shall not be approved. Written approval thereof must be obtained before ordering or installation.

Mechanical Equipment Layout
Chiller
Pumps
Valves, Strainers, Unions & Fittings

Hydronic Piping Layout
Insulation
HVAC Controls

3. Shop drawings and submittal data shall be considered to be instruments of service only and submitted for the sole purpose of convenience to the Contractor to assist him in the performance of the contract. The Engineer's review of the shop drawings and submittal data shall not supersede these specifications, the accompanying drawings, or the contract terms, unless specifically covered by a properly executed change order, and then only to the extent specifically and explicitly stipulated therein.
- B. After completion of project Contractor shall turn over to the Engineer complete operating and maintenance instructions including listing of supply and repair items and locations of places to purchase same. Comply with requirements of Division 1 Sections.
- C. Substitutions:
1. All material, equipment, methods, and accessories entering into the work under this section of contract are subject to approval or disapproval of the Engineer. Approval of any manufacturer, material, or product shall not constitute a waiver of Engineer's right to demand full compliance with contract requirements, including shape, size, quality and performance.
 2. Equality of materials is that established by opinion of Engineer. Decision of Engineer is final.

3. Whenever a material or article of equipment is specified by use of a proprietary name, or by naming the manufacturer or vendor, any material or article which will perform adequately the duties imposed by the design will be considered for substitution, providing it is of equal substance, and function, meets specifications, and is aesthetically acceptable to the Engineer. Refer to Division 1 Sections for approval procedures.
4. Literature, technical data, etc., includes complete data and samples if necessary, with submissions for substitutions. Burden of proof that material offered for substitution is equal, or superior, in construction and efficiency to that named, rests on Contractor, and unless proof is satisfactory to Engineer, substitution will not be approved.

D. See Division 1 Sections of Specifications for "Record Drawings" requirements.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Take necessary precautions to protect all material, equipment, apparatus and work from damage. Failure to do so to the satisfaction of the Engineer will be sufficient cause for the rejection of the material, equipment or work in question.
- B. Contractor is responsible for the safety and good condition of the materials installed until final acceptance by the Owner.

1.7 JOB CONDITIONS

- A. Accompanying drawings, including plans, details, diagrams, notes, etc., are shown to limit and explain construction requirements, sizes, capacities and method of installation and erection. Existing conditions may require certain modifications and adjustments from conditions shown. Such deviations are permissible; however, specific sizes capacities and requirements affecting the satisfactory performance and operation of the installation shall remain unchanged. Make allowance for normal job conditions and interferences.
- B. Whenever it becomes necessary to shift pipes, such changes shall be referred to Engineer for approval.
- C. Ask for details whenever uncertain about method of installation. Lack of details not requested shall not excuse improper installation and correction shall be responsibility of Contractor.
- D. Furnish detailed equipment layout and equipment shop drawings based on field measurements and actual job conditions.
- E. Schedule and perform all mechanical work to avoid delays to the Contractor and other trades.
- F. In addition to the basic work covered under this contract, the Contractor shall plan and schedule the work to permit continuous operation of essential services of existing facilities. Planning shall also include scheduling necessary interruptions of service on water lines, drain lines, etc., to existing building at times when such interruptions will cause minimum interference with existing routine and services. All such interruptions shall be made only after consultation with the Owner. This is extremely important since included in the work is a relocation and rerouting of and

connecting to existing facilities, piping, etc. No additional compensation will be allowed for failure to be so informed.

- G. It is essential that all adjacent areas of the building be kept in operation at all times, except when specific permission is given to contrary. Before any lines or equipment are shut down for disconnecting, tie-ins, or rearranging of services, make arrangements with Engineer to do this work at night, or Sunday, or at special time of day or year with length of shutdown agreed upon before work is begun. Contractor to bear any overtime or work costs in the connection.
- H. All piping, cleanouts and covers, and other mechanical items in way of construction or remodeling, shall be rerouted, relocated or otherwise adjusted to work out with such construction or changes shown or specified in any or all of various sections of specifications. Unknown piping that is encountered will be referred immediately to Engineer for method of disposition before continuation of work.
- I. The Contractor shall review the Construction Documents to become familiar with the phasing of construction required for this project.

1.8 GUARANTEE AND SERVICE

- A. Guarantee all equipment, materials, and workmanship for a period of one (1) year following date of notice of final acceptance.
- B. During the period of guarantee any defects in equipment, materials, or workmanship shall be promptly corrected without cost to the Owner.
- C. Guarantee includes equipment capacity and performance ratings specified without excessive noise levels. Any deficiencies in equipment capacity specified shall be promptly corrected.
- D. Guarantee does not include maintenance items.

1.9 MECHANICAL RECORD DRAWINGS

- A. Maintain one set of marked-up white prints of the Contract Drawings and Shop Drawings in clean and undamaged condition with mark-up of actual installations that are different from the work shown on the contract documents and, or shop drawings. Mark up either the construction drawings or shop drawings that are most capable of showing the install conditions accurately. If shop drawings are used, record reference notes on the appropriate construction drawings.
- B. Mark record prints to show the actual installation where installation varies from that shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record data as soon as possible after obtaining it.
- C. Mark the changes with erasable pencil, and use multiple colors to distinguish between the installations of separate and different electrical systems.
- D. Record all substantive installations of mechanical work in the actual locations if different from the construction drawings or shop drawings. As minimum record the following.

1. HVAC piping drawn to scale and fully dimensioned.
 2. Mechanical installations concealed behind or within other work, in non-accessible locations.
 3. All aspects of the piping systems.
 4. Identify all changes and revisions required by change orders or addendum.
- E. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize the prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
- F. As part of the record documents submittal provide a bound copy of all approved Mechanical equipment data submittals, with each item clearly labeled and identified as to type and quantity.

PART 2 - PRODUCTS

2.1 ACCESS PANELS

- A. Provide all access panels necessary for proper access to valves, traps, equipment connections, control devices or other items installed under this contract.
- B. Panels to be Milcor, Type M, or KARP Model D3C-214M hinged with screwdriver lock or as indicated on drawings for special locations, minimum size 12" x 12" or larger as required for proper access.
- C. Exact locations for panels to be directed by Engineer.

2.2 TOOLS AND SCAFFOLDING

- A. Furnish all tools, equipment, scaffolding and other facilities required to properly and expeditiously perform the work.

2.3 SIPHON PREVENTORS

- A. Furnish and install on all equipment and fixtures requiring same, backflow preventors or vacuum breakers of a type approved by the Louisiana Health and Human Resources. Water connections to fixtures and equipment shall be made in such a way as to prevent back siphonage when the water supply is out or the pressure drops. Provide reduced pressure type back flow preventors where indicated on drawings. They shall be Watts series 900 or Febco Series 825, size as indicated on drawings.

2.4 SLEEVES AND THIMBLES

- A. Pipe sleeves - wrought iron or cast iron of sufficient size for piping and installation to be installed in floors, walls below grade, and grade beams where piping passes through.

- B. Thimbles above grade - heavy galvanized steel of proper size to allow freedom of piping and insulation, set in floor or roof slab as work progresses, also to be installed in wall and partitions where piping passes through.
- C. Thimbles below grade - same as pipe sleeves above.
- D. Sleeves through floors extend 1/4" above finished floor. Caulk around and seal all piping in chases and piping passing through floor slab.
- E. Provide sleeve seals and shields for all pipe penetrations of ground floor slab.
- F. Provide fire-stopping in all pipe penetrations of rated floors and walls.

2.5 BUCKS, GROUNDS AND CHASES

- A. Be responsible for proper location and sizes or for any errors or omission in placing same.
- B. Failure to inform the General Contractor promptly of such requirements shall not relieve the Mechanical installer of the responsibility for providing a complete mechanical system.

2.6 HANGERS

- A. Horizontal piping above grade without hubs shall be rigidly supported. Distance between pipe supports:
 - 1. 1/2" pipe 6'-0" maximum
 - 2. 3/4" pipe 7'-0" maximum
 - 3. 1" pipe 8'-0" maximum
 - 4. 1 1/4" pipe 9'-0" maximum
 - 5. 1 1/2" pipe and over 10'-0" maximum
- B. Hangers shall be similar to "Split Ring" type.
- C. Metal strap or wire will not be acceptable.
- D. For two or more systems of piping run parallel and with same grade trapeze hangers may be used.
- E. Use #22 gauge galvanized sheet steel saddles between the pipe covering and each pipe hanger on all insulated lines. Saddles shall extend along pipe runs and at least half way up piping on each side.
- F. All above grade horizontal sewer drain, vent, waste and similar piping shall be hung at every hub using the same type hangers as specified for other piping.

2.7 PAINTING AND IDENTIFICATION

- A. New Equipment, including pumps, motors, and similar factory fabricated and assembled units shall be furnished with factory applied protective prime coat paint of finished baked enamel. Any

Equipment surfaces damaged during course of construction or shipment shall be refinished by the Mechanical Contractor.

- B. Uncoated black ferrous piping and fittings shall be cleaned under this section and painted with one coat of enamel paint under PAINTING SECTION. Color of piping shall be selected by Engineer. Hangers and supports shall be coated by dipping or brush painting with one coat of asphalt varnish. Steel frame equipment supports shall be cleaned and painted with one coat of aluminum paint.
- C. Detached motor controllers, disconnects, etc., shall be identified with metal or plastic plates with etched letters to completely identify service of electrical equipment.
- D. Major control and sectionalizing valves shall be identified by means of etched brass plates bracketed to valve handle. Contractor shall prepare schedule of such identifying plates for Engineer's approval.

PART 3 - EXECUTION

3.1 FLASHING AND COUNTERFLASHING

- A. All new pipes that pass through roof and walls shall run so as not to interfere with the structural system and to permit proper application of base and counterflashing. New pipes to be provided with suitable curbs and flashed to roof or walls as indicated.

3.2 CLEANING, STERILIZING AND PIPING

- A. When all work has been finally tested, Contractor shall clean all new equipment, pipes and exposed work.
- B. All pipes shall be free from all obstructions.
- C. All plated and other finished products shall be thoroughly cleaned and polished.
- D. New domestic water piping shall be sterilized as required by Louisiana State Plumbing Code.
- E. All piping shall be installed so that it may expand and contract freely without damages to equipment, other work, or injury to piping system. All necessary swing joints, expansion joints, or offsets to protect piping, etc., shall be installed whether indicated or not. Piping shall be graded to allow for system drainage.
- F. Stainless steel or chromium plated floor, wall and ceiling plates shall be furnished on all exposed piping passing through floor, walls, or ceilings. Plates shall be secured in place with round head screws or toggle bolts of proper size and type for adjacent construction.
- G. All piping shall be installed and sized as indicated on plans and be of equivalent materials to piping as hereinafter specified.

- H. All piping Shall be installed with runs arranged parallels or perpendicular to walls and ceilings with symmetrical and equal spacing between parallel pipes. Offsets shall be made using factory fittings, bending of piping shall not be accepted.
- I. Notify the Engineer a minimum 72 hours prior to enclosing piping in concealed spaces so that piping may be inspected.

3.3 TESTING AND INSTRUCTION

- A. New Piping shall be tested to pressure hereinafter specified. Where pressures are not mentioned, it shall be understood that testing to 1-1/2 times service conditions, before insulation is applied, will be acceptable. All tests shall be held for a minimum of 24 hours before inspection.
- B. Furnish all necessary gauges, pumps, test plugs, and temporary connections and shall test sections of the building as work progresses.
- C. All tests shall be made in the presence of the Engineer or his representative. Where pipes or connections in new piping are found to leak, They shall be made tight and the tests repeated.
- D. Make all necessary adjustments to controls, dampers, valves, etc., to obtain best operation first with empty building and later under actual conditions.
- E. Thoroughly check the operation of each item of equipment and controls while testing, without waiting first for the Owner or Engineer to complain about their operation. Verify that same are wired correctly and completely, notifying the proper parties for necessary corrections. Thoroughly instruct the Owner's representative in the operation and care of controls, individual equipment, and entire system.
- F. Provide Engineer with six (6) copies of balance reports as hereinafter specified.

3.4 CUTTING AND PATCHING

Cooperate to the fullest extent with all other trades to reduce to a minimum the amount of cutting and patching of other work necessary for this installation. Do not cut or patch the work of other trades but arrange to provide cutting templates in time, or otherwise pay the respective other contractors for changing theirs, to accommodate this work. No cutting into any structural units likely to impair the strength shall be done without the approval of the Engineer.

3.5 CLEAN UP

Remove debris, surplus and waste materials, oil, grease or stains resulting from the work performed and leave the premises in a broom clean condition AT THE END OF EACH WORKING DAY. All debris, surplus and waste material shall be removed completely from the job site.

3.6 COMMISSIONING

- A. Contractor shall install all items of equipment as identified in this specification in strict accordance with manufacturer's requirements (whether identified in this specification or not), shop drawings and contract documents. Contractor shall coordinate with Electrical and Building Facility Management System Contractors to insure a complete installation. Start-up of all equipment shall be by manufacturer authorized representative. Start-up services shall be provided for as long a period of time as is necessary to insure proper operation of the equipment items. The start-up technician shall conduct all operating tests as required to insure the equipment is operating in accordance with design parameters. Complete testing of all safety and emergency control devices shall be made. The start-up technician shall submit a written report to the engineer (prior to final punch list inspection) containing all test data recorded as required above and a letter certifying that the equipment is operating properly.
- B. Other specific items of commissioning shall be as follows:
1. Visually inspect insulation system to verify that insulation is continuous and vapor barrier is complete. Verify there is no condensation or hot spots, correct as required.
 2. Thoroughly test all piping systems to insure no leaks are present. Adjust valves, pressure reducing valves, etc., as required by operating characteristics of the system. Set pressures of gas and domestic water systems.
 3. Hydronic piping shall be tested and balanced. See Section 23 05 93
 4. Vibration isolation shall be tested by running equipment and checking deflection of spring isolators. Make adjustments as required. No isolator shall be fully compressed.
 5. Piping shall be checked to insure direction of flow.
 6. Contractor to insure mechanical systems operate in accordance with plans and specifications. Cooling modes of HVAC equipment shall be tested. Actual values of temperature in space shall be checked against setpoint values and deviations shall be corrected.
 7. Provide written reports for all startup and commissioning tests for Engineer review prior to final punch list inspection.

3.7 WELDING

- A. Codes and Standards
1. American Society of Mechanical Engineers (ASME) B31.1
 2. ASME Boiler and Pressure Vessel Code – Section V and IX
 3. American Welding Society (AWS) D10
- B. Qualifications for Welding Work: The fabricator and/or installer shall qualify each welder or welding operator for the welding processes to be used during production and field welding. The performance qualification shall be in accordance with a qualified Welding Procedure Specification (WPS). The WPS shall be governed by the essential variables listed in ASME Section IX and AWS D10.9 as may be applicable for the welding processes for which the welder is being qualified. Provide certification that the welders performing work on this project are qualified in accordance with the WPS, as well as the parameters used in the qualification.

C. Welds shall be in accordance with ASME and AWS standards as qualified under ASME Section IX. Owner shall employ a testing agency to perform a visual inspection of 5% of the welds in accordance with ASME Section V. The following visual examination indications shall be deemed unacceptable and shall be corrected at Contractor's expense:

1. Cracks on external surfaces
2. Surface undercut greater than 1/32 inch deep
3. Weld reinforcement greater than specified in ASME Table 127.4.2
4. Lack of fusion on surface
5. Incomplete penetration

D. Future inspections for failed welds shall be tested at Contractor's expense.

END OF SECTION 23 00 50

SECTION 23 05 00 - HVAC SYSTEMS AND PIPING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.
- B. Refer to Section 23 00 50 which shall apply to work in this Section.

1.2 DESCRIPTION OF WORK

- A. The work to be done under this Section includes the furnishing of all labor, tools, materials, equipment and services necessary for and reasonable incidental to the installation of complete Mechanical equipment as shown on plans and herein specified, excepting only work and/or materials indicated as being done and/or furnished under other sections.
- B. This Contractor shall provide the chemical water treatment for the entire Chilled Water System Piping, as here in after specified.
- C. Contractor shall refer to other Sections of the Specifications which may be applicable to or associated with this Section.

1.3 RELATED WORK SPECIFIED IN OTHER SECTIONS

- A. Electrical Section shall provide all power wiring including furnishing and installing of disconnect switches where specified. Control wiring for air conditioning equipment shall be provided under this Section as required.
- B. Other Sections shall provide and install structural supports for equipment. These supports shall be checked and coordinated by this Section so that they suit the equipment which is to be supported.
- C. Other Sections shall provide all platforms slabs, lintels and curbs, as directed by this Section, to accommodate the Mechanical Equipment.
- D. Mechanical Contractor shall provide starters and/or VFD for motors furnished under this Section.

1.4 QUALITY ASSURANCE

- A. These specifications with accompanying drawings, require complete apparatus, fully erected and in successful operating condition. Perform all work in best, most substantial manner.
- B. All equipment furnished and installed under this Section shall be U.L. approved and labeled where applicable.

- C. All unfired pressure vessels furnished under this Section shall be ASME and National Board stamped.
- D. All manufacturers products shall comply with the requirements of this Section:

1.5 SUBMITTALS

- A. Contractor, before beginning work, shall submit dimensional shop drawings for approval, for all Equipment and piping systems. Contractor is responsible to coordinate all equipment piping, and electrical installations to avoid all conflicts. Conflicts encountered after work has started shall be corrected at Contractor's expense.
- B. Where the equipment installed is of a different configuration and/or size than that shown on the drawings, Contractor shall assume all responsibility to conform with the intent of the contract documents. The Engineer shall be advised of any changes and deviations for his approval. The same shall be true for any field modification required because of "on job" construction conditions.

PART 2 - PRODUCTS

2.1 ACCESS PANELS

- A. Access panels shall be installed wherever required for ready access to any operating part.
- B. Panels shall not be smaller than 12 X 12 inches, with brass hinge and sash type fasteners.

2.2 PIPING AND FITTINGS

- A. Furnish and install all piping related to the Mechanical systems including make-up water piping, condensation drains, and other miscellaneous piping.
- B. All piping shall be installed parallel and square with building lines and shall be sloped to permit drainage, with suitable provision for drainage at all low points.
- C. Piping shall be arranged to maintain headroom and keep passageways clear and where necessary shall be offset to maintain the required clearance and conform with the structural features of the building. Contractor shall determine in advance of construction locations for all piping sleeves, hangers, etc. No allowance shall be made for extra due to inaccurate location of sleeves, piping or equipment.
- D. All piping shall have provisions for expansion and contraction with anchorage at each point shown on the plans and/or as required.
- E. Full length pipe shall be used where possible, short lengths and couplings shall not be permitted. After cutting, all pipes shall be reamed out to full bore and before erection, all cutting and foreign matter shall be removed from the inside of pipes. Screwed joints shall be made tight without

caulking or the use of lead or paint and no lubricant shall be used except flake granite and cylinder oil paste, or approved pipe compound applied to connect threaded pipe.

- F. Pipe sleeves shall be provided for the passage of all pipe through walls, floors and partitions.
- G. Welding fittings shall be Tube Turn, Midwest, or approved equal. Use welding elbows at all turns in welded piping, except where bent runs are indicated and except that turns and off-setting to a maximum of 15 degrees mitered. At branch connections, use welding tees. Use extra heavy couplings in all cases where female threaded openings are required, in welding piping.
- H. Above slab, chilled water piping, 2-1/2" and larger shall be installed using Schedule 40 black steel pipe with malleable iron fittings. At Contractor's option size three (3") inches and larger may be flanged or welded. Welded elbows shall be factory made long radius. Provide bronze unions at connections to copper coils. Also, at Contractor's option all chilled water piping, above ground, may be installed using approved mechanical pipe coupling and fittings, with grade "E" gaskets. Piping 2" and smaller shall be type "K" hard drawn copper with wrought copper sweat fittings.
- I. Install control valves, sensor wells, sockets, flow meters and DP sensors that are required.

2.3 PIPING IDENTIFICATION

- A. All piping at each piece of equipment shall be stencil to show the service and direction of flow.
- B. Stencils shall be black on a white background with letters one (1") inch high spaced at approximately forty-eight (48") inches apart.
- C. Pressure-sensitive pipe markers ANSI Standard A 13.1 may be used in lieu of stenciling.

2.4 MOTOR STARTERS

- A. This Contractor shall provide motor starters for all motors furnished under this section.
- B. Starters shall be NEMA ICS 2, AC general-purpose Class A magnetic controllers for induction motors rated in horsepower. Size shall be as for the motors connected. All motors over 25 HP shall use solid state reduced voltage starters.
- C. Coils shall have the operating voltage required for the motors connected. Coils shall be of the encapsulated type with the required poles.
- D. Windings shall be straight-through type with all terminals clearly marked.
- E. Overload relays shall be NEMA ISC with one piece thermal unit construction, and shall be interchangeable. Overload relay control circuit contacts shall also be replaceable. Thermal units shall be required for starter to operate. Starters shall have phase loss, phase reversal, three phase, under-voltage relay motor protection.

- F. Starters shall have HOA, located in the cover. Starters shall also have a 150VA control transformer and auxiliary contacts as required for controls. Coordinate these with the requirements of the building automation system, Section 25 55 00.
- G. Starter enclosures shall be ANSI/NEMA ICSG, type 1 or 3R as required to meet conditions of installation.
- H. Full voltage starters shall be G. E. Model 300 Series or ABB Series B.

2.5 VIBRATION ISOLATION SYSTEMS

- A. Work shall include furnishing, installing and testing all material required and hereinafter called for complete execution of the vibration isolation system. Isolation materials shall not be limited to compressors, convertors, air units, pumps, piping, duct work, fans, etc. All motor-connected equipment shall be considered a source of vibration and shall be isolated to prevent vibration and sound transmission. Isolation equipment, as manufactured by Kinetics, Mason Industries or prior approval equal, shall be used. Specific reference to isolation under equipment headings is to provide additional information by which proper selection of the required isolation may be made. Equipment specification data showing physical size, bearing points, weights per point, rotating speeds and sound power levels generated shall be furnished by the respective equipment supplier to the vibration isolation supplier after equipment submittals have been approved.
- B. All mechanical and sound isolation materials specified herein or shown on drawings shall be provided by a single manufacturer to assure singular responsibility for proper selection, application, installation and performance. Substitution for isolation material specified incorporating non-permanent materials, such as cork, rubber, wood pulp, or thermal fiberglass shall not be acceptable. Should no specific material be called out for particular use, all mechanical vibration isolation shall be based upon Chapter 42, 1991 A.S.H.R.A.E. Guide-Table 34, "Guide for Selection of Vibration Isolators". Bases, mounts and hangers furnished shall have a nominal deflection equal to the minimum deflection as shown in this guide and shall be furnished on all motor driven equipment requiring isolation as well as piping and duct connected to same.
- C. To assure stability, the spring element to be a large diameter laterally stable spring with load plate and have a lateral stiffness greater than 0.8 times the rated vertical stiffness and be designed to provide up to 50% overload capacity. Each base mount spring shall have a 1" isolation sound pad of elastomeric material.
- D. Isolation shall be stable during starting and stopping of equipment without any transverse or eccentric movement that could damage or adversely affect the equipment or attachments. Isolation systems for floor or ceiling-mounted equipment shall have a maximum lateral motion under start up and shut down of 3/8". Motion in excess shall be corrected by restrained spring-type mounts. Isolators shall be selected for the lowest operating speed of the equipment isolated and shall be located to produce uniform loading and deflection even when equipment weight is not evenly distributed. Static deflection on grade up to 3/8" shall use nominal 1" deflection springs on isolation pads. Static deflection above grade shall use spring isolators with spring deflection based upon 1991 Guide Deflection data. The static deflection of the isolation system shall be selected to avoid being in resonance with the disturbing frequency. All spring isolators shall have neoprene sound damping pads separating isolator from structure.

- E. Submittals shall contain a complete schedule of all equipment to be isolated along with the type of isolator, loading per isolator, static deflection, spring diameters and maximum deflection. Should isolation installed fail to perform satisfactorily in preventing the transmission of vibration, the isolation shall be replaced without cost to owner and properly selected isolators shall be installed.
- F. All piping over 1" in diameter and connected to motor-driven equipment shall be spring hung for a minimum of 3 hangers in each direction. The spring deflection for the hanger shall be the same as the spring deflection for the equipment isolated. Mason Model 30N or Kinetics Model SFH.

2.6 PACKAGED AIR COOLED CHILLER

- A. Provide and install as shown on the plans a factory-assembled, factory-charged air-cooled rotary screw compressor packaged chillers with the capacities as shown on the drawings and characteristics as here in after required. Chillers shall have full architectural louvers panels. Chillers shall ship with elastomeric Isolators. The chillers shall be installed in accordance with this specification and perform at the specified conditions as scheduled. Chillers shall be as manufactured by Trane, Model ACR, or approved equal.
- B. Chillers shall be capable of the following conditions.
 - 1. Chillers shall be able to start and operate in ambient conditions from 0°F (-18°C) to 125°F (52°C). Wide ambient operation is accomplished with factory installed and tested protection. If field installed wide ambient solution is used, this shall be purchased and installed at contractor expense.
 - 2. Chillers shall be capable of operating with a leaving solution temperature range 40°F to 68°F (4.4 to 20°C) without glycol.
 - 3. Chillers shall be capable of starting up with 95°F (35°C) entering fluid temperature to the evaporator. Maximum water temperature that can be circulated with the Chiller not operating is 108°F (52°C)
 - 4. Chillers shall provide evaporator freeze protection and low limit control to avoid low evaporator refrigerant temperature trip-outs during critical periods of chiller operation. Whenever this control is in effect, the controller shall indicate that the chiller is in adaptive mode. If the condition exists for more than 30 seconds, a limit warning alarm relay shall energize.
 - 5. Chillers shall have Rapid Restart after power restoration. The Chillers shall be capable of starting in 45 seconds.
- C. Chiller compressors shall be provided as follows.
 - 1. Chillers shall operate using semi-hermetic, variable speed drive, helical rotary screw compressor per circuit.
 - 2. Chillers shall have compressor motors that are suction gas cooled with robust construction and system design protection.
 - 3. Chillers shall have oil lubrication system with oil charging valve and oil filter to ensure adequate lubrication during starting, stopping, and normal operation.
 - 4. Chillers shall have compressor heater to evaporate refrigerant returning to compressor during shut down. Energize heater when compressor is not operating.

5. Chillers shall have compressors with automatic capacity reduction equipment consisting of capacity control via variable speed drive and/or slide valve. Compressors must start unloaded for soft start on motors.
 6. Chillers shall be capable of operation down to 25% load without hot gas bypass.
- D. Each Chiller shall be provided with a pump package and combination skid package as follows.
1. Structural steel base with painted steel treadplate and with open frame under the chiller (AWSD 1.1 certified structural welders)
 2. All internal package piping completed at factory (ASME Section IX certified piping welders)
 3. Pipe supports for 2" insulation (insulation as specified in Section 23 0700, field installed)
 4. 6" Class 150 carbon steel piping manifolds
 5. (2) CHWP-1,2; each 386 GPM @ 90' TDH end suction close coupled pumps with 15 HP 1750 RPM TEFC PE motors
 6. Suction diffusers, check valves and isolation butterfly valves
 7. Pumps mounted on vibration isolation pads with flex connectors on piping
 8. Mount, pipe and wire (1) ACR 200 chiller
 9. Chiller to have manual isolation valves, y-strainer, and SS flex connectors
 10. Drains and relief valve
 11. Gauges and thermometers
 12. Controls and sensors shall be provided and installed as required in Section 25 5500
- E. Each Chiller electrical requirements shall be provided as follows.
1. 460/3/60 Nema 3R single point power connection
 2. (2) each ,15 HP NEMA 3R VFDs (no bypasses)
 3. Chiller breakers shall be modified to feed pump power distribution panel
 4. All Wiring from chiller to pump power distribution panel
 5. All Wiring from pump power distribution panel to VFDs
 6. All Wiring from VFDs to motors
 7. All internal package wiring
 8. All wiring shall be in EMT or liquid tight flexible metal conduit.
- F. Chiller evaporators shall be provided as follows.
1. The evaporators shall be designed, tested, and stamped in accordance with ASME code for a refrigerant side working pressure of 200 psig. Waterside working pressure shall be 150 psig.
 2. Insulate the evaporators with a minimum of 0.75 inch (K=0.28) UV rated insulation. If the insulation is field installed, the additional money to cover material and installation costs in the field should be included in the bid.
 3. All Evaporator heaters shall be factory installed and shall protect chiller down to -20°F (-29°C). Contractor shall wire separate power to energize heat tape and protect evaporator while chiller is disconnected from the main power.
 4. Evaporator shall have shell and tube type, seamless or welded steel construction with cast iron or fabricated steel heads, seamless internally and externally finned copper tubes, roller expanded into tube sheets.
 5. It shall be able to remove evaporator tubes from the heat exchanger.
 6. Evaporator shall have cleanable tubes
 7. Evaporator shall have water drain connection, vent and fittings. Factory installed leaving water temperature control and low temperature cutout sensors.
 8. Evaporator Water connections shall be grooved pipe.

9. Proof of flow shall be provided by the Equipment Manufacturer, mechanically installed and electrically wired, at the factory of origin.

G. Chiller fans shall be provided as follows.

1. Low sound fans shall be balanced and direct driven.
2. All condenser fan TEAO motors have permanently lubricated ball bearings and external overload protection.
3. Each condenser fans shall have an integrated drives to provide variable speed for optimized efficiency and lower part load sound.

H. Chiller condenser coils shall be provided as follows.

1. Construct condenser coils of coated microchannel fins.
2. The condenser coils shall have an integral subcooling circuit and shall be designed for 350 psig or higher working pressure. Leak tested at 1.1 times working pressure.

I. Chiller enclosure shall be provided as follows.

1. Unit panels, structural elements and control boxes are constructed of galvanized steel and mounted on a bolted galvanized steel base. Unit panels, control boxes and the structural base are finished with a baked on powder paint.
2. Control panel doors shall have door stays.
3. Chiller starters and Terminal Blocks shall be mounted in a UL 1995 rated weatherproof panel provided with full opening access doors. If a circuit breaker is provided, it should be a lockable, through-the-door type with an operating handle and clearly visible from outside of chiller indicating if power is on or off.
4. The chiller coating or paint system shall withstand 500 hours in a salt-spray fog test in accordance with ASTM B117.

J. Chiller Mounted Adaptive Frequency Drive (AFD) shall be provided as follows.

1. The AFD efficiency shall be 97% or better at full speed and full load. Fundamental displacement power factor shall be a minimum of 0.96 at all loads for AFD. All other starters shall have a minimum displacement power factor of 0.85.
2. The Power semi-conductor and capacitor cooling shall be from a liquid or air cooled heatsink.
3. Units shall have a single point power connection.
4. The Power line connection type shall be standard with a terminal block.
5. A control power transformer shall be factory-installed and factory-wired to provide unit control power.
6. Unit wiring shall be run in liquid-tight conduit.
7. High short circuit current rating (SCCR) of 10kA.

K. Chillers Refrigerant Circuits shall be provided as follows.

1. All chillers shall have 2 refrigeration circuits, with 1 or 2 compressors on each circuit.
2. Provide the following for each refrigerant circuit:
 - a. Liquid line shutoff valve
 - b. Suction service valve
 - c. Discharge service valve
 - d. Filter (replaceable core type)

- e. Liquid line sight glass.
 - f. Electronic expansion valve sized for maximum operating pressure
 - g. Charging valve
 - h. Discharge and oil line check valves
 - i. High side pressure relief valve
 - j. Integrated oil loss sensor
 - k. Full operating charge of R513a and oil.
- L. Chiller Controls shall be provided as follows.
- 1. A color touch sensitive liquid crystal display (LCD) shall be unit mounted and a minimum of 7" diagonal. Graphical Icons provide links to sub menus on the subsystems operations.
 - 2. A Display shall consist of a menu driven interface with easy touch screen navigation to organized sub-system reports for compressor, evaporator, and motor information as well as associated diagnostics.
 - 3. The chiller control panel shall provide password protection of all setpoints
 - 4. The controller shall have the ability to display all primary sub-system operational parameters on dedicated trending graphs. The operator must be able to create up to 6 additional custom trend graphs, choosing up to 10 unique parameters for each graph to trend log data parameters simultaneously over an adjustable period and frequency polling.
 - 5. Chilled water temperature control shall be microprocessor-based, proportional and integral controller to show water and refrigerant temperature, refrigerant pressure, and diagnostics. This microprocessor-based controller is to be supplied with each chiller by the chiller manufacturer.
 - 6. The front of the chiller control panel shall display the following in clear language, without the use of codes, look-up tables, or gauges:
 - a. Run time.
 - b. Number of starts.
 - c. Current chiller operating mode.
 - d. Chilled water set point and set point source.
 - e. Electrical current limit set point and set point source.
 - f. Entering and leaving evaporator water temperatures.
 - g. Saturated evaporator and condenser refrigerant temperatures.
 - h. Evaporator and condenser refrigerant pressure.
 - i. Oil tank pressure.
 - j. Intermediate oil pressure in the compressor.
 - k. Compressor motor current per phase.
 - l. Compressor motor percent RLA.
 - m. Compressor motor voltage per phase.
 - n. Phase reversal/unbalance/single phasing and over/under voltage protection.
 - o. Low chilled water temperature protection.
 - p. High and low refrigerant pressure protection.
 - q. Load limit functions (both current based or pulldown rate based) to limit compressor loading on high return water temperature.
 - r. Condenser fan sequencing to automatically cycle fans in response to load, expansion valve pressure, condenser pressure, and differential pressure to optimize chiller efficiency.
 - s. Display diagnostics.
 - t. Oil pressure control based off of maintaining system differential pressure.
 - u. Compressors: Status (on/off), %RLA, anti-short cycle timer, and automatic compressor lead-lag.

- v. Oil loss indication.
7. Weatherproof control panel shall be mounted on chiller, containing starters, power and control wiring, factory wired with terminal block power connection. Provide primary and secondary fused control power transformer.
 8. The chiller controller shall utilize a microprocessor that will automatically take action to prevent chiller shutdown due to abnormal operating conditions associated with: evaporator refrigerant temperature, high condensing pressure and motor current overload.
 9. Provide the following safety controls with indicating lights or diagnostic readouts
 10. Weatherproof control panel shall be mounted on chiller, containing starters, power and control wiring, factory wired with terminal block power connection. Provide primary and secondary fused control power transformer.
 11. The chiller controller shall utilize a microprocessor that will automatically take action to prevent chiller shutdown due to abnormal operating conditions associated with: evaporator refrigerant temperature, high condensing pressure and motor current overload.
 12. Provide the following safety controls with indicating lights or diagnostic readouts.
 - a. Low chilled water temperature protection.
 - b. High refrigerant pressure.
 - c. Low oil flow protection.
 - d. Loss of Oil diagnostic
 - e. Loss of chilled water flow.
 - f. Contact for remote emergency shutdown.
 - g. Motor current overload.
 - h. Phase reversal/unbalance/single phasing.
 - i. Over/under voltage.
 - j. Failure of water temperature sensor used by controller.
 - k. Compressor status (on or off).
 13. Provide the following operating controls.
 - a. A variable method to control capacity in order to maintain leaving chilled water temperature based on PI algorithms. Five minute solid state anti-recycle timer to prevent compressor from short cycling. Compressor minimum stop-to-start time limit shall be 2 minutes. If a greater than 5 minute start-to-start.
 - b. Chilled water pump output relay that closes when the chiller is given a signal to start.
 - c. Load limit functions to limit compressor loading on high return water temperature to prevent nuisance trip outs.
 - d. High condenser pressure limit controls that unloads compressors to keep head pressure under control and help prevent high pressure nuisance trip outs on days when outside ambient is above design.
 - e. Compressor current limit controls that unloads compressors to help prevent current overload nuisance trip outs.
 - f. Low ambient lockout control with user adjustable setpoint.
 - g. Condenser fan sequencing which adjusts the speed of all fans automatically in response to ambient, condensing pressure and expansion valve pressure differential thereby optimizing chiller efficiency.
 14. Provide user interface on the front of the panel. If display is on the inside of the panel, then a control display access door shall be provided to allow access to the display without removal of panels. Provide user interface with a minimum of the following features:
 - a. Leaving chilled water setpoint adjustment from touch panel input
 - b. Entering and leaving chilled water temperature output

- c. Percent RLA output for each compressor
 - d. Pressure output of condenser
 - e. Pressure output of evaporator
 - f. Ambient temperature output
 - g. Voltage output
 - h. Current limit setpoint adjustment from LCD input.
15. The chiller control panel shall provide leaving chilled water temperature reset based upon return water temperature.
16. Digital Communications to BAS system shall consist of a BACnet MS/TP interface via a single twisted pair wiring.
- M. Chiller installation, service, and start up shall be provided as follows.
1. Level the chiller using the base rail as a reference. The chiller must be level within 1/2" in over the entire length and width. Use shims as necessary to level the chiller.
 2. Provide all labor and materials to perform startup. Startup shall be performed by a factory-trained technician from the original equipment manufacturer (OEM). Technician shall confirm that equipment has been correctly installed and passes specification checklist prior to equipment becoming operational and covered under OEM warranty. This shall be done in strict accordance with manufacturer's specifications and requirements. Third-party service agencies are not permitted.
 3. A start-up log shall be furnished by the factory approved start-up technician to document the chiller's start-up date and shall be signed by the owner or his authorized representative prior to commissioning the chillers.
 4. Chiller manufacturers shall maintain service capabilities no more than X miles from the jobsite.
 5. Provide local service agent with direct access to factory support on equipment.
 6. The service provider shall employ a minimum of (5) full time, competent HVAC and automation system servicepersons on staff, whose office in which they operate from is within (60) miles of the job site and who have been within their employment for a minimum of (5) years.
- N. Each Chiller, and Pump Package, Startup Testing shall be provided as follows.
1. Accomplished with NIST Traceable Test Equipment
 2. Hydrostatic Test to 150 psig or 50 psig over maximum system pressure (whichever is greater) for 2 hours.
 3. Installation System flow tests
 4. All switches, sensors, alarms, and equipment and sequencing tested at factory

2.7 WATER TREATMENT

- A. Contractor to furnish and install necessary equipment to properly treat the chilled water circulating system. Manufacturers shall be K-2 Chem., Nalco, or equal. Contractor to provide treatment report to owner after completion of water treatment.
- B. Furnish and install high pressure "pot type" feeders interconnected across chilled water circulating pumps. Treatment shall be film forming type capable of maintaining adequate corrosion and sludging protection. Include 55 gallons Closed System Treatment in highly

concentrated liquid form, basically Nitrite-Metallic Polyphosphate formulated to meet local water conditions.

- C. Flush out system and remove pipe scale and oily residue, furnish Pre-Start-Up chemical to be used under direct supervision of chemical company representative. This shall be done after all pipe is completed and tested, prior to operation and initiation of regular chemical feeding.
- D. Provide complete printed instructions for chemical dosages, bleed rates, operation, to simplify operation and set a standard for treatment. Services of factory trained Engineer shall be included for setting up procedures and instructing personnel in proper handling of chemicals based on actual analysis of water supply. Complete test sets for checking PH, Alkalinity, Chloride, Hardness, Nitrite, Organic Phosphonate shall be included with all required reagents and instructions. Factory check analysis and supervision of chemical use and test shall be included for first year's operation.
- E. This Contractor shall furnish and install all piping connections, taps, and shut off valves to accommodate all the equipment and piping. Contractor shall certify piping is clean and free of air.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. All equipment and controls shall be installed in accordance with manufacturer's recommendations. Installation, adjustments and starting shall be done under supervision of manufacturer's representative.
- B. All equipment shall be installed in a neat and workmanlike manner in accordance with the guidelines of NFPA 90-A and the best practice of the trade.
- C. This Contractor shall furnish and install any and all mechanical items which are required to complete the temperature controls that are provided and reconnected under this section, Verify and provide the Chilled Water System Operating Controls as described and required on the drawings.
- D. All piping as specified under this section shall be tested to the following pressures:

Building Chilled water system	-	100 psi
Condensate drain	-	10 psi
- E. The method of application of tests and duration shall be as described in SECTION 23 00 50 Maximum of 5% pressure loss during the duration shall be acceptable.
- F. Upon completion of the installation of all work and equipment the Contractor shall start all equipment and make all necessary tests and adjustments to place entire heating, ventilating and air conditioning systems in a satisfactory condition for continuous safe operation of facilities.

3.2 TESTING AND BALANCING

- A. Balancing Agency shall coordinate with the Mechanical Contractor the testing and balancing requirements.
- B. Adjust chilled water flow to provide specified pressure drops through the new chiller.
- C. Effect adjustment of water distribution systems by means of balancing cocks, valves, and fittings. Do not use service or shut-off valves for balancing unless indexed for balance point.
- D. Use calibrated Venturi tubes, orifices, or other metered fitting and pressure gages to determine flow rates for system balance.
- E. Where flow-metering devices are not installed, base flow balance on pressure drops on elements in the system. Where available pump capacity is less than total flow requirements or individual system parts, full flow in one part may be simulated by temporary restriction of flow to other parts.

END OF SECTION 23 05 00

SECTION 23 05 93 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The Contractor shall furnish all labor, equipment and services necessary for and incidental to Air and Water Systems Testing and Balancing.
- B. The Contractor shall procure the services of an independent testing and balancing agency. The Testing and Balancing Agency (TBA) specializes in testing and balancing of heating, ventilating, air-moving equipment, and air-conditioning systems. The Mechanical Contractor shall award the test and balance contract to the above agency as soon as possible after receipt of contract.
- C. Testing and Balancing shall not begin until the systems have been completed and are in full working order.
- D. Shop drawings must be provided to the TAB firm no later than 30 days after the final, approved shop drawings have been returned by the Architect to the Contractor.
- E. Duct leakage testing shall be the responsibility of the TBA subcontractor.
- F. Fire and smoke damper testing shall be done by the contractor and witnessed by the TAB firm.
- G. The final and complete Test and Balance Report shall be submitted, for approval, not less than two weeks before a final inspection of the Project is requested by the General Contractor. Failure to provide the Report shall be cause to delay the final inspection until the Report is Approved .
- H. Contractor is cautioned that test and Balance Report shall include both Grille counts, and Supply, Return, Outside Air and Exhaust Duct Traverses so that duct leakage can be calculated.
- I. In the event that the requirements of the Engineer's issued Specifications are in conflict with the RFP Specifications (Incl. ALL Addendums), the RFP Specifications Requirements shall prevail and be provided.

1.2 REFERENCES

- A. AABC – National Standards for Total System Balance.
- B. NEBB – Procedural Standards for Testing, Adjusting, and Balancing.

1.3 SUBMITTALS

- A. Field Reports: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.

- B. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect/Engineer and for inclusion in operating and maintenance manuals.
- C. Provide reports in soft cover, letter size, binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating, thermostat locations.

1.4 QUALITY ASSURANCE

- A. Perform total system balance in accordance with AABC National Standards for Field Measurement and Instrumentation, Total System Balance, or NEBB Standards – Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems or Testing Adjusting and Balancing Bureau (TABB)-National Standards for Environmental Systems Balance.

1.5 QUALIFICATIONS

- A. TBA shall be a Company specializing in the testing, adjusting, and balancing of systems specified in this Section with minimum three years experience.

PART 2 - PRODUCTS

2.1 ADJUSTMENT DEVICES

- A. Replacement of adjustable pulleys, additional balancing dampers, additional fan belts, pressure taps and fitting, hydronic balancing valves and any other devices or equipment required to effect proper testing, adjusting and balancing shall be provided shall be provided by the Contractor at no additional cost to the Owner.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
 - 1. Systems are started and operating in a safe and normal condition.
 - 2. Temperature control systems are installed complete and operable.
 - 3. Proper thermal overload protection is in place for electrical equipment.
 - 4. Final filters are clean and in place. If required, install temporary media in addition to final filters.
 - 5. Duct systems are clean of debris.
 - 6. Fans are rotating correctly.

7. Fire and volume dampers are in place and open.
8. Air coil fins are cleaned and combed.
9. Access doors are closed and duct end caps are in place.
10. Air outlets are installed and connected.
11. Duct system leakage is minimized.
12. Proper strainer baskets are clean and in place.
13. Service and balance valves are open.

B. Beginning of work means acceptance of installed HVAC conditions.

3.2 INSTALLATION TOLERANCES

- A. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 5 percent of design for return and exhaust systems.
- B. Air Outlets and Inlets; Adjust total to within plus 5 percent and minus 5 percent of design to space. Adjust outlets and inlets in space to within plus or minus 5 percent of design.

3.3 ADJUSTING – GENERAL

- A. Ensure recorded data represents actual measured or observed conditions.
- B. Permanently mark setting of valves, dampers, and other adjustment devices allowing setting to be restored. Set and lock memory stops.
- C. After adjustment, take measurement to verify balance has not been disrupted or that such disruption has been rectified.
- D. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.
- E. At the time of final inspection the TAB agency may be required to recheck, in the presence of the Owner's Representative, specific and random selections of data, air quantities, and air motion recorded in the certified report. Points and areas for recheck shall be selected by the Architect. Measurements and test procedures shall be the same as approved for the initial work for the certified report. Selections for recheck, specific plus random, shall not exceed 10% of the total number tabulated in the report.

3.4 AIR SYSTEMS PROCEDURE (MINIMUM REQUIREMENTS)

- A. Test and adjust fan RPM to design requirements.
- B. Test and record motor full load nameplate rating and actual ampere draw.
- C. Test and record system static pressures, fan suction and discharge.
- D. Adjust all main supply and return air duct to proper design CFM.

- E. Test and adjust each diffuser, grille and register (new and existing as indicated on drawings). Reading and tests of diffusers, grilles and registers shall include design velocity (FPM) and as adjusted velocity, design CFM and adjusted CFM.
- F. Test and record outside, mixed air and discharge temperatures (D.B. for heating cycle, D.B. and W.B. for cooling cycle).
- G. In coordination with the ATC contractor, set adjustments of automatically operated dampers to operate as specified, indicated and/or noted.
- H. Test and adjust air handling and distribution systems to provide required or design supply, return, outside and exhaust air quantities.
- I. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.
- J. Measure air quantities at air inlets and outlets.
- K. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.
- L. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.
- M. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.
- N. Provide system schematic with required and actual air quantities recorded at each outlet or inlet
- O. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.
- P. Adjust outside air automatic dampers, outside air, return air and exhaust dampers for design conditions.
- Q. Measure temperature conditions across air, return air, and exhaust dampers to check leakage.
- R. Where modulating dampers are provided, take measurement and balance at extreme conditions.
- S. Measure and record pressure differentials between designated spaces.

3.5 REQUIRED REPORTS TO BE SUBMITTED

- A. The following reports shall be submitted, as a minimum, with a complete Title Page, Summary, and Instrument List. All data and nomenclature shall be provided, as required by AABC and/or NEBB Procedure manuals, for each device tested and balanced.
 - 1. Electric Motors.
 - 2. V-Belt Motors.

3. Heating and Cooling Coils Data.
4. Air Moving Equipment.
5. Return Air/ Outside Air Data.
6. Exhaust Air Data.
7. Duct Traverses.
8. Air Distribution Test Sheets.

3.6 COMMISSIONING

- A. Balancing Agency shall coordinate with the Mechanical Contractor the Commissioning requirements as here-in-before specified.
- B. Contractor is cautioned that the Owner, thru the Architect, reserves the right to check and verify any and all points and readings of the Test and Balance report. If 15% or more of the points do not agree with the report, then the Contractor shall re-test and re-balance the entire project and submit a complete, new Report. If 15% or more of this new Data is independently verified and still does not agree with the Contractor's new Report, then the Owner has the right to hire an Independent Test and Balance Contractor and the Original Contractor shall be held responsible to pay these costs.
- C. All TAB deficiencies shall be corrected when found. Any deficiencies that are (for whatever reason) not corrected immediately shall be shown in the TAB report and listed on a summary sheet in the front of the TAB report. The TAB report must be completed and accepted by the Mechanical Engineer before the project is accepted and all items on the summary sheet shall become punch list items with dollar values assigned to them.

END OF SECTION 23 05 93

SECTION 23 07 00 - PLUMBING AND HVAC INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide a complete system of insulation, as herein specified, for both inside and outside of building.
- B. The General Provisions of the Contract including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.
- C. Refer to SECTION 23 00 50," Common Work Results For HVAC" which is applicable to this Section.
- D. Insulation shall include insulating materials, their applications, finish, bands, tie wire and weather protection for all piping, fittings, valves, and equipment as indicated and specified herein.

1.2 GENERAL

- A. All insulation shall be applied in a workmanlike manner by skilled workmen regularly engaged in this type of work.
- B. All pipe insulation shall have COMPOSITE flame and smoke hazard ratings as tested in accordance with standard testing methods (NFPA) 255 and UL 723).
- C. Composite ratings shall not exceed: flame spread 25, smoke developed 50.
- D. Accessories such as adhesive, mastic, cement, tapes and asbestos cloth shall have the same component ratings as listed above.
- E. THE INSULATION CONTRACTOR SHALL CERTIFY IN WRITING, PRIOR TO INSTALLATION, THAT ALL PRODUCTS TO BE USED WILL MEET THE ABOVE CRITERIA.

1.3 QUALITY ASSURANCE

- A. Manufacturers offering products to comply with the requirements of this Section include the following. All materials and/or devices shall be equal in substance and function and meet the requirements of the specified items. Burden of proof that the items offered are equal, or superior, in construction and efficiency, to the specified items, rests on the supplier of those items. Final approval of these items during the Submittal Phase will only be granted if that proof is satisfactory to the Architect.

Johns Manville
Owens Corning
KARP

Knauf
Nomaco
Armaflex

PART 2 – PRODUCTS

2.1 DOMESTIC COLD WATER PIPING ABOVE GROUND

- A. Insulate all new above ground cold water pipe with glass fiber pipe insulation with factory applied white all service jacket, with self-sealing lap (ASJ-SSL) as manufactured by KNAUF, Owens Corning, Johns Manville, or approved equal.
- B. Insulate fittings, flanges and valves with performed insulation with PVC premolded one-piece fitting covers, with fiberglass inserts, Proto covers, or approved equal. Premolded or shop fabricated Glass Fiber covers may be used in lieu of above at the Contractor's option. Optional covers to be given a smoothing coat of finishing cement, Ryder "V" one coat, or approved equal, in exposed areas and vapor sealed in all areas with vapor barrier mastic coating. Foster 30-35, or approved equal, reinforced with white glass fabric.
- C. Insulation thickness for all cold water piping to be 1/2 inch.
- D. Provide an isolating vapor seal between pipe insulation jacket and pipe at butt joints of insulation at fittings, flanges, valves, hangers and at 21 foot intervals on continuous runs. Using Foster 30-35 vapor barrier mastic coating, or approved equal.
- E. Adhere longitudinal laps and butt strips of jacket with factory applied pressure sensitive tape system, as manufactured by KNAUF, Owens Corning, Johns Manville, or approved equal.

2.2 CHILLED WATER PIPING INTERIOR ABOVE GROUND

- A. All interior chilled water piping and fittings, above ground, shall be insulated with 100% rigid cellular glass molded pipe insulation. Insulation shall have an average density of 8 lb./cu.ft. and shall have a thermal conductivity of 0.27 BTU-in/hr.sf.degrees F. at 50 degrees F. The insulation shall comply with ASTM C 552, Type II furnished in half sections of 24" long.
- B. Insulation shall be installed with all seams and joints sealed with water proof sealant as recommended by the manufacturer. After sealant is applied insulation shall be secured with 1/2" wide by 0.010" thick stainless steel bands with matching seals. Sealants shall be applied full depth of all joints and shall not be used to fill voids or cracks.
- C. Cover all new insulation with a cellulose free fiberglass reinforced vapor retarder insulation jacketing. The jacketing shall consist of a, 1.1 mil thick, white polypropylene film reinforced with a fiberglass scrim and laminated to a, .5mil thick, aluminized polyester film (bottom) to assure high level of resistance and protection against puncture and tear.
- D. Insulate fittings, flanges and valves with same material and thickness as adjacent piping. Cover insulation with same jacket as adjacent piping.
- E. Chilled water pipe insulation shall have the following thickness.

PIPE SIZE	INSULATION THICKNESS
Up to 1"	2"
1 1/4" to 4"	2 1/2"
Above 4"	3"

- F. Provide one or two layer expansion/contraction joints in accordance with manufacturer's recommendations.
- G. At contractor's option, interior chilled water piping and fittings, above ground inside the building, may be insulated with closed phenolic foam insulation, as manufactured by Resolco Inc. or approved equal. Insulation shall have a "K" value ASTM C-518 .15 BTU-in/.F@75°F with a Maximum service temperature 250°F , a Maximum moisture absorption of 0.5 % by volume , and a 2.5 lb/cu ft density. This Insulation shall have a Vapor Barrier Jacket that is Venture Wrap or Venture Clad; a moisture vapor transmission ASTM E 960.01 perm; that is Secured with self sealing longitudinal laps and butt strips and with vapor barrier mastic. Vapor barrier lap adhesive shall be Childers CP-76 or approved equal and shall be compatible with the insulation. Materials shall have a flame spread index of less than 25 and a smoke-development index of less than 50 in accordance with ASTM E 84. Minimum thickness shall be as listed below.

PIPE SIZE	INSULATION THICKNESS
Up to 1"	1"
1 1/4" to 4"	1 1/2"
5" and above	2"

- H. Also, at Contractors option, the following flexible closed cell elastomeric tubular insulation system, AP Armaflex, AP Armaflex SS, or approved equal, may be used for interior chilled water piping and fittings, above ground inside the building.
- Materials shall have a maximum thermal conductivity of 0.27 BTU-in/hr.s.f. degrees F. at 75 degrees F. in accordance with ASTM C 177 or ASTM C 518. Maximum water vapor transmission of 0.08 perm-inches in accordance with ASTM E 96.
 - Materials shall have a flame spread index of less than 25 and a smoke-development index of less than 50 in accordance with ASTM E 84.
 - All seams and butt joints shall be adhered and sealed using Armaflex 520 or 520 BLV adhesive. Insulation shall also be adhered directly to the piping at the high end using a two inch strip of Armaflex 520 or 520 BLV. All exposed ends cuts shall also be coated with Armaflex 520 or 520 BLV adhesive.
 - This Insulation shall have the following thickness.

PIPE SIZE	INSULATION THICKNESS
Up to 1"	1"
1 1/4" and above	1 1/2"
 - Entire installation shall be in strict accordance with the Manufactures recommendations.

2.3 CHILLED WATER PIPING – EXTERIOR - ABOVE GRADE

- A. All chilled water piping and fittings installed, exposed to the weather shall be insulated with 100% rigid cellular glass molded pipe insulation. Insulation shall have an average density of

7.5 lb/cu.ft. and shall have a thermal conductivity of 0.27 BTU-IN/HR.SF. degrees F at 50 degrees F.

- B. Insulation shall be installed with all seams and joints sealed with water proof sealant as recommended by the manufacturer. After sealant is applied insulation shall be secured with 1/2" wide by 0.010" thick stainless steel bands. Sealants shall be applied full depth of all seams and joints and shall not be used to fill voids or cracks.
- C. Cover all, exterior of building, insulation with a special bituminous containing laminate water waterproofing membrane. Covering shall be 125 mil, thick Pittwrap or approved equal. Jacket shall be installed per manufacturer's recommendations. Provide S.S. Bands as required by manufacturer installation details.
- D. Insulation thickness shall be 2" thick up to 1" pipe size and 2 1/2" thick up to 4" pipe size, and 3" thick above 4" pipe size.
- E. Insulation shall be Foamglass Super K as manufactured by Pittsburg Corning, or approved equal, and shall be installed in strict accordance with their recommendations and requirements.
- F. On all outdoor piping insulation, above ground, provide aluminum jacket 0.016 inch thick with longitudinal z-joint secured with preformed 2" wide butt strips, as manufactured by KNAUF, Owens Corning, Johns Manville, or approved equal. Provide preformed aluminum fitting cover on all fittings.

2.4 PUMPS

- A. Insulate all NEW chilled water pumps and casings with 1 inch thick closed cell rubber insulation, Nomaco K-flex, Johns Manville Aerotube, or approved equal, that shall be bonded to all surfaces that come in contact with the system water.
- B. Coat all exterior surfaces of the insulation with two coats of exterior surface preparation to reduce exterior deterioration of the insulation.

PART 3 – EXECUTION

3.1 WORKMANSHIP AND INSTALLATION

- A. All insulation shall be applied per manufacturer's specifications and installation requirements.
- B. Insulation shall be applied over clean dry surfaces after all test have been performed and approved.
- C. Methods of application and other details not specified herein shall be in accordance with manufacturer's recommendations, which shall constitute minimum standards.
- D. Sheet Metal Saddles - 10" long shall be provided on all hangers supporting insulated lines. They shall be fabricated to conform with the outside diameter of the pipe covering and shall be

fabricated from 22 gauge sheet iron for pipe through 2½", 20 gauge sheet iron for pipes 3" through 8" and 16 gauge for all pipes over 8".

- E. A rigid insulation material shall be used at each pipe hanger as an insert and the pipe covering shall pass full thickness through the hangers.
- F. On all outdoor piping insulation, above ground, provide aluminum jacket 0.016 inch thick with longitudinal z-joint secured with preformed 2" wide butt strips, as manufactured by KNAUF, Owens Corning, Johns Manville, or approved equal. Provide preformed aluminum fitting cover on all fittings.

END OF SECTION 23 07 00

SECTION 23 09 00 - VALVES AND FITTINGS FOR HVAC**PART 1 – GENERAL****1.1 SUMMARY**

- A. The work under this heading includes the furnishing and installing of all required appurtenances incidental to the piping systems as indicated on the drawings.
- B. Refer to Section 22 00 50, “Common Work Results for HVAC”, which shall apply to all work in this Section.

1.2 QUALITY ASSURANCE

- A. Manufacturers offering products to comply with the requirements of this Section include the following. All materials and/or devices shall be equal in substance and function and meet the requirements of the specified items. Burden of proof that the items offered are equal, or superior, in construction and efficiency, to the specified items, rests on the supplier of those items. Final approval of these items during the Submittal Phase will only be granted if that proof is satisfactory to the Architect.

Red-White	Homestead
Nibco	Febco
T&S Brass	Milwaukee
Stockham	Milliken
Nexus	

PART 2 – PRODUCTS**2.1 GENERAL**

- A. Provide factory-fabricated valves for use in service indicated. Provide valves of types and pressure ratings indicated; provide proper selection to comply with installation requirements. Provide sizes as indicated, and connections, which properly mate with pipe, tube, and equipment connections. Where more than one type is indicated, selection is installer's option. Valves shall be of same make for all these services.
- B. Valves shall comply with the following:

Gate - cast iron - MSS SP-70
Gate - bronze - MSS SP-80
Globe - cast iron - MSS SP-85
Globe - bronze - MSS SP-80
Ball - MSS SP-110
Butterfly - MSS SP-67
Check - cast iron - MSS SP-71

Check - bronze - MSS SP-80

- C. Gate valves shall be equipped with packing suitable for intended service. (Under no circumstances is asbestos acceptable.) Valves shall be designed so back seating protects packing and stem threads from media when valve is fully opened, and equipped with gland follower. Guides for disc on rising stem valves shall be machined for accurate fit.
- D. Globe valves shall be equipped with packing suitable for intended service. (Under no circumstances is asbestos acceptable.) Globe valves shall be designed so back seating protects packing and stem threads from media when valve is fully opened, and equipped with gland follower.
- E. Ball valves shall have FULL port opening blow out proof stem: hard chrome plated forged brass ball, rated not less than 600# W.O.G.
- F. Provide gear operators on butterfly valves 8" and larger. Valve bodies shall have extended necks to provide for 2¹/₂" insulation.
- G. Provide valves with features indicated and where not otherwise indicated, provide proper valve features as outlined in this specification. Comply with ANSI B31.1.
- H. Valve flanges shall comply to ANSI B16.1 (cast iron), ANSI B16.5(steel), ANSI B16.24 (bronze).
- I. Threaded valve ends shall comply with ANSI B2.1.
- J. Butt-Weld valve ends shall comply with ANSI B16.25.
- K. Solder Joint valve ends shall comply with ANSI B16.18.
- L. Flangeless valve bodies shall be manufactured to fit between flanges and shall comply with ANSI B16.1 (cast iron), ANSI B16.5 (steel), or ANSI B16.24 (bronze).
- M. Fabricate pressure-containing components of valves, including stems and seats from brass or bronze materials, of standard alloy recognized in valve manufacturing that resist de-zincification.
- N. Design seat of valve with removable disc, and assemble valve so disc can be replaced when worn.
- O. Butterfly valves shall be designed for flow regulation, and manufactured to be tight in closed position. Test pressures in accordance with MSS SP-67 with Seat Diameters 2" to 12" at 220psi. No leakage shall be permitted under test.

2.2 GLOBE VALVES FOR STEEL PIPING

- A. Threaded Ends 2" and Smaller: Class 125, bronze body, union bonnet, rising stem, Teflon disc: Nibco T-211-Y, Milwaukee 502, or approved equal.
- B. Flanged Ends 2¹/₂" and Larger: Class 125, iron body, bolted bonnet, rising stem, OS&Y, renewable seat and disc: Nibco F718-B, Milwaukee F2981, or approved equal.

2.3 GATE VALVES FOR STEEL PIPING

- A. Threaded Ends 2" and Smaller: Class 125, bronze body, union bonnet, rising stem, solid wedge: Nibco T-124, Milwaukee 105, or approved equal.
- B. Flanged Ends 2 1/2" and Larger: Class 125, iron body, bronze mounted, bolted bonnet, rising stem, OS&Y, solid wedge: Nibco F617-0, Milwaukee F2885, or approved equal.

2.4 GLOBE VALVES FOR COPPER PIPING

- A. Soldered Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, rising stem, bronze disc (swivel type): Nibco S211-B, Milwaukee 1502, or approved equal.
- B. Flanged Ends 2 1/2" and Larger: Class 125, iron body, bolted bonnet, rising stem, OS&Y, renewable seat and disc: Nibco F718-B, Milwaukee F2981, or approved equal. Provide dielectric gasket and bolt isolators.

2.5 GATE VALVE FOR COPPER PIPING

- A. Flanged Ends 2 1/2" and Larger: Class 125, iron body, bronze mounted, bolted bonnet, rising stem, OS&Y, solid wedge: Nibco F617-0, Milwaukee F2885, or approved equal. Provide dielectric gasket and bolt isolators.
- B. Solder Ends 2" and Smaller: Class 125, bronze body, screwed bonnet, rising stem, solid wedge: Nibco S-111. (Non-rising stem gate valves may be used where headroom prevents full extension of rising stems: Nibco S-113, Milwaukee 115, or approved equal.)

2.6 BALL VALVES

- A. Threaded Ends 4" and Smaller: 600# W.O.G., forged brass two piece body, hard chrome plated forged brass ball, blow-out proof stem: Nibco T-FP-600, Milwaukee BA-100
- B. Soldered Ends 2" and Smaller: 600# W.O.G., forged brass two piece body, hard chrome plated forged brass ball, true adjustable packing nut ("O"-ring only type stem seal not acceptable), blow-out proof stem: Nibco S-585-70, Milwaukee BA-150, or approved equal.

2.7 SWING CHECK VALVE IN COPPER PIPING

- A. Soldered Ends 2" and Smaller: Class 125, bronze body, screwed cap, "Y" pattern swing, bronze disc: Nibco S-413B, Milwaukee 1509, or approved equal.
- B. Flanged Ends 2 1/2" and Larger: Class 125, iron body, bronze mounted, horizontal swing, cast-iron disc: Nibco F918-B, Milwaukee F2974, or approved equal. Provide dielectric gasket with insulated bolts.

2.8 SWING CHECK VALVES IN STEEL PIPING

- A. Threaded Ends 2" and Smaller: Class 125, bronze body, screwed cap, "Y" pattern swing, Teflon disc: Nibco T-413Y, Milwaukee 509T, or approved equal.
- B. Flanged Ends 2¹/₂" and Larger: Class 125, iron, bronze mounted, horizontal swing, cast-iron disc: Nibco F918-B, Milwaukee F2974, or approved equal.

2.9 BUTTERFLY VALVES

- A. Provide lug type with rated working pressure of 200 psi. Valve shall be cast iron, drilled and tapped bug body, lever operated, 10 position throttling handle up to 8" and gear operator 10" and above, memory plate, type 410 stainless steel stem with EPDM seat.
- B. Manufacturer shall be Red-White L615, Stockham LG712, Milwaukee ML123, Nibco LD or equal.

2.10 UNIONS IN COPPER LINES

- A. Cast Bronze Unions.

2.11 UNIONS IN BLACK STEEL, WROUGHT IRON OR GALVANIZED STEEL PIPING

- A. Ground joint malleable iron galvanized for 2" nominal pipe sizes or below.
- B. For pipe sizes 2¹/₂" and larger use forged steel welding flanges (Galvanized for galvanized piping).

2.12 UNIONS IN CONNECTION BETWEEN COPPER AND STEEL OR IRON PIPING

- A. Provide bronze valves or Victaulic dielectric waterways.

2.13 BALANCING COCKS

- A. Nibco T/S1710, Crane D931, or approved equal.

2.14 STRAINERS

- A. Through 2¹/₂" Metraflex Style S - Screwed; Zurn Model YSBR 20 mesh monel screen, through 2"; .045 stainless steel on 2¹/₂".
- B. Strainers on 3" and above Metraflex Style M1 – flanged, Zurn Model FS 3", to have .045 mesh, SS screws; 3¹/₂" and above .125 mesh, SS screws.

2.15 GAGE COCK

- A. Crane No. 744, or Weiss TC-14, all bronze.

2.16 GAUGES

- A. Furnish and install where shown on the plans or where good practice required, pressure gauges with 4 $\frac{1}{2}$ " glass dial face, corrosion resistant stainless steel case and ring, balanced adjustable black pointer guaranteed accurate to 1% of range, easy read dial - white background with bold black numerals and graduations, 270 degree ARG, $\frac{1}{4}$ " N.P.T. bottom connection.

2.17 THERMOMETERS

- A. Thermometers shall be Adjustable Angle type with 9" case, lens front reading mercury tube, with angle satin finish aluminum scales, bold black numerals, bold scale graduations, thick glass windows, and die cast aluminum case with baked bronze finish.
- B. Thermometers shall rotate 180 degrees and stem swivels 180 degrees in 10 degree increments separable wells to suit insulation.
- C. For chilled water 20 degrees to 120 degrees. For hot water 30 degrees to 240 degrees.

2.18 AUTOMATIC FLOW CONTROL VALVES

- A. Furnish and install where shown on the plans automatic flow control valve. Valves shall be sized based on minimum pressure loss as recommended by manufacturer. Contractor shall submit schedule of values showing flow and operational pressure drop for approval prior to ordering and/or installation.
- B. Flow control valves shall automatically control flow rates with plus or minus 5% accuracy. Valve control mechanism shall consist of a stainless steel cartridge with a ported cup and coil/helical spring to avoid corrosion. Four operating ranges shall be available with the minimum range requiring less than 2 PSID to actuate the mechanism. Manufacturer shall provide independent laboratory tests verifying accuracy of performance. All FCVs shall be of one manufacturer and conform to the above specifications.

2.19 BALANCING VALVES

- A. Valves $\frac{1}{2}$ " to 2" pipe size (NPT or Sweat) to be of dezincification brass or bronze construction. Valves 2 $\frac{1}{2}$ " to 12" pipe size shall be cast iron for flanged models or ductile iron for grooved models. Valves shall be globe type rated 175 psi for iron and 240 psi for brass/bronze at 250 degrees F. Valves to have concealed memory stop feature and visual position readout. Each valve shall have two metering/test ports with internal check valves and protective caps. Valves to be leak-tight at full rated working pressure. All valves to be provided with molded insulation

to permit access for balance and read-out. Nibco model T or S1710 ($\frac{1}{2}$ " to 2"), F or G737 ($2\frac{1}{2}$ " to 12"); DEZURIK Series 12.30-1 or approved equal.

2.20 T.A.P. PLUGS

- A. Furnish where shown on plans or where good practice requires $\frac{1}{2}$ " IPS plug. The Contractor shall leave with the Owner one kit consisting of (1) $\frac{1}{8}$ " thermometer, (1) pressure gauge and (1) gauge adaptor, $\frac{1}{8}$ " diameter with stainless steel probe, $\frac{1}{4}$ " FPT gauge connection.

PART 3 – EXECUTION

3.1 WORKMANSHIP AND INCIDENTAL ITEMS

- A. All valves shall be installed so as to be easily accessible for cleaning, inspection, maintenance, and operation.
- B. Insulate all valves, installed under this work, in accordance with the requirements of Section 23 07 00.
- C. Install valves with stems pointed up, in vertical position where possible, but in no case with stems pointed downward for horizontal plane unless unavoidable. Provide chain operators on all valves over 6' above floor in mechanical rooms.
- D. Except as otherwise indicated, install valves with the following ends or types of pipe/tube connections.
 - Tube Size 2" and smaller - Soldered-joint valves
 - Pipe Size 2" and smaller - Threaded valves
 - Pipe Size $2\frac{1}{2}$ " and larger - Butt-weld end valves or Flanged end valves
- E. Install swing check valves in horizontal position, unless otherwise shown on drawings, with hinge pin horizontally perpendicular to centerline of pipe. Install for proper direction of flow.
- F. Provide access panels at all concealed valves.
- G. Major control and sectionalizing valves throughout building shall be identified by means of a brass valve tag bracketed to valve handle. Contractor shall prepare schedule of such identifying plates and frame under glass for installation in main equipment room.
- H. All welded piping to be welded by certified welders skilled in the work to be done.
- I. No piping of dissimilar metals placed in contact or in close proximity with each other. Provide bronze valves wherever piping of dissimilar metals is joined.
- J. Run all piping concealed unless specifically noted otherwise, making all necessary offsets, turns, etc., necessary to conceal piping from view.

- K. Provide all necessary steel frame supports, anchor bolts, sleeves, etc., required for safe support of equipment and piping installed under this contract. The Mechanical Contractor shall be completely responsible for the accurate position and dimensions of all foundations and support items.

END OF SECTION 23 09 00

SECTION 25 55 00 - INTEGRATED AUTOMATION CONTROL FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Refer to Sections 23 05 00 - "Common Work Results For Plumbing And HVAC", and 23 05 00 "HVAC Systems and Piping", which are applicable to this Section.
- B. Drawings, General Conditions of the Contract for Construction, Supplementary Conditions of the Contract for Construction including Specification Sections, apply to this Section.

1.2 SCOPE

- A. Furnish and install a complete system of electric, electronic, and direct digital temperature controls as necessary to accomplish the sequences as specified. The control system shall be as manufactured by Schneider Electric and shall be an extension of the existing Building Automation System provided by Automated Control Systems. Contact Wayne Durr at 504-885-3694.
- B. The temperature controls shall include electrical interlocking of motor starters and other equipment, which is supplied as part of the heating, ventilation, and air conditioning system. Individual components of the system shall be DDC/electric.
- C. The control system shall consist of all thermostats, temperature transmitters, controllers, automatic valves and dampers, damper operators, control panels, relays, accessory control equipment, and a complete system of electric wiring to fill the intent of the specification and provide for a complete operable system.
- D. Workmen regularly employed by the approved control manufacturers listed herein shall install the control system. No other workmen to install the control system will be approved. The system shall be guaranteed free of defects in workmanship and material for a period of one (1) year from the date of substantial completion. The control supplier shall furnish complete control drawings, showing the operation of the air conditioning and mechanical control system.
- E. Submit eight (8) copies of manufacturers' drawings to the Architect for all equipment and controls. Drawings shall include detailed dimensions, capacities.
- F. The control contractor shall be an established firm engaged in the design and installation of temperature control systems. Control contractor shall have a Louisiana state license.
- G. Control contractor shall calibrate and verify proper operation of all control devices before the Architect and/or Owner will accept control system.

PART 2 - PRODUCTS

2.1 ELECTRICAL

- A. The Electrical Division shall provide all power wiring to the Starters/VFD's and from the Starters/VFD's to the motors. The Electrical Contractor shall perform all connections into the power circuit.
- B. The electrical work included in this section includes furnishing, installing, and wiring the temperature control devices as necessary to comply with the sequence of operation.
- C. All wiring shall be new and done in accordance with all governing codes. The maximum allowable control and interlocking voltage shall be 120 volts.
- D. All wiring shall be installed in electrical raceways in accordance with requirements of Division 16.
- E. All exposed conduits shall be run parallel to the lines of the building.

2.2 AUTOMATIC CONTROL DAMPERS

- A. Automatic control dampers shall be opposed blade type with sizes as indicated on the plans.
- B. All damper blades shall not be less than 16 gauge galvanized steel roll formed for high velocity performance. Blades on all dampers must not be over 8" wide. All blade linkage hardware shall be of corrosive resistant finish and readily accessible for maintenance after installation.
- C. Dampers shall have minimum leakage rate of 1% for all applications.

2.3 DUCT SMOKE DETECTORS

- A. Duct smoke detectors are furnished and installed by the Fire Alarm Contractor.
- B. This contractor shall provide the wiring between the fire alarm control module and the unit fan starter.
- C. The control module shall be mounted by the Fire Alarm Contractor next to the unit fan Starter/VFD.

2.4 DIFFERENTIAL PRESSURE SWITCHES

- A. Unit for fluid flow proof shall be JCI P74, United Electric J Series, or equal.

Range	8 to
70 psi Differential	3 psi
Maximum differential pressure	200
psi Maximum Pressure	325
psi	

- B. Unit for airflow proof shall be P32, Robertshaw PC-301, or equal.

Set point ranges	0.05" WG to 1.0" WG
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1.0" WG to
12.0" WG

2.5 DAMPER ACTUATORS

- A. Units shall be quiet in operation and shall be sized to operate the control devices to which they are connected.

2.6 SPACE TEMPERATURE

- A. Sensors shall be RTD, balco or solid state devices with a temperature range 20 to 120 degrees F.
- B. The sensor shall be complete with a decorative cover and suitable for mounting over a standard electrical utility box.

2.7 THERMOSTATS

- A. Room and duct thermostats for control of line voltage devices shall be of the snap-acting type with contacts rated for applied service.
- B. On-off differential shall not exceed 2 degrees F., except where required by the sequence of operation.

2.8 DUCT TEMPERATURE

- A. Sensors shall be RTD, balco or solid state devices with a insertion measuring probe and a temperature range of 20 to 120 degrees F.
- B. For all mixed air and preheat air applications, install bendable averaging duct sensors with a minimum 12 feet long sensor element.

2.9 OUTSIDE AIR TEMPERATURE

- A. Sensor shall be RTD, balco or solid state device mounted in the outdoors where airflow occurs.
- B. The temperature range shall be -20 to 180 degrees F.
- C. Provide a sun shield and weatherproof assembly for mounting to ½ inch rigid conduit.

2.10 SPACE HUMIDITY

- A. Inter-cap sensing element shall have an accuracy of + 3%.
- B. Range of sensor shall 0-90% RH and output shall be 4-20 ma.
- C. Housing material for transmitter shall be rated for NEMA 1 type applications.

2.11 CURRENT SENSING RELAY

- A. Veris Industries Hawkeye H-701, or approved equal, digital output current sensor with adjustable threshold, digital (binary) output, AC output: 0-135A (1.OA turn-on).

2.12 CARBON MONOXIDE SENSOR

- A. BAPI CO Sensor BA/BBV-COBN shall be for rough service areas, be field replaceable, be self-testing and shall have a 5 year warranty. Sensor shall have BACnet communication.
- B. Range of sensor shall be 0-500 ppm. Accuracy shall be + 5% or less.
- C. Sensor shall have field selectable outputs and a ventilated BAPI-Box for accurate sensing.

2.13 HIGH LIMIT STATIC PRESSURE SWITCH

- A. High limit static pressure sensors shall have a range of 0 to 6 inches WG.
- B. The body shall be constructed of die cast aluminum with a silicon rubber diaphragm.
- C. Device shall shutdown unit when tripped.

2.14 DIFFERENTIAL PRESSURE TRANSMITTER

- A. Transmitter shall have a minimum range of 0 – 6 inches WG. Accuracy shall be + 1 %. Output signal shall be 4–20 ma.

2.15 DRAIN PAN SAFETY SWITCHES

- A. Safety switch shall sense presence of water and shall shutdown unit when tripped.

2.16 VAV CONTROLLERS / WALL SENSORS

- A. DDC controllers shall have integrated actuator and pressure transducer with plenum rated enclosure. Integral actuator shall include manual override button and travel limit stops. Actuator shall mount directly over damper shaft of the terminal box. Minimum torque rating of actuator is 53 lb.-in. Actuator shall have a minimum of three digital outputs for heating and/or fan control. Actuator shall be 24Vac.
- B. Wall sensors shall be of the digital type with plug-in communications jack. Sensor shall display zone temperature, setpoints actual air flow, etc.

2.17 LOCAL CONTROL CABINETS

- A. A control cabinet shall be provided in each mechanical room which will contain all pressure-electric switches, receiver- controller, high-low pressure selectors, temperature and pressure indication, etc. as described under PART 3 - EXECUTION.

- B. Each panel shall be constructed of extruded aluminum alloy frames with all corners securely riveted and supported by angle brackets. The panel shall have removable face and back panels that are to be made of aluminum bonnet on both sides over a plywood core. The panel door shall be supported by a non-removable piano-type hinge that spans the entire height of the panel. A keylocking latch shall be provided on all panels to insure only authorized access.

2.18 CONTROL SYSTEM HARDWARE

- A. The Control System shall be comprised of a network of various independent Digital Controllers as specified, to provide centralized access and facility wide control functions. The DDC Controllers shall be interconnected in a communicating network to provide facility wide access and sharing of information.
- B. The distributed communication network system shall consist of a multi-drop RS-485 bus architecture connecting DDC Controllers.
- C. A twisted pair of wires (18 awg) run in metallic conduit or a twisted shielded pair of wires (18awg) with the shield grounded in accordance with the manufacturer's wiring practices.
- D. There shall be no power wiring, in excess of 30 Vac, run in conduit with communications trunk wiring. In cases where power or signal wiring is run in conduit with trunk wiring, all communications trunk wiring and power wiring shall be run using separate twisted shielded pairs (18awg) with the shields grounded in accordance with the manufacturer's wiring practices.

2.19 DDC UNIT CONTROLLERS

- A. Controls shall be BACnet compliant with the capability to function in either a standalone mode or as part of a FTT-10 free topology network. All sensing inputs shall be provided via industry standard signals. Temperatures, humidities, differential pressure signals, and other signal inputs shall be one of the following types:
 - 1. 0-20 ma
 - 2. 0-5 VDC
 - 3. 0-12 VDC
 - 4. 1000 ohm platinum
 - 5. 1000 ohm Balco
 - 6. 10 k ohm Thermistor
- B. All signal inputs shall be compatible with the controllers used, and with the requirements for readout of variables in true-scaled engineering units as specified.
- C. Modulating outputs shall be industry standard 0-20 mA. Drive open/Drive closed type modulating outputs are acceptable provided that they also comply with the following requirements.
- D. The controller shall provide LED indication of transmit/receive communications performance as well as for the proper/improper operation of the controller itself.
- E. The controller shall be mounted in a NEMA 1 enclosure. Controller shall have as a minimum the following point configuration: (2) Digital Inputs, (3) Universal Inputs, (6) Digital Outputs, (2) Analog Outputs.

- F. For compatibility to the environment of the mechanical systems, the Controller shall have ambient service ratings of - 40 Degrees F to 140 Degrees F. Controllers shall be microprocessor based. Controllers shall be provided for air handling units, pumps, chillers, boiler and other applications as shown on the drawings.
- G. All Input/Output signals shall be directly hardwired to the Controllers. Trouble shooting of input/output signals shall be easily executed with a volt-ohm meter (VOM). As a result of this intent, it is specified that power line carrier systems, or other systems which command multiple outputs over a single pair of wires, shall not be used.
- H. Controllers shall be in continuous direct communication with the network that forms the EMCS. The Controllers shall communicate with the SDC at a baud rate of not less than 38,200 baud.
- I. All control sequences programmed into the Controllers shall be stored in non-volatile memory, which is not dependent upon the presence of a battery to be retained. Power failures shall not cause the memory to be lost, nor shall there be any need for batteries to be recharged or replaced to maintain the integrity of the controller database.
- J. All control sequences shall be fully field programmable at the controller, allowing for the creation or editing of an application sequence of operations.

2.20 DDC NETWORK CONTROLLER/ GRAPHICAL INTERFACE

- A. Controller shall be LONWorks or BACnet system compliant and shall be multi-user, multi-tasking.
- B. The Network Controller shall be the interface device for communicating with any device using block programming in combination with the BACNET protocol.
- C. The Network Controller shall have a complete set of energy and facility management capabilities.
- D. The Network Controller shall connect to other area controllers through either an RS-232 trunk or an Ethernet/Echelon trunk.
- E. The Network Controller shall function in either a standalone mode or as part of a FTT-10 free topology network and shall provide graphical user interface to entire HVAC System as required.

2.21 CENTRAL CONTROL STATION

- A. Connect to the existing Central Control Station located in the IT/Electrical/Communication /Surveillance Room.
- B. The Owner shall provide an internet connection for the ability of monitoring and controlling the HVAC system from a remote location. The Owner shall incur the expense of the internet connection line.

2.22 GUARANTEE

- A. All components, parts and assemblies shall be guaranteed against defects in material and workmanship for a period of one year after acceptance.
- B. Guarantee commences at time of acceptance and continues for the previously indicated duration.

PART 3 - SEQUENCE ON OPERATION**3.1 CHILLED WATER SYSTEM**

- A. A start signal shall be given from the DDC control panel to the Lead Chiller. The isolation control valve shall open and when flow is proven through a differential pressure switch, the lead chiller shall be energized. The chiller shall then cycle around its internal controls to maintain a chilled water supply setpoint of 45 degrees F (adj). Chilled water setpoint shall also be adjustable from BAS Computer as required.
- B. Lag chiller control shall be de-energized upon initial chilled water system startup for a period of 30 minute (adj).
- C. Lead chiller shall rotate on a monthly basis.
- D. Chiller lead and lag selections shall be adjustable from the Central Computer. Once enabled, the chillers shall operate on their factory provided control system.

CHW System Enabled	Operate Lead Chiller
Common CHW Supply Temp > 49 degrees F (adj)	Operate Lead Chiller + Lag Chiller
Common CHW Return Temp > 58 degrees F (adj)	Operate Lead Chiller + Lag Chiller

- E. Should outside air temperature fall to 35 degrees F, both chilled water pumps shall be energized to circulate water and prevent pipes from freezing. Chillers shall be locked out when outside air falls to 45 degrees F (adj).
- F. Provide dynamic graphic of central plant on Central Headend Computer.

3.2 POINT LIST**A. CENTRAL PLANT**

	<u>Digital Output</u>	<u>Digital Input</u>	<u>Analog Output</u>	<u>Analog Input</u>
CH-1 Pump Start/Stop	X			
CH-1 Pump Status		X		
CH-1 Pump Control			X	
CH-1 Start/Stop	X			
CH-1 Status		X		
CH-1 Alarm		X		
CH-1 Evap. Differential Pressure				X

	<u>Digital Output</u>	<u>Digital Input</u>	<u>Analog Output</u>	<u>Analog Input</u>
CH-1 Supply Temperature				X
CH-1 Return Temperature				X
CH-1 Isolation Valve			X	
CH-1 Isolation Valve Feedback				X
CH-2 Pump Start/Stop	X			
CH-2 Pump Status		X		
CH-2 Pump Control			X	
CH-2 Start/Stop	X			
CH-2 Status		X		
CH-2 Alarm		X		
CH-2 Evap. Differential Pressure				X
CH-2 Supply Temperature				X
CH-2 Return Temperature				X
CH-2 Isolation Valve			X	
CH-1 Isolation Valve Feedback				X
Common CHW Supply Temperature				X
Common CHW Return Temperature				X
Outside Air Temperature				X

END OF SECTION 25 55 00

SECTION 26 05 00 - COMMON WORK RESULTS FOR ELECTRICAL**PART 1 - GENERAL****1.1 SUMMARY**

- A. Furnish all labor, tools, materials, fixtures, equipment, accessories, transportation, etc., required for complete electrical lighting and power systems, complete with necessary auxiliaries as indicated on drawings and as hereinafter specified.
- B. The GENERAL CONDITIONS of the Contract and Engineering Drawings and Specifications shall apply to all work under this Section. Separation of Specifications into Sections is for convenience only and is not intended to establish limits of work or liability. The following are the Sections that apply to this project.
 - 26 05 00 - Common Work Results for Electrical
 - 26 20 00 - Low Voltage Electrical Materials and Methods
 - 26 47 00 - Electrical Equipment Connections
- C. In general, the work shall consist of the following installations:
 - 1. Electrical demolition as shown on drawings.
 - 2. Modifications to existing electrical distribution system.
 - 3. Power wiring to all new mechanical and air conditioning equipment and controls.
- D. Prior to submitting quotation for electrical work, Contractor shall visit and examine the job site in order to become familiar with all existing conditions pertinent to the work to be performed thereon. No additional compensation will be allowed for failure to be so informed.
- E. It is the intent of these specifications that in all particulars, the materials and workmanship shall conform to the best practice and that the equipment and accessories as furnished and installed shall be complete and ready to operate.
- F. All materials shall be new, except where otherwise indicated, and shall conform with the standards of underwriters' Laboratories in every case where such a standard has been established for the particular type of material in question.
- G. The drawings showing the layout of electrical work indicate approximate location of the outlets, receptacles, panelboards and other electrical equipment, unless noted otherwise. The runs of feeders and branches are schematic only and are not intended to show the exact routing of conduits. Certain routings are as shown to avoid areas with asbestos materials, and may not allow for deviation. The final determination of the routing shall be governed by structural conditions, other conditions and other construction. The Contractor shall consult all drawings which may affect the location of any outlet, apparatus, or equipment to avoid possible interference and any reasonable changes in the location of an outlet, apparatus or equipment, up to the time of rough-in, is reserved by the Engineer, and any minor deviations shall be made without additional cost. It shall be the Electrical Contractor's responsibility to see that all equipment such as junction boxes, panelboards, switches, and other apparatus, as may require maintenance from time to time, are made easily accessible. Although the location of the equipment may be shown on the drawings, the construction may disclose the fact that such location does not make its position

readily accessible, in which case the Electrical Contractor shall call the Engineer's attention to the condition before advancing the construction to a point where a change in location would require additional cost.

- H. The Contractor that is furnishing and installing any of the Lighting, Power and/or Special Systems, shall coordinate each complete system with the Performance Standards of School Facilities Master Plan (SFMP) for Orleans Parish for the LRSD and NOPSI. Any deviations between these Specifications and those required by those Specifications shall be installed and provided as required by the SFMP, at NO additional cost to the Owner.

1.2 MEASUREMENTS

- A. Because of the small scale of the drawings, it is not possible to indicate all offsets, fittings, and accessories necessary.
- B. The Contractor shall carefully investigate structural conditions, walls, furring and chase locations and room finishes and shall make actual measurements on the job so that the panelboards, switches, receptacles, lighting fixtures and accessories shall fit.

1.3 LAWS, CODES AND PERMITS

- A. Latest edition of the following listed established standards constitute part of the specification requirements.

- National Electrical Code - (NFPA No. 70)
 - Applicable State Requirements
 - Underwriters' Laboratories (UL)
 - Electrical Testing Laboratories (ETL)
 - American National Standard Institute (ANSI)
 - NFPA 101 Life Safety Code
 - NFPA 72 – Fire Alarm Systems

1.4 JOB CONDITIONS

- A. Accompanying drawings, including plans, details, diagrams, notes, etc., are shown to limit and explain structural conditions, construction requirements, sizes, capacities and method of installation and erection. Structural and other conditions may require certain modifications and adjustments from conditions shown. Such deviations are permissible; however, specific sizes capacities and requirements affecting the satisfactory performance and operation of the installation shall remain unchanged. Make allowance for normal job conditions and interferences.
- B. Ask for details whenever uncertain about method of installation. Lack of details not requested shall not excuse improper installation and correction shall be responsibility of the Contractor.
- C. Schedule and perform all electrical work to avoid delays to the Contractor and other trades.

- D. In addition to the basic work covered under this contract, the Contractor shall plan and schedule the work to permit continuous operation of essential services of existing facilities. Planning shall also include scheduling necessary interruptions of electrical service to existing building at times when such interruptions will cause minimum interference with existing routine and services. All such interruptions shall be made only after consultation with the Owner. This is extremely important since included in the work is a relocation and rerouting of and connecting to existing facilities. No additional compensation will be allowed for failure to be so informed.
- E. It is essential that all areas of the building be kept in operation at all times, except when specific permission is given to contrary. Before any power or equipment is shut down for disconnecting, tie-ins, or rearranging of services, make arrangements with Owner to do this work at night, or Sunday, or at special time of day or year with length of shutdown agreed upon before work is begun. Contractor to bear any overtime or work costs in this connection.
- F. All piping, conduits, conductors and other electrical items in way of construction, shall be rerouted, relocated or otherwise adjusted to work out with such construction or changes shown or specified in any or all of various sections of specifications. Unknown electrical devices that are encountered will be referred immediately to Engineer for method of disposition before continuation of work.
- G. The Contractor shall review the Engineering drawings to become familiar with the phasing of construction required for this project.

1.5 QUALITY ASSURANCE

- A. The Contractor bidding on this portion of the work must be fully experienced in installations of equal size, complexity, and quality, and must be licensed to perform such work as required by the Louisiana State Legislature, R.S.37:2152-2163.
- B. In bidding he acknowledges that he fully understands the scope of work and design, and has the ability for the contract price to assemble and install the equipment shown or specified, so as to mold same into a satisfactory workable system and arrangement.
- C. Contractor shall recognize that a fault or error in his work remains his responsibility regardless of whether such difficulty was discovered after the work had progressed, and shall make corrections at no cost to the Owner.
- D. Adequate and competent constant supervision shall be provided by Contractor to assure that work is done in accordance with good standard practice and workmanship and with intent of drawings and specifications. Contractor shall recognize that amount of information and detail could be provided to contract documents is limitless and could extend into every minute detail and sequence of operations, to a point where only workmen would be required, without drawing on ability, experience and ingenuity of the Contractor.
- E. All work shall be installed in strict accordance, with all existing local and state codes and ordinances, with National Board of Fire Underwriters
- F. Contractor shall maintain and service all equipment until time of acceptance by Owner. Contractor shall include all required service access in the installation as required by the manufacturer and governing codes.

- G. Prior to starting any work, the Contractor shall submit a quality assurance plan for approval by the Engineer. In the quality assurance plan, the Contractor shall provide the following information.
1. List of all subcontractors and equipment suppliers.
 2. List of all foreman and job superintendents including job experience for all trades.
 3. Construction time schedule demonstrating coordination with other trades and showing detailed timelines for test and balance and commissioning being completed prior to final punch list inspection.
- H. The Electrical Contractor shall review and coordinate the APPROVED Mechanical Equipment submittals. This Electrical Contractor shall coordinate and verify that the Electrical wiring is in conformance to the requirements of the APPROVED Mechanical Equipment submittals. Check and verify that same is wired correctly under the Electrical Section for proper operating of all mechanical items. Any conflicts that are encountered will be referred immediately to Engineer for method of disposition before installation is continued.

1.6 ELECTRICAL RECORD DRAWINGS

- A. Maintain one set of marked-up white prints of the Contract Drawings and Shop Drawings in clean and undamaged condition with mark-up of actual installations that are different from the work shown on the contract documents and, or, shop drawings. Mark up either the construction drawings or shop drawings that most capable of showing the install conditions accurately. If shop drawings are used, record reference notes on the appropriate construction drawings.
- B. Mark record prints to show the actual installation where installation varies from that shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record data as soon as possible after obtaining it.
- C. Mark the changes with erasable pencil, and use multiple colors to distinguish between the installations of separate and different electrical systems.
- D. Record all substantive installations of electrical work in the actual locations if different from the construction drawings or shop drawings. As minimum record the following.
1. New conduits with conductors labeled, both exterior and interior, drawn to scale and fully dimensioned.
 2. Electrical installations concealed behind or within other work, in non-accessible locations.
 3. Mains and branches of new electrical systems, including switchboards, transformers, panelboards, control equipment and devices, all located and labeled.
 4. All aspects of the new grounding systems.
 5. Identify all changes and revisions required by Change Orders or Addendum.
- E. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize the prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
- F. As part of the record documents submittal provide a bound copy of all approved electrical equipment data submittals, with each item clearly labeled and identified as to type and quantity.

PART 2 - PRODUCTS AND INSTALLATION

2.1 APPROVALS

- A. Name of manufacturer or catalog numbers are mentioned herein in order to establish a standard as to design and quality. Other products similar in design and of equal quality may be used if submitted to the Engineer and approved by him.
- B. Within thirty (30) days after award of General Contract, Contractor shall submit, in six (6) copies, complete dimensional shop drawings and descriptive literature covering the following equipment and materials. Written approval thereof must be obtained before ordering or installation.

New Circuit Breakers
Safety Switches

Wiring Devices and Plates
Conductors

2.2 PROTECTION OF FIXTURES, MATERIAL AND EQUIPMENT

- A. Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Owner's property from injury or loss, except as may be caused by agents or employees of the Owner. He shall adequately protect adjacent property as provided by law.
- B. Conduit openings shall be capped or plugged during installation. Fixtures and equipment shall be tightly covered and protected against dirt, moisture, chemical and mechanical injury. At the completion of the work, the fixtures, material and equipment shall be thoroughly cleaned and delivered in condition satisfactory to the Engineer.

2.3 CUTTING, PATCHING, AND SEALING

- A. All cutting and patching for the work of this Section shall be in accordance with the requirements of the GENERAL CONDITIONS. The Contractor shall perform all necessary cutting and patching required for the installation of work. Where floor or roof is cut or penetrated the structural integrity shall be maintained or restored. Cutting of structural members is prohibited except with prior approval of the Engineer.
- B. Penetrations of all walls, floors, and ceilings shall be sealed with a material capable of preventing the passage of flames and gases in accordance with the requirements of the test standard ASTM-E-814 for fire stops. The integrity of the fire rating, as indicated on the Engineering drawings, shall be maintained.

2.4 CLEANING UP

- A. This Contractor shall promptly remove from the jobsite all debris, surplus and waste materials, empty crates and cartons resulting from his work.

- B. This Contractor shall remove all oil, grease or other stains resulting from his work performed in the building or the exterior thereof.

2.5 TESTING AND BALANCING

- A. Make tests which may be required by the Owner or the Engineer in connection with the operation of the Electrical System in the building.
- B. Balance all NEW single phase loads connected to the panelboards in the building to insure an approximate equal division of these loads on main secondary power supply serving building.
- C. All tests shall be made in accordance with the latest standards of the IEEE and the NEC.
- D. The installation shall be tested for performance, grounds, and insulation resistance. "Megger" type instrument shall be used. Circuit continuity tests and operational tests on all equipment furnished and/or connected by him shall be made by the Contractor after such equipment has been installed.
- E. The tests shall be made in the presence of the Engineer or his representative. The Contractor shall notify the Owner or his representative. The Contractor shall notify the Owner and the Engineer at least seventy-two (72) hours in advance of tests. The Contractor shall provide all testing equipment and all costs shall be borne by him. Written reports shall be made of all tests. All faults shall be corrected immediately.

2.6 PAINTING

- A. Contractor shall touch-up or refinish all items of electrical equipment furnished with a factory finish coat of paint and which may have been damaged regardless of cause.
- B. All electrical equipment such as switches, panelboards, motor controllers, etc., shall be suitably identified with micarta nameplates.

2.7 GUARANTEE

- A. Upon completion of all tests and acceptance, the Contractor shall furnish the Owner a written guarantee covering all electrical work under this Contract for a period of one (1) year from date of final acceptance.
- B. Upon notice from the Owner, Engineer or the Consulting Engineer during the Guarantee period, the Contractor shall replace defective materials and correct faults of workmanship and repair any damage caused thereby promptly and free of any charge.
- C. Fuses and lamps are excluded from the guarantee.

2.8 CONTRACTOR'S QUALIFICATIONS

- A. The Contractor, bidding on this portion (Electrical Division) must be licensed to perform such work as required by State and Local laws.

2.9 DIRECTORY CARDS, NAMEPLATES AND EQUIPMENT LABELS

- A. Provide in the directory frame of each panelboard and for each feeder switch or circuit breaker, neatly typed directory cards indicating the general area and type of electrical load.

2.10 SUBSTITUTION

- A. All specified material, equipment, fixtures, etc., entering into the work under this section of contract are subject to the prior approval or disapproval of the Engineer. Refer to Division 1 Sections for approval procedures.
- B. Materials, equipment, fixtures, etc., herein named or indicated on drawings establish the type, size, appearance and quality required of products other manufacturers must meet to be acceptable.
- C. Requests for substitutions must include necessary data to conclusively demonstrate equality in type, size, appearance, quality, etc. Any deviation in the opinion of Engineer may be cause for rejection.

2.11 COMMISSIONING

- A. Contractor shall install all items of equipment as identified in this specification in strict accordance with manufacturer's requirements (whether identified in this specification or not), shop drawings and contract documents.
- B. Contractor shall coordinate with Mechanical, and Building Automation and Temperature Control System Contractors to insure a complete installation.
- C. Start-up of all equipment shall be by manufacturer authorized representative. Start-up services shall be provided for as long a period of time as is necessary to insure proper operation of the equipment items. The start-up technician shall conduct all operating tests as required to insure the equipment is operating in accordance with design parameters.
- D. Complete testing of all safety and emergency control devices shall be made.
- E. The start-up technician shall submit a written report to the engineer (prior to final punch list inspection) containing all test data recorded as required above and a letter certifying that the equipment is operating properly.

END OF SECTION 26 05 00

SECTION 26 20 00 - LOW VOLTAGE ELECTRICAL MATERIALS AND METHODS**PART 1 GENERAL****1.1 RELATED DOCUMENTS**

- A. Applicable items of this Section shall apply to all sections of ELECTRICAL.

PART 2 PRODUCTS AND INSTALLATION**2.1 METHODS OF WIRING**

- A. No wire shall be smaller than No. 12 except those for fixture drops and for control circuits of equipment. All wire shall have 600-volt insulation equivalent to type THHN or THWN-2 unless otherwise noted on the drawings. All wiring shall be run in conduit, unless specifically noted otherwise. Type MC cable may NOT be used in this project.
- B. Conductors shall be continuous from outlet to outlet and no splices shall be made except in outlet or junction boxes.
- C. Homeruns to panelboards may be collected in one or more conduits provided all circuiting is done in accordance with Code requirements and the maximum unbalanced current does not exceed the capacity of the neutral conductors. Shared neutrals shall not be allowed for computer circuits.
- D. Powdered soapstone or approved pulling compound shall be used as a pulling lubricant for all non-lead covered conductors. Use Thomas and Betts Wireslick, Ideal 77 or equal.
- E. All empty conduits installed shall contain a #14 fish wire.
- F. Conduit sizes shall conform to the requirements of the National Electric Code and/or sizes shown on the drawings. Minimize size conduit shall be 1/2".
- G. Vertical penetrations of concrete slabs shall be cored and sealed with fire stop. Size and location of all sleeves are subject to the approval of the structural engineer. Conduits routed below the first floor slab shall be rigid galvanized conduit, supported using 3/8" stainless steel threaded rods and steel framing, hot-dipped galvanized after fabrication. Supports shall be spaced in accordance with NEC-346-12. Any exposed conduits on exterior of building, shall be heavy wall hot dipped galvanized rigid conduit. Where conduits pass thru rated walls, draftstop or partition, penetrations shall be sealed with approved fire stop of the same rating of the wall draftstop or partition.
- H. Conduits in metal stud walls, exposed within mechanical and electrical rooms, and above ceilings shall be EMT. Conduits in hollow cmu walls shall be EMT with concrete tight set screw fittings. Conduits in solid, infilled cmu walls shall be Schedule 40 PVC.
- I. All raceways shall be concealed unless otherwise indicated.

- J. Branch circuit conduits feeding outlets in masonry walls shall be concealed in masonry. Where outlet boxes are indicated in bare masonry walls, the box shall be mounted so that two edges of the box or plaster cover will fall in a mortar joint. Where switchboxes will not accommodate the number of conductors required and 4" square or larger boxes are installed, the device covers shall be manufactured by Steel City Manufacturing Co., or Appleton, 1" minimum in depth, with straight rectangular openings for drywall construction. Where grouting is required to fill up improperly cut openings in the masonry, the work will be rejected. Contractor shall cooperate with the bricklayer to insure a neat and workmanlike job.
- K. Solderless Fixed spring connectors (T & B 10-100, Ideal wrap-cap, or equal) shall be used for all branch circuit wiring and fixture connections on all conductors #10 AWG and smaller. Split bolt or 2 bolt connectors (T & B 6 HPW, O-Z Gedney PMX, or equal) shall be used for connections and splices on all conductors #8 AWG or larger.
- L. Connections to all motors not equipped with a portable cord shall be made with a short piece of flexible metal conduit between rigid conduit system and motor terminal box. Ground bond of separate copper conductor shall be made between motor frame and rigid conduit system. In all outdoor locations, liquid tight flexible metal conduit shall be used.
- M. All recessed fixtures, unless they contain a box approved for THW wire shall be wired with THHN, in three feet (3') maximum of flexible metal conduit from a box at least one foot (1') from the fixture. Not more than two individual or two rows of continuous fixtures shall be connected to any one of these outlet boxes. This box shall be located above the ceiling and shall be accessible by removing fixture. Installation of blank covers on ceilings to provide access to such boxes will not be acceptable.
- N. Splices in all low voltage wiring shall be made at terminal blocks furnished with the equipment. At junction boxes or where other splices are required, these splices shall be soldered.
- O. Other routings than those indicated may not be used without the approval of the Architect, but Contractor shall make allowance for possible obstructions to routes indicated. Conduits shall be grouped together and run on common hangers parallel to building lines in areas of open ceilings.

2.2 WIRING IN RACEWAYS

- A. Conduit sizes shall conform to requirements of the National Electrical Code and/or sizes shown on drawings.
- B. It is not mandatory that all conduits be routed as shown on the drawings. Other routings facilitating speed and ease of installation may be used, provided the general intent of these specifications is followed and the specific intent of the particular circuit or circuits and the National Electrical Code are not violated; such changes and must be approved by the Architect before work is done. Contractor shall make full allowances for possible obstructions to these routes, as no extra charges will be allowed for added lengths that may be necessary.
- C. Conduits shall be installed in a neat appearing manner and shall be rigidly secured in place. The use of wooden plugs in masonry or concrete as a base to fasten raceways will not be permitted. Approved anchors only shall be used for this purpose. Exposed conduits shall be installed with runs arranged parallel or perpendicular to walls and ceilings, with rigid angle turns consisting of

symmetrical bends, condulets and junction boxes. Bends and offsets shall be held to a minimum. Conduits shall be kept at least six (6") inches from parallel runs of hot piping flues, or other hot objects.

- D. Conduits shall be cut with a hacksaw; ends must be square, threads cut and cleaned before reaming. Conduits must be securely fastened to all outlet and junction boxes with two locknuts and one bushing of approved make, care being exercised to see that full number of threads project through to permit bushings to butt up tight against the end of the conduit, after which the locknuts shall be screwed tight. Conduit shall be joined by approved conduit couplings and shall have ends butted in all cases where couplings are used. Use three piece threaded electrical unions where standard couplings cannot be used. The use of running threads will not be permitted. Where condulets cannot be joined by standard, threaded couplings, approved type conduit unions shall be used. Connectors and couplings for electric metallic tubing shall be of the set screw type. Couplings for rigid heavy-wall conduit shall be of the threaded type.
- E. Conduit fittings shall be grounding type, or approved equal.
- F. Insulated bushings shall be provided for all conductors #4 and larger.
- G. No wire shall be pulled in until the conduit system is complete and plastering dried. This does not include the white finish coat of plaster.
- H. During Construction, all outlet boxes and conduit stub-ins shall be suitably protected against the entrance of foreign material.

2.3 BOXES AND FITTINGS

- A. Boxes and fittings shall conform to requirements of Article 370 of the N.E.C.
- B. Junction and pull boxes required by field conditions shall be installed whether indicated on drawings or not.
- C. The location of outlets not specifically dimensioned on the drawings should be considered as approximate only. The Contractor shall study the general plans with relation to the spaces surrounding each outlet in order that his work fit the work of others so that when fixtures or other fittings are installed, they will be symmetrically located according to design requirements.
- D. Use only galvanized outlet and junction boxes, conduit fittings, covers, and supports for INTERIOR wiring and cast fittings and boxes with gasketed covers for EXTERIOR wiring. The Contractor shall provide all necessary structural supports for boxes and cabinets. Kindorf or Unistrut channels shall be used where applicable.
- E. Boxes for concealed outlets shall be 4" square by 1-1/2" deep, or larger, with raised device covers as required, except that 2-3/4" deep switch boxes may be used where only one conduit enters a box.
- F. Boxes for concealed ceiling outlets shall be 4" octagonal by 1-1/2" deep, or larger. Boxes in plaster ceilings shall have plaster covers. Fixture outlet boxes shall be equipped with fixture studs secured to the boxes.

- G. Outlet boxes for exposed work shall be 4" square by 1-1/2" deep, or larger. Boxes shall have Appleton 1/2" deep surface metal covers to accommodate the devices indicated, or approved equal.
- H. In walls or ceilings of concrete, tile or other non-combustible material, boxes and fittings shall be so installed that the front edge of the box or fitting will not set back of the finished surface more than 1/4". In walls or ceilings constructed of wood or other combustible material, outlet boxes and fittings shall be set flush with the finished surface.
- I. If a fixture, canopy or pan is used as an outlet box cover, any combustible wall or ceiling finish between the edge of the canopy and the outlet box shall be covered with non-combustible material.
- J. Fixture studs shall be installed in all fixture outlets. In each case, the maximum permissible number of conductors shall be reduced by one.
- K. Appropriate galvanized blank covers, subject to approval of the Architect, shall be installed over outlet or junction boxes which do not house a device. Multiple devices shall be installed in one-piece multi-gang box with one-piece multi-gang cover plates. On surface mounted switch and receptacle outlets, provide raised covers to permit mounting devices without additional device plates.
- L. For junction and pull boxes, 14 gauge or thicker sheetmetal. Attach covers by means of 1/4" X 20 round head machine screws. In damp locations, provide rubber or neoprene gaskets.
- M. Attention is called to National Electrical Code, Article 370, Paragraph 370-16, Sub-paragraph (a) and (b) relative to allowable number of conductors in outlet boxes. Contractor shall make provisions to prevent overcrowding outlet and junction boxes regardless of number of conductors shown on the drawings at the outlets. There shall be no deviations from Code requirements on this subject.

2.4 CONDUCTORS

- A. Conductor sizes shown on the drawings are based on copper capacities. **All conductors installed,** shall be copper and no wire shall be less than #12 AWG except as otherwise noted herein and or indicated on the drawings.
- B. All conductors, except as herein noted and/or as indicated on drawings, shall have 600 volt insulation type THHN or THWN-2. Wiring through channels of continuous surface or suspended fluorescent fixtures shall be Type RHH, or THHN.
- C. Conductors #8 and larger shall be stranded. Feeders shall be of the size and type indicated on drawings.
- D. Type MC cable shall NOT be used.

2.5 GROUNDING

- A. Grounding shall conform to the requirements of Article 250 of the N.E.C.

- B. Contractor shall provide grounding as indicated on drawings, or as required by the modifications to the distribution system.
- C. A grounding conductor shall be provided in all new conduit. The grounding conductor shall be green insulated, with a minimum size of #12 AWG, or as indicated on the drawings or per NEC-250. Grounding conductors routed entirely in soil as part of the ground loop shall be bare copper. The grounding conductor connecting the electrical service to the ground system shall be green insulated copper.
- D. Bond jumpers shall be used around concentric or eccentric knockouts on service equipment.
- E. Grounding pole of each polarized receptacle shall be bonded to its outlet box with copper wire and machine or self-tapping screw.

2.6 EQUIPMENT SUPPORTS

- A. All electrical switches, panels, appurtenances, etc., shall be rigidly supported on Unistrut or equal steel framing which shall be securely fastened to walls, floors, ceilings, etc., as required.
- B. Details of framing must be submitted to Architect for approval before installation.

2.7 MOUNTING HEIGHTS

- A. If not otherwise indicated in Electrical drawings, mounting heights to centerline of outlets shall be as follows:
- B. Receptacles - 18" above finished floor except above counter where indicated, or as directed by Owner.
- C. Light Switches - 48" above finished floor.
- D. Panelboard - Not more than 6'-0" from topmost operating handle to floor.
- E. Bracket Fixtures - 8'-0" above floor, or where mounted above exterior door, mirror, medicine cabinet, at a height just sufficient to clear the swing of the door or medicine cabinet.
- F. The above mounting heights may be adjusted as required to permit bottom or top of plate to align with mortar joints in unfinished masonry walls, provided joints are not raked. Where joints are raked, adjust height as required to insure that center of outlet box will be in center of a masonry unit.

2.8 PANELBOARDS

- A. Panelboards are existing and shall have new breakers provided as shown on the drawings.
- B. New Circuit breakers shall be bolted to the bus bar, and be quick-make, quick-break, using over-center toggle mechanism. Breakers shall indicate tripped position by assuming the center toggle

position. Breakers shall have deion arc extinguisher principle. All two and three-pole breakers shall have single handle and the common trip. No bail handle ties will be acceptable.

C. Provide one spare of each type, of breaker provided, for maintenance inventory.

2.9 SAFETY SWITCHES

- A. Safety switches shall be of the visible blade, heavy duty knife switch type. They shall be of the fused or unfused type as required. Fused switches shall have positive pressure fuse clips. Switches shall be fully interlocked with provision to neutralize the interlock by a screwdriver while under load without interrupting the circuit. Switches shall be complete with insulated base and pressure or solderless lugs. All switches shall be horsepower rated, capable of breaking stalled-rotor motor current at these ratings. Outdoor locations shall have NEMA Type 3R enclosures, indoor locations shall have NEMA 1 enclosures.
- B. Switches shall have provision for padlocking in the "ON" or "OFF" positions. Safety switches, as indicated on plans, shall be Siemens (Type VBII), General Electric (Spec Setter Type TH), Cutler-Hammer (Type DH), or Square D (Class 3110).

2.10 FUSES

- A. Fuses utilized shall provide type 2 "no damage" as defined by IEC 947. All fuses shall have a minimum interrupting rating of 200,000 A.
- B. Fuses protecting transformers shall be Class J or RK5 time delay. Fuses protecting motor loads shall be Class J or RK1 current limiting. Provide one set of spare fuses for each load protected.
- C. Fuses shall be manufactured by Ferraz-Shawmut, Cooper Bussman, or approved equal.

2.11 TERMINATIONS

- A. All termination lugs shall be rated 75 degrees C or higher, and shall be compatible with number and size of wires to be terminated.

END OF SECTION 26 20 00

SECTION 26 47 00 - ELECTRICAL EQUIPMENT CONNECTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Applicable items of all other ELECTRICAL SECTIONS shall apply to this Section.
- B. Drawings and General Provisions of the Contract, including General Specification Sections, apply to this Section.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 MECHANICAL EQUIPMENT

- A. All power wiring shall be coordinated with the MECHANICAL SECTIONS 23 thru 25 of these Specifications shall be installed by this Electrical Contractor. The Electrical Contractor shall coordinate and verify that the Electrical wiring is in conformance to the requirements of the APPROVED Mechanical submittals. The Electrical Contractor shall check and verify that same are wired correctly under the Electrical Section for proper operating of all mechanical items. Any conflicts that are encountered shall be referred immediately to Engineer for method of disposition before installation is continued.
- B. All HVAC control wiring shall be as specified in the Mechanical Division.
- C. Overload elements in all starters shall be selected according to actual motor nameplate full load current. Responsibility for this coordination shall lie with the Contractor who has furnished the particular starter. Starters, for motors furnished by Mechanical Contractor, shall be furnished by Mechanical Contractor.
- D. All manual starting switches shall be furnished and installed by Electrical Contractor.
- E. All disconnect switches shall be furnished and installed as indicated and as required by the Electrical Contractor.
- F. All firestats will be furnished and set under the MECHANICAL DIVISION electrically connected in the branch circuit wiring by the Electrical Contractor.
- G. Refer to MECHANICAL DIVISION and to MECHANICAL PLANS for any additional electrical work required.
- H. Should the Mechanical or any other Contractor desire to use equipment requiring larger motors than those indicated on the drawings or equipment requiring more elaborate controls than the

equipment described in these specifications, the responsible contractor shall reimburse the Contractor for any extra materials or labor furnished.

- I. The Electrical Contractor shall furnish and install all wiring, overcurrent protection devices, disconnect devices and interconnections necessary for the installation of all transformers and/or speed controllers on exhaust fans, as required to meet the requirements of the NEC, weather shown on the drawings or not.

3.2 ELECTRICAL EQUIPMENT

- A. The Electrical contractor shall be responsible for the installation of all equipment furnished under this section of the specifications.
- B. It shall be the responsibility of the Electrical Contractor to verify that the sizes of the electrical equipment shall fit in the spaces allowed, and that the installations shall be in accordance with the requirements of the NEC and Manufacturer's recommendations relative to service and operation.
- C. The Electrical Contractor shall notify the Engineer of any space conflicts prior to when any installation revisions will result in removal of installed equipment and/or conduits. No additional compensation will be allowed if the Contractor fails to so inform the Engineer.
- D. Starters, for motors furnished by the Electrical Contractor, shall be furnished by the Electrical Contractor, and installed by the Electrical Contractor.

END OF SECTION 26 47 00